

OFFERING MEMORANDUM DATED AUGUST 25, 2020

Quadrant Biosciences Inc.



505 Irving Avenue, Suite 3100AB  
Syracuse, NY 13210  
315-614-2325

Up to \$1,070,000 in Convertible Promissory Notes

SEE “SECURITIES BEING OFFERED” AT PAGE 50

Quadrant Biosciences Inc., is offering up to \$1,070,000 worth of convertible promissory notes of the company on a best efforts basis. The minimum target amount under this Regulation CF offering is \$50,000 (the “Target Amount”). Unless the company reaches its Target Amount of \$50,000 by February 21, 2021, no securities will be sold in this offering, investment commitments will be cancelled, and committed funds will be returned. The company will accept oversubscriptions in excess of the Target Amount up to \$1,070,000 (the “Maximum Amount”). If the company reaches its Target Amount prior to February 21, 2021, the company may conduct the first of multiple closings, provided that investors who have committed funds will be provided notice five business days prior to the close. The company has engaged Boston Private Bank as escrow agent to hold any funds that are tendered by investors. After each closing, funds tendered by investors will be made available to the company.

**A crowdfunding investment involves risk. You should not invest any funds in this offering unless you can afford to lose your entire investment.**

**In making an investment decision, investors must rely on their own examination of the issuer and the terms of the offering including the merits and risks involved. These securities have not been recommended or approved by any federal or state securities commission or regulatory authority. Furthermore, these authorities have not passed upon the accuracy or adequacy of this document.**

**The U.S. Securities and Exchange Commission does not pass upon the merits of any securities offered or the terms of the offering, nor does it pass upon the accuracy or completeness of any offering document or literature.**

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*In this Offering Memorandum, the terms “Quadrant”, “the company”, “we”, “us” and “our” refer to Quadrant Biosciences Inc. and its consolidated subsidiaries.*

THIS OFFERING MEMORANDUM MAY CONTAIN FORWARD-LOOKING STATEMENTS AND INFORMATION RELATING TO, AMONG OTHER THINGS, THE COMPANY, ITS BUSINESS PLAN AND STRATEGY, AND ITS INDUSTRY. THESE FORWARD-LOOKING STATEMENTS ARE BASED ON THE BELIEFS OF, ASSUMPTIONS MADE BY, AND INFORMATION CURRENTLY AVAILABLE TO THE COMPANY’S MANAGEMENT. WHEN USED IN THE OFFERING MATERIALS, THE WORDS “ESTIMATE,” “PROJECT,” “BELIEVE,” “ANTICIPATE,” “INTEND,” “EXPECT” AND SIMILAR EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD-LOOKING STATEMENTS, WHICH CONSTITUTE FORWARD LOOKING STATEMENTS. THESE STATEMENTS REFLECT MANAGEMENT’S CURRENT VIEWS WITH RESPECT TO FUTURE EVENTS AND ARE SUBJECT TO RISKS AND UNCERTAINTIES THAT COULD CAUSE THE COMPANY’S ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE CONTAINED IN THE FORWARD-LOOKING STATEMENTS. INVESTORS ARE CAUTIONED NOT TO PLACE UNDUE RELIANCE ON THESE FORWARD-LOOKING STATEMENTS, WHICH SPEAK ONLY AS OF THE DATE ON WHICH THEY ARE MADE. THE COMPANY DOES NOT UNDERTAKE ANY OBLIGATION TO REVISE OR UPDATE THESE FORWARD-LOOKING STATEMENTS TO REFLECT EVENTS OR CIRCUMSTANCES AFTER SUCH DATE OR TO REFLECT THE OCCURRENCE OF UNANTICIPATED EVENTS.

## Implications of Being an Emerging Growth Company

We are not subject to the ongoing reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) because we are not registering our securities under the Exchange Act. Rather, we are subject to the more limited reporting requirements under Regulation A and Regulation CF, including the obligation to electronically file:

- annual reports (including disclosure relating to our business operations for the preceding two fiscal years, or, if in existence for less than two years, since inception, related party transactions, beneficial ownership of the issuer’s securities, executive officers and directors and certain executive compensation information, management’s discussion and analysis (“MD&A”) of the issuer’s liquidity, capital resources, and results of operations, and two years of audited financial statements),
- semiannual reports (including disclosure primarily relating to the issuer’s interim financial statements and MD&A) and
- current reports for certain material events.

In addition, at any time after completing reporting for the fiscal year in which our offering statement was qualified, if the securities of each class to which this offering statement relates are held of record by fewer than 300 persons and offers or sales are not ongoing, we may immediately suspend our ongoing reporting obligations under Regulation A.

If and when we become subject to the ongoing reporting requirements of the Exchange Act, as an issuer with less than \$1.07 billion in total annual gross revenues during our last fiscal year, we will qualify as an “emerging growth company” under the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) and this status will be significant. An emerging growth company may take advantage of certain reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. In particular, as an emerging growth company we:

- will not be required to obtain an auditor attestation on our internal controls over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- will not be required to provide a detailed narrative disclosure discussing our compensation principles, objectives and elements and analyzing how those elements fit with our principles and objectives (commonly referred to as “compensation discussion and analysis”);
- will not be required to obtain a non-binding advisory vote from our stockholders on executive compensation or golden parachute arrangements (commonly referred to as the “say-on-pay,” “say-on-frequency” and “say-on-golden-parachute” votes);
- will be exempt from certain executive compensation disclosure provisions requiring a pay-for-performance graph and CEO pay ratio disclosure;
- may present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations, or MD&A; and
- will be eligible to claim longer phase-in periods for the adoption of new or revised financial accounting standards.

We intend to take advantage of all of these reduced reporting requirements and exemptions, including the longer phase-in periods for the adoption of new or revised financial accounting standards under Section 107 of the JOBS Act. Our election to use the phase-in periods may make it difficult to compare our financial statements to those of non-emerging growth companies and other emerging growth companies that have opted out of the phase-in periods under Section 107 of the JOBS Act.

Under the JOBS Act, we may take advantage of the above-described reduced reporting requirements and exemptions for up to five years after our initial sale of common equity pursuant to a registration statement declared effective under the Securities Act of 1933, as amended (the “Securities Act”), or such earlier time that we no longer meet the definition of an emerging growth company. Note that this offering, while a public offering, is not a sale of common equity pursuant to a registration statement, since the offering is conducted pursuant to an exemption from the registration requirements. In this regard, the JOBS Act provides that we would cease to be an “emerging growth company” if we have more than \$1.07 billion in annual revenues, have more than \$700 million in market value of our common stock held by non-affiliates, or issue more than \$1 billion in principal amount of non-convertible debt over a three-year period.

Certain of these reduced reporting requirements and exemptions are also available to us due to the fact that we may also qualify, once listed, as a “smaller reporting company” under the SEC’s rules. For instance, smaller reporting companies are not required to obtain an auditor attestation on their assessment of internal control over financial reporting; are not required to provide a compensation discussion and analysis; are not required to provide a pay-for-performance graph or CEO pay ratio disclosure; and may present only two years of audited financial statements and related MD&A disclosure.

## SUMMARY

### Overview

Quadrant Biosciences Inc. is a biotechnology company focused on neuroscience research and the development of clinical diagnostics, therapeutics and related products and services. The company has research relationships with more than 30 academic medical or clinical sites in North America, Central America and Europe; these sites recruit research study participants and collect biological samples, medical histories, phenotypic characteristics and demographic data related to several large-scale, global health issues, including Autism Spectrum Disorder (“ASD”), Parkinson’s disease (“PD”), concussion injuries, Covid-19 and several other neurodevelopmental and neurodegenerative diseases and disorders. Through 2019, the company has accumulated biological samples and data related to nearly 4,000 patients, ranging in age from new-born to over 90 years and including nearly every racial and ethnic background. The company analyzes these biological samples using next-generation sequencing technology for epigenetic and genetic content and further analyzes the results of this sequencing, along with medical histories, phenotypic characteristics and demographic data of the patients, using artificial intelligence and machine learning tools developed by the company to identify molecular profiles which accurately differentiate patients with the subject disorder or disease from those without it.

In certain cases, the company believes the molecular profiles discovered through this process may yield appropriate targets for the development of new therapeutics.

The company has developed proprietary epigenetic and genetic research systems which align and quantify certain human and microbial molecules which may play a significant role in gene expression and observed phenotypic characteristics. The company extensively utilizes cloud-computing and database storage facilities offered by Amazon Web Services.

The technology pioneered by Quadrant has translated into the development of clinical diagnostic tools which are based on identifying certain profiles of biomarkers in biological samples, such as blood and saliva, that are highly correlated with specific medical conditions. The company intends to market its epigenetic tests under the brand name “Clarifi”.

To date, the company has sold two products, Clarifi ASD and the ClearEdge® Brain Health Toolkit (“ClearEdge” or “ClearEdge Toolkit”), both developed and validated in cooperation with the SUNY Upstate Medical University and the Penn State College of Medicine:

- Clarifi ASD is an epigenetic test that provides clinicians with objective support for earlier diagnosis of Autism Spectrum Disorder, when treatment is most effective. Regulators approved Clarifi ASD pursuant to the Clinical Laboratory Improvement Amendments (“CLIA”) in November 2019. Sales were initiated in December 2019 but have been limited to date.
- The ClearEdge Toolkit is a suite of tests and assessments healthcare providers use to measure and track a patient’s balance and cognitive reaction time. Recently, the company developed an improved ClearEdge balance module which was cleared by the Food and Drug Administration (“FDA”) as a Class II medical device in October 2019. While the ClearEdge Toolkit continues to gain clinical acceptance and has additional utility in clinical research applications, the company focuses its resources on the sale and marketing of Clarifi ASD and the development of other epigenetic diagnostic tools and services. Sales to date are limited.

However, due to the pandemic related to the novel coronavirus (“Covid-19”), we have also been working in conjunction with SUNY Upstate Medical University and other universities, to develop testing for the detection of Covid 19. We are currently working on the following three levels of testing for Covid-19:

- Individual Testing: The Clarifi Covid-19 Test Kit a non-invasive and easy to administer saliva swab that determines the presence or absence of SARS-CoV-2 viral RNA;
- Community/Municipal Wastewater Screening: Wastewater surveillance for Covid-19 in New York State; and
- Group/College Covid Surveillance: Surveillance using pooled samples of saliva collected from university students prior to attending classes to obtain information on the prevalence of Covid-19 in the student population. To date we have partnered with the State University of New York to conduct pooled surveillance of over 250,000 students preparing to begin the fall semester at SUNY schools. We are supplying them with test components as well as consulting services in order to complete the surveillance work.

We are in the process of revising and supplementing our submission for an emergency use authorization (“EUA”) for the Clarifi Covid-19 Test Kit from the U.S. Food and Drug Administration (“FDA”) to fully implement our plans. We optimistically expect the

FDA will approve our EUA, but there can be no assurance that they will. In addition, due to the continuing changing environment caused by Covid-19, we expect our plans here may continue to pivot.

## **The Offering**

Our Target Amount for this offering to investors under Regulation Crowdfunding is \$50,000. We will accept up to \$1,070,000 from investors through Regulation Crowdfunding before the deadline of February 21, 2021.

The minimum investment in this offering is \$100.

## **Use of Proceeds**

Proceeds from this Offering will be used for general working capital and to advance the company's research, development and commercialization efforts to create new epigenetic diagnostic tools for Autism Spectrum Disorder, Parkinson's Disease and concussion injuries, and to advance the company's Covid-19 diagnostic businesses. See "Use of Proceeds to Issuer" section of this Offering Memorandum.

## **Summary Risk Factors**

Our business is subject to a number of risks and uncertainties, including those highlighted in the section titled "Risk Factors" immediately following this summary. These risks include, but are not limited to, the following:

### **Risks Related to the Company's Business**

- We are an early stage revenue producing company and have incurred losses since our inception.
- We expect to incur losses for the foreseeable future as we further expand our product offerings and may never achieve or maintain profitability.
- The company has a limited operating history, which makes it hard to evaluate its ability to generate revenue through operations.
- The company and its suppliers and distributors may be impacted by Covid-19.
- If the company loses certain senior management and key personnel or are unable to attract and retain skilled employees when needed, it may not be able to operate successfully.
- The company may face substantial competition from a number of known and unknown competitors as well as the risk that one or more of them may obtain patents covering technology critical to the company's businesses.
- We rely on a limited number of suppliers or, in some cases, sole suppliers for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers.
- The company relies on certain major distributors, making it vulnerable to changes in the business and financial condition of, or demand for its services by, such distributors.
- The technology upon which the company relies for its operations may malfunction; company methodologies may produce unanticipated consequences.
- Our business and operations would suffer in the event of system failures.
- The company and its subsidiaries are subject to cyberattacks, security risks and risks of security breaches.
- We worked in concert with Admera Health, a licensed clinical laboratory located in South Plainfield, New Jersey, to design, develop and commercially run our epigenetic diagnostics. Any disruption in Admera Health's operations or our ability to continue to reach acceptable commercial terms for us to work together, could materially impact our ability to continue to offer and sell our epigenetic diagnostics tests, including but not limited to Clarifi ASD, which could significantly affect our business, financial condition, results of operations, and reputation.
- If we are unable to support demand for our existing and our future products, including ensuring that we have adequate

capacity to meet increased demand, or we are unable to successfully manage the evolution of our bioinformatics platform, our business could suffer.

- The company has a convertible note that it is treating as debt.
- New product development involves a lengthy and complex process, and we may be unable to successfully commercialize any other products we may develop on a timely basis, or at all, and the development and commercialization of additional products may negatively affect the commercialization of existing products.
- Our existing collaborations are important to our business, and future licenses may also be important to us. If we are unable to maintain any of these collaborations, or if these arrangements are not successful, our business could be adversely affected.
- We have no experience manufacturing our products at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our products in compliance with regulations at a cost or in quantities necessary to make them commercially viable.
- Even if any of our product candidates receives marketing clearance or approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.
- Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

#### Risks Related to Company's Covid-19 Diagnostic Work

- We may not receive an emergency use authorization (EUA) from the FDA for the use of our product.
- Even if we were able to clear the regulatory hurdles to commercialize the Covid-19 individual saliva Test Kit, our Covid-19 wastewater test work and our work in relation to pooled surveillance for Covid-19, one or more of these commercial opportunities may fail to achieve the degree of market acceptance by local, state and federal authorities, physicians, patients, third-party payors and others in the medical community necessary for commercial success.
- Even if our Covid-19 saliva test is initially successful, mutations of the virus or future need may make our test obsolete.
- The company's focus on the Covid-19 saliva test may divert the company's attention for its other diagnostic tests.
- The company may face substantial competition from a number of known and unknown competitors as well as the risk that one or more of them may obtain patents covering technology critical to the company's businesses.

#### Risks Related to Government Regulation

- We offer products that are subject to regulation as medical devices by the FDA. If we fail to comply with any applicable FDA regulatory requirements, it may have a substantially negative impact on our business, financial condition or results of operation.
- We plan to perform epigenetic diagnostic tests that could, at some point in the future, be regulated by the FDA as medical devices. If the FDA decides to actively regulate tests like those that we plan to offer, we may need to obtain FDA and/or other regulatory clearances or approvals, and comply with other regulatory requirements, which may delay, encumber or block us from commercializing these diagnostic tests.
- If we fail to meet any applicable requirements of CLIA or state clinical laboratory licensure laws, that failure could prohibit and/or restrict the commercial sale of our epigenetic testing diagnostic technologies and otherwise cause us to incur significant expense.
- We are subject to federal and state healthcare regulations and laws relating to anti-bribery and anti-corruption, and non-compliance with such laws could lead to significant penalties.
- A violation of privacy, security or data protection laws could have a material adverse effect on the company and the value of the shares.
- Government regulations and other legal requirements affecting our company are subject to change. Such change could have a

material adverse effect on our business.

- Our employees, independent contractors, principal investigators, contract research organizations, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could expose us to liability and hurt our reputation.
- If we or our contract manufacturers or other third parties fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.
- We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

#### Risks Related to our Intellectual Property

- If we are unable to adequately protect our proprietary technology and intellectual property, or if we infringe on the intellectual property of others, it could have a material adverse effect on our business.
- Though we currently do not solely own any issued patents or pending patent applications, our goal is to either solely or jointly with our partners receive patent protection. We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time-consuming and ultimately unsuccessful.
- We rely on a licensing agreement with the Research Foundation for the State University of New York and the Pennsylvania State Research Foundation.
- We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property or claiming ownership of what we regard as our own intellectual property.
- We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.
- We may not be successful in obtaining or maintaining necessary rights to our product candidates through acquisitions and in-licenses.
- If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

#### Risks Related to Investment in the Convertible Promissory Notes

- Any valuation of the company at this stage is difficult to assess.
- Future fundraising may affect the rights of investors, including the price at which the convertible promissory notes may convert to common equity shares of the company.
- The securities are unsecured indebtedness of the company and are subordinate to existing and future secured indebtedness of the company.
- The company may not be able to pay principal and interest on the convertible promissory notes or declare and pay dividends on its shares of Common Stock.
- The amended and restated certificate of incorporation and the subscription agreement have forum selection provisions that require disputes be resolved in specific forums, regardless of convenience or cost to you, the investor.
- The holders of the majority of the outstanding shares of our capital stock may require other stockholders to participate in certain future events, including a sale of the company or the sale of a significant amount of the company's assets.
- Investors in this offering may be subject to transfer restrictions.
- There is currently no public market for the convertible promissory notes or our Common Stock, and a public market for the convertible promissory notes and our Common Stock may never develop.



## RISK FACTORS

The SEC requires the company to identify risks that are specific to its business and its financial condition. The company is still subject to all the same risks that all companies in its business, and all companies in the economy, are exposed to. These include risks relating to economic downturns, political and economic events and technological developments (such as cyber-attacks and the ability to prevent those attacks). Additionally, early-stage companies are inherently more risky than more developed companies. You should consider general risks as well as specific risks when deciding whether to invest.

### Risks Related to the Company's Business

***We are an early stage revenue producing company and have incurred losses since our inception. We expect to incur losses for the foreseeable future as we further expand our product offerings and may never achieve or maintain profitability.***

Since inception, we have incurred significant operating losses. Our net loss was approximately \$6.94 million for the year ended December 31, 2018, approximately \$7.30 million for the year ended December 31, 2019. As of December 31, 2019, we had an accumulated deficit of approximately \$20.10 million. Sales of our ClearEdge Toolkit have not yet provided us with any significant revenue; sales of Clarifi ASD initiated in December 2019 and have not yet resulted in material revenues. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We expect that our expenses will increase substantially as we continue to develop and expand the number of products and the scope of uses of our products, including as we:

- conduct additional verification and validation testing for expanding the FDA cleared uses of ClearEdge and the clinical uses of Clarifi ASD and our individual Covid-19 Test Kit, our commercial products;
- conduct additional research and development and verification and validation testing in relation to a possible EUA submission for a pooled Covid-19 test product and of our other saliva-based epigenetic diagnostics in mild traumatic brain injury, Parkinson's disease and anorexia;
- seek to expand our saliva epigenetic diagnostic platform to other neurological diseases and disorders to discover and develop additional product candidates;
- seek regulatory clearances or approvals (where required) for any product candidates that successfully complete verification and validation testing;
- continue to build a sales, marketing and distribution infrastructure and scale up diagnostic laboratory capabilities, either internally or externally to commercialize any epigenetic products;
- maintain, expand and protect our intellectual property portfolio, bioinformatics and machine learning platforms, including through licensing arrangements;
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our growth;
- experience any delays or encounter any issues with any of the above, including, but not limited to, failed verification and validation testing, complex results, safety issues or other regulatory challenges; and
- if and as necessary, enforce our rights under a note purchase agreement, dated as of November 12, 2018, between Quadrant and a corporate lender organized in the Cayman Islands by a Hong Kong based venture capital firm ("Lender").

Our ability to continue operations is dependent upon our ability to generate sufficient cash flows from operations to meet our obligations, which the company has not been able to accomplish to date, and/or to obtain additional capital financing.

***The company has a limited operating history, which makes it hard to evaluate its ability to generate revenue through operations.***

The company's limited operating history may make it difficult to evaluate its current business and future prospects. The company has encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly developing and changing industries. Investors should consider the company's business and prospects in light of the risks and difficulties it faces as an early-stage company focused on developing products in the fields of medical devices and laboratory-developed tests.

***The company and its suppliers and distributors may be impacted by Covid-19.***

An outbreak of a respiratory disease caused by a novel coronavirus first detected in China in December 2019 has spread globally in a short period of time. In an organized attempt to contain and mitigate the effects of the spread of the coronavirus known as Covid-19, governments and businesses world-wide have taken aggressive measures, including closing borders, restricting international and domestic travel, and the imposition of prolonged quarantines of large populations. Covid-19 has resulted in the disruption of and delays in the delivery of healthcare services and processes, the cancellation of organized events and educational institutions, the disruption of production and supply chains, a decline in consumer demand for certain goods and services, and general concern and uncertainty. The effects of Covid-19 on supply chains and personnel may affect our ability to obtain the supplies needed for our individual Covid-19 saliva test, if we are able to receive an EUA from the FDA to market and sell it, and for our Covid wastewater test work (where we have already experienced some supply chain shortfalls which have limited our ability to satisfy demand for such testing) and our Covid-19 pooled surveillance work, and further may affect our ability to produce, market and sell our existing products, and other epidemics and pandemics that may arise in the future, could adversely affect the economies of many nations, the global economy, individual companies and capital markets in ways that cannot be foreseen at the present time. Further, our business, that of our suppliers, and of our distributors may be impacted by the virus. If our employees (including our key employees), or those employees of suppliers and distributors were to be personally impacted by Covid-19, it may impact our ability to deliver the product in a timely manner, if at all. The duration of Covid-19 and its effects cannot be determined at this time, but the effects could be present for an extended period of time.

***If the company loses certain senior management and key personnel or are unable to attract and retain skilled employees when needed, it may not be able to operate successfully.***

The success of the company depends largely on its management team, including its founder, Richard Uhlig. The company does not maintain any life insurance coverage on Mr. Uhlig or any other member of its management team. The death of Mr. Uhlig, or an extended illness or the occurrence of any other event which might prevent him from regularly performing his duties as chief executive officer of the company, or the loss of any key member of the management team, may substantially limit the company's ability to execute its business plans.

***The company may face substantial competition from a number of known and unknown competitors as well as the risk that one or more of them may obtain patents covering technology critical to the company's businesses.***

The company believes that a number of organizations are or may be working to develop human health and disease diagnostic and preventative mechanisms and or other novel technologies that may be competitive with its own technology. Some or all of such organizations and/or their respective purchasers have substantially greater resources than the company has, and many of them appear to be attempting to patent technologies that may be competitive with or similar to the technology the company has developed. The company does not have access to detailed information about the technologies these organizations and/or their respective purchasers may be attempting to patent. If one or more other persons, companies or organizations obtains a valid patent covering technology critical to the company's existing or prospective businesses, the company and the other entities that need the relevant technology in order to enable the company's existing or prospective businesses to be successful and to operate as intended might be unable or unwilling to license the technology, which could have a material adverse effect on the company.

***We rely on a limited number of suppliers or, in some cases, sole suppliers for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers.***

We rely on several sole suppliers, including Illumina and DNA Genotek, for certain products and substances used in the chemical processing of saliva to prepare it for sequencing, and reagents, sequencers, equipment, and other materials which we use in our laboratory operations. For instance, we rely on DNA Genotek as the sole supplier of saliva swabs used in our Clarifi ASD test kits, our individual Covid-19 Test Kits and our pooled Covid-19 surveillance work, and we rely on Illumina as the sole supplier of sequencers and various associated reagents, and as the sole provider of maintenance and repair services for these sequencers. An interruption in our laboratory operations could occur if we encounter delays or difficulties in securing these or any other of our products, reagents, sequencers, or other laboratory materials, and if we cannot then obtain an acceptable substitute. Any such interruption could significantly affect our business, financial condition, results of operations, and reputation.

Further, we believe that there are only a few other equipment manufacturers that are currently capable of supplying and servicing the equipment necessary for our laboratory operations, including sequencers and various associated reagents. The use of equipment or materials furnished by these replacement suppliers would require us to significantly alter our laboratory operations. Transitioning to a new supplier would be time-consuming and expensive, may result in interruptions in our laboratory operations, would likely affect the performance specifications of our laboratory operations, and would require that we revalidate our products currently under development. We cannot assure you that we would be able to secure alternative equipment, reagents, and other materials, and bring

such equipment, reagents, and materials online and revalidate them without experiencing interruptions in our workflow. If we should encounter delays or difficulties in securing, reconfiguring, or revalidating the equipment and reagents we require for our products, our business, financial condition, results of operations and reputation could be adversely affected.

Another sole source arrangement relates to the DANA™ software module which is used in the ClearEdge Toolkit for performing computerized tests of cognitive reaction time. The DANA software is sourced via a master license from Anthrotronix. If the DANA software were to become unavailable, the company would be required to develop and obtain premarket clearance from FDA for a substitute computerized test of whatever neurologic tests were desired, which would need to include at least the cognitive reaction time tests currently performed with the DANA software module.

Currently, the company only has one supplier to provide the swabs required for the remote use of its individual Covid-19 saliva Test Kit and its pooled Covid-19 surveillance work, DNA Genotek. Should the company be unable to supply the swab, or to satisfy our demand for swabs in relation to our opportunities to commercialize such tests, our ability to provide the test may be diminished or delayed or we may not be able to engage in saliva testing for Covid-19 at all.

***The company relies on certain major distributors, making it vulnerable to changes in the business and financial condition of, or demand for its services by, such distributors.***

The company relies on certain major distributors, making it vulnerable to changes in the business and financial condition of, or demand for its products and services by, such distributors. The company's income and ability to meet its financial obligations could also be adversely affected in the event of bankruptcy, insolvency or significant downturn in the business of one of these distributors.

***The technology upon which the company relies for its operations may malfunction; company methodologies may produce unanticipated consequences.***

The technology relied upon by the company may not function properly, which would have a material impact on the company's operations and financial conditions. There are few alternatives available if such technology does not work as anticipated. This technology may malfunction because of internal problems, the current verification and validation testing could fail to establish the performance of our products or as a result of cyberattacks or external security breaches. The technology employed by the company in relation to the development of its saliva-based epigenetic diagnostic aids is novel and the methodology developed by the company in relation thereto may be subject to unanticipated consequences. For example, in the course of clinical trials it was discovered that if several saliva samples were taken in succession from a subject, the RNA composition of samples subsequent to the first sample could be altered by the sample collection itself. This unexpected discovery led to modifying the directions for sample collection to include a waiting time between successive sample collections to allow time for the RNA composition to come back into equilibrium so that it represented the patient's true steady state. These types of technological problems, failures and unanticipated consequences, if not timely corrected or cured, could adversely impact the company's business and operating results.

***Our business and operations would suffer in the event of system failures.***

Despite the implementation of security measures, our internal computer systems and those of our current and future contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we are not aware of any such material system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of data from completed or future verification and validation testing could result in delays in our regulatory efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties to manufacture our product candidates and conduct verification and validation testing, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

***The company and its subsidiaries are subject to cyberattacks, security risks and risks of security breaches.***

The company and its subsidiaries are all subject to cyberattacks, security risks and risks of security breaches. An attack on any of them or a breach of security of any of them could result in a loss or corruption of private data. In addition, a breach of personally identifying information may require notice to affected individuals and government authorities, may result in fines or other penalties, and may result in costs for mitigation measures for affected individuals.

***We worked in concert with Admera Health, a licensed clinical laboratory located in South Plainfield, New Jersey, to design, develop and commercially run our epigenetic diagnostics. Any disruption in Admera Health's operations or our ability to***

***continue to reach acceptable commercial terms for us to work together, could materially impact our ability to continue to offer and sell our epigenetic diagnostics tests, including but not limited to Clarifi ASD, which could significantly affect our business, financial condition, results of operations, and reputation.***

If we are unable to use Admera's laboratory facility, it may be difficult or impossible for us to operate our molecular information diagnostic platform and related tests for some period of time. The inability to perform our tests or to reduce the backlog of analyses that could develop if the facility is inoperable, for even a short period of time, may result in the loss of customers or harm to our reputation, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, it would be difficult, time-consuming, and expensive to rebuild or switch facilities or license or transfer our proprietary technology to a third party, particularly in light of the licensure and accreditation requirements for a commercial laboratory. If we do utilize a third party with such qualifications to enable us to provide our epigenetic diagnostic tests, we may be unable to negotiate commercially reasonable terms with such third parties.

***If we are unable to support demand for our existing and our future products, including ensuring that we have adequate capacity to meet increased demand, or we are unable to successfully manage the evolution of our bioinformatics platform, our business could suffer.***

As our volume grows, either through the use of third parties or internally, we will need to continue to increase our workflow capacity for sample intake, customer service, billing and general process improvements, expand our internal quality assurance program, and extend our bioinformatics platform to support comprehensive epigenetic analyses at a larger scale within expected turnaround times. The company or our third-party partners will need additional certified laboratory scientists and technicians and other scientific and technical personnel (as applicable) to process higher volumes of our products. Portions of our process are not automated and will require additional personnel to scale. We will also need to purchase additional equipment, some of which can take several months or more to procure, set up, and validate, and increase our software and computing capacity to meet increased demand. We cannot assure you that any of these increases in scale, expansion of personnel, equipment, software and computing capacities, or process enhancements will be successfully implemented, or that we or our third-party partners will have adequate space to accommodate such required expansion.

As we commercialize additional products, we will need to incorporate new equipment, implement new technology systems and laboratory processes, and hire new personnel with different qualifications. For example, we may procure additional laboratory space internally or externally to allow us to further develop new products. Failure to manage this growth or transition could result in turnaround time delays, higher product costs, declining product quality, deteriorating customer service, and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and could damage our reputation and the prospects for our business.

***The company has a convertible note that it is treating as debt.***

In October 2018, Quadrant entered into a convertible note purchase agreement ("NPA") with a lender pursuant to which Quadrant initially borrowed \$5,000,000 and had the right to borrow an additional \$2,500,000 on each of March 31 and June 30 of 2019. When we exercised our right to borrow \$2,500,000 on March 31, 2019, the lender failed to fund us and defaulted on its obligation to do so, which we believe constituted a material breach of the NPA. In consultation with our outside counsel and independent auditors, we concluded that the breached NPA is no longer in effect or binding on Quadrant. Accordingly, we believe that other than our obligation to pay the principal amount outstanding and interest upon it (less costs and damages resulting from the breach), we have no further obligations under the NPA and related note, including conversion rights, board appointment or exclusive licensing rights for our intellectual property in the Asia-Pacific region. In our financial statements, we have accordingly treated our obligation to the lender as debt. To date, the lender has not asserted any claims under the NPA and related note; however, should the lender do so, it may lead to costly and extended litigation or other adversarial proceedings. If, notwithstanding the lender's breach of the NPA, the lender were to pursue such a course of action and was able to reinstate its conversion rights under the NPA, it would be entitled to convert its \$5,000,000 loan into our Common Shares at a strike price of \$1.50 per share (3,333,334 shares). This increase of Quadrant's outstanding shares would be dilutive of Quadrant's existing stockholders' interests, see "Dilution".

***New product development involves a lengthy and complex process, and we may be unable to successfully commercialize any other products we may develop on a timely basis, or at all, and the development and commercialization of additional products may negatively affect the commercialization of existing products.***

We believe the preclinical and clinical data to date for our epigenetic diagnostic technologies are promising and we have recently started selling Clarifi ASD and hope to successfully commercialize Clarifi ASD on a large scale in the near future, but we cannot assure you that we will meet this goal. To date our sales of Clarifi ASD have fallen well below our projections. With respect to our other products currently in earlier stages of development, including the epigenetic tests for traumatic brain injury ("TBI") and

Parkinson's Disease, it will take time to successfully commercialize them, and we cannot assure you that that these products will be successful for a variety of technical and market reasons.

We cannot assure you that our new products will be capable of reliably diagnosing the diseases we are pursuing. Before we can commercialize any new products, we will need to expend significant funds in order to:

- conduct substantial research and development, including validation studies and potentially clinical trials;
- identify and/or build additional laboratory space for new products;
- further develop and scale our laboratory processes to accommodate different products; and
- further develop and scale our infrastructure to be able to analyze increasingly large amounts of data.

The process of obtaining marketing authorizations, both in the United States and abroad, is expensive and may take many years. Our product development process involves a high degree of risk, and product development efforts may fail for many reasons, including:

- failure of the product to perform as expected at the preclinical stage;
- delays in clinical testing;
- failure to recruit, or timely recruit, eligible subjects to participate in clinical testing and clinical trials;
- suspension or termination of a clinical trial due to subject injury or other events;
- completion of preclinical studies and clinical trials without positive results and/or that fail to establish clinical utility;
- need for additional clinical trials, depending on the results of previous trials, and the type, complexity, and novelty of the product under development;
- failure to timely receive desired marketing clearances or approvals from applicable regulatory authorities (where required); and
- failure to obtain and maintain patent and trade secret protection.

Regulatory authorities have substantial discretion in the review process and may refuse to accept a marketing application as deficient or may decide that our data is insufficient for clearance or approval and require additional verification and validation testing. In addition, varying interpretations of the data obtained from verification and validation testing could delay, limit or prevent marketing authorization of a product candidate.

As we develop products, we will have to make significant investments in product development, marketing, and selling resources to maintain and grow an organization of scientists and businesspeople who can develop and commercialize our products. Because we have limited financial and management resources, we focus on a limited number of research programs and product candidates and are currently principally focused on Clarifi ASD, our ASD diagnostic aid. As a result, we may forego or delay our pursuit of opportunities with other products or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities.

***Our existing collaborations are important to our business, and future licenses may also be important to us. If we are unable to maintain any of these collaborations, or if these arrangements are not successful, our business could be adversely affected.***

We have entered into, or plan to enter into, collaborations with other parties, including, but not limited to, collaborations with the Foundations. If these collaborations fail for any reason, Quadrant's ability to develop the contemplated tests for evaluating patients for TBI and Parkinson's Disease would be significantly impaired because these collaborative studies are in their early stages. Our existing collaborations, and any future collaborations we enter into, may pose a number of risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;

- collaborators may not pursue development of any product candidates or may elect not to continue or renew development or commercialization programs based on verification and validation testing results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay verification and validation testing, provide insufficient funding for such testing, stop such testing or abandon a product candidate, repeat or conduct new verification and validation testing, or require a new formulation of a product candidate for such testing;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborations may be terminated for the convenience of the collaborator and, if terminated, we would potentially lose the right to pursue further development or commercialization of the applicable product candidates;
- failure to satisfy provisions of applicable license agreements, including those regarding milestones for commercialization of the licensed product or payment of minimum royalties, which would constitute default and permit our collaborators to terminate license agreements;
- there may be conflicts between different collaborators that could negatively affect those collaborations and potentially others;
- the number and type of our collaborations could adversely affect our attractiveness to future collaborators or acquirers; and
- we currently have, and in the future may have, a limited number of collaborations and the loss of, or a disruption in our relationship with, any one or more of such collaborators may harm our business.

If our collaborations do not result in the successful development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research and development funding. If we do not receive the funding we expect under these agreements, our continued development of our product candidates could be delayed, and we may need additional resources to develop additional product candidates. Additionally, subject to its contractual obligations to us, if one of our collaborators is involved in a business combination or otherwise changes its business priorities, the collaborator might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and the perception of our business in the business and financial communities, and our stock price, could be adversely affected. In addition, we have a limited number of collaborations and if our relationship with any one or more of such collaborators were to cease, our business would be harmed as a result.

We face significant competition in seeking appropriate collaborators and we may be unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all. If we are unable to do so we may have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, or delay its potential commercialization or reduce the scope of any sales or marketing activities.

***We have no experience manufacturing our products at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our products in compliance with regulations at a cost or in quantities necessary to make them commercially viable.***

Quadrant relies on a contract manufacturer, or CM, for the manufacture of the sensor used to test balance in the ClearEdge Toolkit. If our facility, or our CMs' facilities, were damaged or destroyed, or otherwise subject to disruption, it would require substantial lead-time to replace our manufacturing capabilities. In such event, we would be forced to identify and rely entirely on alternative third-party contract manufacturers for an indefinite period of time. Any disruptions or delays at our facility or its failure to meet regulatory compliance would impair our ability to develop and commercialize ClearEdge, which would adversely affect our business and results of operations. We have not yet demonstrated that we can continuously and reliably staff and efficiently work to meet the commercial demand for our Covid-19 test products and services.

***Even if any of our product candidates receives marketing clearance or approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.***

If any of our product candidates receive premarket clearance or approval (where required), it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. Further, significant uncertainty

exists as to the coverage and reimbursement status of our products and our product candidates, including those for which we must obtain regulatory clearance or approval. Our ability to commercialize any products successfully will depend, in part, on the extent to which coverage and adequate reimbursement for these products (or services involving such products) will be available from third-party payers, such as government health administration authorities, private health insurers, and self-insured employers. Third-party payors decide which medical devices, and which procedures in which such medical devices are used, they will pay for and establish reimbursement rates for such items and services. If our product candidates do not achieve an adequate level of acceptance by the market, including third-party payors, we may not generate significant product revenues and we may not become profitable.

***Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.***

We face an inherent risk of product liability exposure related to the testing of our product candidates in verification and validation testing and to the use of our products sold commercially as well as product liability related to the potential commercialization of our Covid-19 saliva test under adverse conditions and on short notice. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of research study participants;
- significant costs to defend the related litigation;
- substantial monetary awards to research study participants and/or patients;
- delay in completing, or failure to complete, research study recruitment or research study endpoints;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

We currently hold \$4 million in product liability insurance coverage in the aggregate, with \$4 million per occurrence limit, which may not be adequate to cover all liabilities that we may incur. Further, the commercialization of a Covid-19 test may significantly increase our exposure. Due to the contagious nature of Covid-19, if our test is flawed, both false negatives and positives could potentially expose us to liability. We may need to increase our insurance coverage as we expand our verification and validation testing or if we commence commercialization of our product candidates, including the Covid-19 saliva test. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

### **Risks Related to our Covid-19 Diagnostic Work**

***We may not receive an emergency use authorization (EUA) from the FDA for the use of our product.***

If we are unable to receive an EUA from the FDA for the Clarifi Covid-19 Test Kit for testing individual patients, we will not be able to market or sell this product. Obtaining such authorization is dependent upon a number of factors, which are not under our control.

***Even if we were able to clear the regulatory hurdles to commercialize the Covid-19 individual saliva Test Kit, our Covid-19 wastewater test work and our work in relation to pooled surveillance for Covid-19, one or more of these commercial opportunities may fail to achieve the degree of market acceptance by local, state and federal authorities, physicians, patients, third-party payors and others in the medical community necessary for commercial success.***

Even if we were able to receive FDA clearance to commercialize our Covid-19 saliva Test Kit, it may nonetheless fail to gain sufficient market acceptance by local, state and federal authorities, physicians, patients, third-party payors and others. The same is true with respect to our businesses for Covid-19 wastewater testing and sales of the test components required for surveillance testing

of pooled saliva samples for the presence of Covid-19, which do not require FDA authorization. Further, the amount that any CLIA laboratory can get reimbursed by the Centers for Medicare and Medicaid Services (CMS) for an individual Covid-19 test is currently limited to \$51.31. This amount includes our fees as well as those of the laboratories administering our test. Further, the reimbursement rate could be lowered in the future. Our ability to successfully commercialize our individual Covid-19 saliva Test Kit, and any pooled test for Covid-19 that we may develop will depend, in part, on the extent to which coverage and adequate reimbursement will be available from third-party payers, such as government health administration authorities, private health insurers, and self-insured employers. We may not be able to produce these tests to make them financially viable.

***Even if our Covid-19 saliva test is initially successful, mutations of the virus or future need may make our test obsolete.***

Currently, the virus is mutating at a rate of approximately 1-3 mutations per month; the mutations may result in our Covid-19 saliva test no longer being useful in detecting the virus. If we are unable to modify our Covid-19 saliva test to detect new variants, we may no longer receive revenues from the test. Further, even if we were able to quickly adapt, we may have a large inventory of the older tests and we would not be able to recoup the costs related to the inventory. Further, we may also be left with inventory we will not be able to sell, if the duration of the Covid-19 pandemic is shorter than anticipated or if other tests are developed that are improvement on our tests based on cost, speed and accuracy.

***The company's focus on the Covid-19 testing may divert the company's attention from its other diagnostic tests.***

We are currently a small company with limited resources and limited numbers of managerial and scientific staff. Our company's recent focus on the Covid-19 testing over the past several months has diverted some resources from the focus of our other products, some of which might otherwise be more lucrative than these new initiatives.

***The company may face substantial competition from a number of known and unknown competitors as well as the risk that one or more of them may obtain patents covering technology critical to the company's businesses.***

The competition to develop products related to Covid-19 is robust. On February 29, 2020, the FDA issued an immediately in effect guidance with policy specific to this public health emergency. This guidance was updated on March 16, 2020. As of August 2020, there are at least 200 in vitro diagnostics that have received EUAs. Some or all of those organizations and/or their respective purchasers receiving EUAs have substantially greater resources than the company has. Further, there are many other organizations worldwide actively working to develop diagnostics to detect Covid-19. The other diagnostics developed may prove to be more marketable than ours, including for cost, accuracy, and speed. Further, even if our test proves to be more successful or viable, due to the exigent nature of the pandemic, we may not be able to protect our technology to the same degree we would under normal circumstances.

## **Risks Related to Government Regulation**

***We offer products that are subject to regulation as medical devices by the FDA. If we fail to comply with any applicable FDA regulatory requirements, it may have a substantially negative impact on our business, financial condition or results of operation.***

The company's ClearEdge product as well as future products are subject to regulation as medical devices by the FDA. As a result, we are currently subject to certain ongoing FDA regulatory requirements, including, but not limited to, establishment registration, device listing, quality system regulations, or QSR, adverse event reporting, correction and removal regulations, and certain record-keeping requirements. We are also subject to periodic inspections to assess our compliance with the QSR. Accordingly, we and the contractors with whom we work must continue to expend time, money and effort in all areas of FDA regulatory compliance, including manufacturing, production and quality control.

Moreover, to the extent required, the process of obtaining regulatory approvals to market a medical device can be expensive and lengthy, and applications may take a long time to be approved, if they are approved at all. For example, we submitted a 510(k) application for an improved version of our ClearEdge Balance module in December 2018 and obtained clearance to sell the new ClearEdge Balance module on October 22, 2019. Our compliance with the quality system, medical device reporting regulations and other laws and regulations applicable to the manufacturing of products within our facilities and the facilities of our contract manufacturers is subject to periodic inspections by the FDA and other governmental authorities. Complying with regulations, and, if necessary, remedial actions can be significantly expensive. Failure to comply with applicable regulatory requirements may subject us to a range of sanctions, including substantial fines, warning letters that require corrective action, product seizures, recalls, halting product manufacturing, revocation of approvals, exclusion from future participation in government healthcare programs, substantial fines, and criminal prosecution. For instance, on February 15, 2019, we received a letter from FDA which stated the agency's determination that some of the claims in marketing materials for the ClearEdge product were problematic. These claims were deemed to indicate that the ClearEdge product was designed and intended for use in evaluating specific conditions, such as concussion or

Parkinson's Disease, while the product was cleared only for measurements of cognitive reaction times and balance, which can be affected by a number of factors and conditions, in addition to concussion and Parkinson's Disease. We have eliminated the problematic marketing claims from the ClearEdge marketing materials, and on March 15, 2019 we provided a written response to the FDA letter. To date, we have had no further communication with FDA regarding the marketing claims for the ClearEdge product. If the FDA discovers additional problems with our products, our marketing materials, and/or our procedures, and concludes that we have failed to comply with applicable regulatory requirements, the agency may take various types of enforcement action against us.

The company's Covid-19 Test Kit product is regulated by the FDA as an in-vitro diagnostic medical device. Due to the government's declaration of a Public Health Emergency caused by Covid-19, in-vitro diagnostic test kits and laboratory tests for Covid-19 can be marketed and sold pursuant to Emergency Use Authorizations (EUAs) issued by FDA, instead of the standard regulatory 510(k) clearance. EUAs permit marketing and sale of in-vitro diagnostic test kits and laboratory tests for Covid-19 only for the duration of the Public Health Emergency. If the company obtains an EUA for the Clarifi Covid-19 test kit, it will authorize sales only until expiration or termination of the Public Health Emergency and if the company desires to continue selling the Clarifi Covid-19 test kit, it will be required to seek 510(k) clearance. 510(k) clearance may be more difficult to obtain and there is no assurance that the company would obtain clearance even though it had obtained an EUA.

Some Covid-19 work we are conducting with the State University of New York and other universities could be prematurely terminated, or delayed for some time, if the FDA were to impose increased regulation of such work.

Further, if we were to market and sell our products in jurisdictions outside of the United States, we may be subject to similar regulatory requirements in such jurisdictions. Regulatory authorization procedures vary among jurisdictions and may require information and/or data beyond that required to comply with FDA requirements. We may not obtain the authorization(s) required to market our products outside the United States on a timely basis, if at all. Our failure or delay in obtaining required regulatory authorization to market our products in one or more countries may have a negative effect on our business.

***We perform epigenetic diagnostic tests that could, at some point in the future, be regulated by the FDA as medical devices. If the FDA decides to actively regulate tests like those that we offer, we may need to obtain FDA and/or other regulatory clearances or approvals, and comply with other regulatory requirements, which may delay, encumber or block us from commercializing these diagnostic tests.***

The Clarifi ASD test is being offered as a laboratory-developed test ("LDT") that is available through a single CLIA certified laboratory, Admera Health. Historically the FDA has exercised enforcement discretion with respect to most LDTs and not required them to comply with the requirements for medical devices (e.g., premarket clearance, device listing, quality system regulations, and adverse event reporting). The Clarifi ASD test is a new type of bioinformatics LDT, which uses a software algorithm to analyze the results of next generation sequencing of nucleic acids. FDA's regulation of bioinformatics LDTs is in its infancy, and there is uncertainty about the risk that FDA may withdraw its enforcement discretion with respect to bioinformatics LDTs, such as Clarifi ASD, and decide to regulate them as medical devices.

If the FDA regulates one or more of our epigenetic diagnostic technologies as a medical device, such decision may materially impact our plans to develop and commercialize such test(s) and may require us to change our business model to come into and maintain compliance with these regulations. FDA oversight of our tests may significantly increase the time it takes us to bring such tests to market, may materially increase the costs of developing and offering such tests, and decrease the profitability of providing such tests. We cannot provide any assurance that FDA will not regulate any of our epigenetic diagnostic technologies in the future, whether through final guidance, regulations promulgated by the FDA under notice and comment rulemaking, or as instructed by Congress in new legislation. It is possible that legislation will be enacted into law, regulations could be promulgated, or guidance could be issued by the FDA which may result in increased regulatory burdens for us to offer our epigenetic tests. Moreover, if pre-market review is required by the FDA or if we decide to voluntarily pursue the FDA's pre-market review for any of our tests, we cannot assure you that our diagnostic tests will be cleared or approved on a timely basis, if at all. There is also no assurance that FDA will permit marketing our diagnostic tests for the clinical uses that we desire, and such limitations on marketing claims may adversely affect the adoption of and reimbursement for our tests. If the FDA regulates our epigenetic diagnostic technologies, our business could be negatively impacted.

***If we fail to meet any applicable requirements of CLIA or state clinical laboratory licensure laws, that failure could prohibit and/or restrict the commercial sale of our epigenetic testing diagnostic technologies and otherwise cause us to incur significant expense.***

The operations for conducting the Clarifi ASD test, and other epigenetic tests are and will be subject to federal and state laws and regulations applicable to the operation of clinical laboratories. The CLIA regulations impose a federal certification requirement for clinical laboratories, and establish standards for personnel, facilities administration, inspections, quality assurance, quality control, and proficiency testing, among other requirements. Clinical laboratories are subject to inspection by regulators, and to sanctions for

failing to comply with applicable requirements. Sanctions available under CLIA include suspension, limitation, or revocation of the laboratory's CLIA certificate, requiring a laboratory to implement a corrective plan, imposing civil monetary penalties, injunctive suits, and/or criminal penalties.

Similarly, Admera Health and any other clinical laboratory at which we perform our tests may be subject to certain state clinical laboratory licensure requirements. Such clinical laboratories may be required to obtain a state clinical laboratory permit from the state in which they operate. Moreover, several states require the licensure of out-of-state laboratories that accept specimens from those states (i.e., New York, California, Maryland, Pennsylvania, and Rhode Island) or from laboratories in those states (i.e., Florida). Furthermore, insofar as we intend to offer our tests as laboratory developed tests to patients in the state of New York, we are required to obtain a test-specific approval for such tests before we can perform tests on samples from the state of New York.

Complying with the CLIA and/or state licensure requirements for clinical laboratories may be expensive, time-consuming, and subject us to significant and/or unanticipated delays. Our failure to comply with such requirements may prevent us from offering our tests in certain jurisdictions or require us to modify or delay our activities in such jurisdictions. The prohibition, delay, or interruption of our plans to commercialize our test services may have a significant negative impact on our business.

***We are subject to federal and state healthcare regulations and laws relating to anti-bribery and anti-corruption, and non-compliance with such laws could lead to significant penalties.***

State and Federal anti-bribery laws, and healthcare fraud and abuse laws, dictate how we conduct the relationships that we and our distributors and sales representatives have with healthcare professionals, such as physicians and hospitals. We also must comply with a variety of other laws that protect the privacy of individually identifiable healthcare information. These laws and regulations are broad in scope and are subject to evolving interpretation, and we could be required to incur substantial costs to monitor compliance or to alter our practices if we are found not to be in compliance. In addition, violations of these laws may be punishable by criminal or civil sanctions, including substantial fines, imprisonment of current or former employees and exclusion from participation in governmental healthcare programs.

***A violation of privacy, security or data protection laws could have a material adverse effect on the company and the value of the shares.***

Certain of our current and planned services, including providing a database of the results of computerized neurologic testing of patients using the ClearEdge Toolkit of sensors (cognitive reaction time tests and balance tests) and the storage of the electronic epigenetics test results, including Clarifi ASD, in a database controlled by the company will be covered by various privacy, security and data protection laws. The most important of these laws is the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by The Health Information Technology for Economic and Clinical Health Act ("HITECH"). If our operations are found to be in violation of any of the federal and state laws or any other governmental regulations that apply to us, we may be subject to penalties, including criminal and significant civil monetary penalties, damages, fines, imprisonment, exclusion from participation in government healthcare programs, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business.

***Government regulations and other legal requirements affecting our company are subject to change. Such change could have a material adverse effect on our business.***

We operate in a complex, highly regulated environment. The numerous federal, state and local regulations that our business is subject to include, but are not limited to: federal and state regulation of medical devices; governmental payor regulations including Medicare and Medicaid; data privacy and security laws and regulations including HIPAA; the Affordable Care Act ("ACA") or any successor to that act; laws and regulations relating to the protection of the environment and health and safety matters, including those governing exposure to, and the management and disposal of, hazardous substances; consumer protection and safety regulations including those of the Consumer Product Safety Commission; federal and state laws governing health care fraud and abuse; anti-kickback laws; false claims laws; and laws against the corporate practice of medicine. The FDA and state regulatory authorities have broad enforcement powers, including the ability to seize or recall products and impose significant criminal, civil and administrative sanctions for violations of these laws and regulations.

Changes in laws, regulations and policies and the related interpretations and enforcement practices may significantly affect our cost of doing business as we endeavor to maintain compliance with such new policies and laws. Changes in laws, regulations and policies and the related interpretations and enforcement practices generally cannot be predicted and may require extensive system and operational changes. Noncompliance with applicable laws and regulations could result in civil and criminal penalties that could adversely affect our business, including: suspension of payments from government programs; loss of required government certifications; loss of authorizations to participate in or exclusion from government programs, including the Medicare and Medicaid programs; and significant fines or monetary penalties. Any failure to comply with applicable regulatory requirements could result in

significant legal and financial exposure, damage our reputation, and have a material adverse effect on our business operations, financial condition and results of operations.

***Our employees, independent contractors, principal investigators, contract research organizations, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could expose us to liability and hurt our reputation.***

We are exposed to the risk that our employees, independent contractors, principal investigators, contract research organizations, consultants, commercial partners and vendors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct that violates applicable laws and regulations, such as laws that require the reporting of true, complete and accurate information to the FDA, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from failure to comply with such laws or regulations. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Even if we are successful in defending ourselves, we may incur substantial legal expenses, damage to our reputation, and management's attention may be diverted from the operation of our business.

***If we or our contract manufacturers or other third parties fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.***

We and our contract manufacturers and other third parties with whom we do business are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including biological materials and chemicals. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain workers' compensation insurance to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. The failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

***We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.***

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors and other partners from authorizing, promising, offering or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for verification and validation testing outside of the United States, to sell our product candidates abroad once we enter a commercialization phase, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations.

We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors and other partners, even if we do not explicitly authorize or have actual knowledge of such activities. Our violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

### **Risks Related to our Intellectual Property**

***If we are unable to adequately protect our proprietary technology and intellectual property, or if we infringe on the intellectual property of others, it could have a material adverse effect on our business.***

Our success depends in large part on our ability to obtain, maintain and enforce intellectual property protection in the United States and other countries with respect to our proprietary epigenetic technology and products, as well as other product candidates, which are important to our business. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and product candidates. Though we have filed joint patent applications with the United States Patent and Trademark Office (“USPTO”), as well as international patent agencies, related to the epigenetic diagnostic tools that we discovered and developed with our collaborators, we currently do not solely own any issued patents or pending patent applications. Patents may not be issued for any pending or future patent applications owned by or licensed to us, and the claims allowed under any issued patents may not be sufficiently broad to protect our technology. Further we may fail to file patents in a timely manner or fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Any issued patents owned by or licensed to us may be challenged, invalidated or circumvented, and the rights under these patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture increased market position. We could incur substantial costs to defend ourselves in suits brought against us or in suits in which we may assert our patent rights against others. An unfavorable outcome of any such litigation could materially adversely affect our business and results of operations.

In addition to the protection afforded by patents, to maintain competitive position, we rely on methods of trade secret protection, including security measures and confidentiality agreements, to protect proprietary know-how, information, or technology that is not covered by our patents. Although our agreements require all of our employees, advisors and consultants to assign their inventions to us, and we require all of our employees, consultants, collaborators, contract manufacturers, advisors and any other third parties who have access to our trade secrets, proprietary know-how and other confidential information and technology to enter into appropriate confidentiality agreements, we cannot be certain that our trade secrets, proprietary know-how, and other confidential information and technology will not be subject to unauthorized disclosure. Trade secret protection does not prevent others from independently developing technology that is substantially equivalent to our trade secrets, proprietary know-how, and other information and technology. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States.

Enforcing trade secret protections is difficult, expensive, and time consuming, and the outcomes of enforcement actions are unpredictable. Moreover, in cases where we prove a misappropriation of a trade secret, we may not be able to obtain adequate remedies for such breaches, and As a result, we may encounter significant problems in protecting and defending these trade secret assets globally. If we are unable to prevent unauthorized disclosure of these trade secret assets to third parties, we may not be able to establish or maintain a competitive advantage in our market, which could adversely affect our business and operations.

Third parties may assert that we are infringing on their intellectual property rights. In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture, or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition and results of operations.

***Though we currently do not solely own any issued patents or pending patent applications, our goal is to either solely or jointly with our partners receive patent protection. We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time-consuming and ultimately unsuccessful.***

Though we currently do not solely own any issued patents or pending patent applications, in addition to patents we may file on our own behalf, we have potential patent rights that may be obtained through patent applications jointly invented and owned by the company and the Foundations or invented and owned by the Foundations. In the future, competitors may infringe our issued patents or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. Any claims we assert against perceived infringers could provoke these parties to assert

counterclaims against us alleging that we infringe their patents. In addition, in a patent infringement proceeding, a court may decide that one of our patents is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly, which could materially and adversely affect us and our collaborators.

Any litigation to enforce or defend our intellectual property rights, even if we were to prevail, could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded if we were to prevail may not be commercially meaningful. Even if we are successful, domestic or foreign litigation, or USPTO or foreign patent office proceedings, may result in substantial costs and distraction to our management. We may not be able, alone or with our licensors or potential collaborators, to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other proceedings, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or other proceedings.

***We rely on a licensing agreement with the Research Foundation for the State University of New York and the Pennsylvania State Research Foundation.***

The company's epigenetic technology is currently under development as a collaborative effort between the company and Admera Health, based on research conducted at SUNY Upstate Medical University and the Penn State College of Medicine and licensed from the Research Foundation for the State University of New York and the Pennsylvania State Research Foundation ("Foundations"). See, "The Company's Business – Intellectual Property." We have entered into a license agreement with the Foundations, which, among other things, grant us exclusive rights to practice the patent rights and associated know how in defined fields of use, comprising ASD, Parkinson's Disease, and TBI. Our failure to satisfy certain provisions of the License Agreement, including those regarding milestones for commercialization of the licensed product or payment of minimum royalties, would constitute a default thereunder and permit the Foundations to terminate the License Agreement. If our arrangement with the Foundations were to end, we would no longer be able to use the intellectual property covered by the patent, which could significantly affect our business.

***We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property or claiming ownership of what we regard as our own intellectual property.***

Many of our employees were previously employed at universities or other biotechnology companies, including our competitors or potential competitors. We may also engage advisors and consultants who are concurrently employed at universities or other organizations or who perform services for other entities. Although we try to ensure that our representatives (employees, advisors and consultants) do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our representatives have used or disclosed intellectual property, including trade secrets or other proprietary information, of a representative's former or current employer or in violation of an agreement with another party. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

In addition, while it is our policy to require our representatives who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such assignments with each party who in fact develops intellectual property for us. The assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. Similarly, we may be subject to claims that a representative performed work for us that conflicts with that person's obligations to a third party, such as an employer, and thus, that the third party has an ownership interest in the intellectual property arising out of work performed for us. Litigation may be necessary to defend against these claims. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

***We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.***

It is our policy to enter into confidentiality and intellectual property assignment agreements with our employees, consultants, contractors and advisors. These agreements generally provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively

assign intellectual property rights to us. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

***We may not be successful in obtaining or maintaining necessary rights to our product candidates through acquisitions and in-licenses.***

We currently have rights to certain intellectual property, through licenses from third parties and under patents and patent applications that we own, to develop our product candidates. Because we may find that our programs require the use of proprietary rights held by third parties, the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of the more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, financial resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of that program and our business and financial condition could suffer.

***If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.***

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. Moreover, our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

#### **Risks Related to Investment in the Convertible Notes**

***Any valuation of the company at this stage is difficult to assess.***

The valuation for the offering was established by the company. Unlike listed companies that are valued publicly through market-driven stock prices, the valuation of private companies, especially startups, is difficult to assess and you may risk overpaying for your investment.

***Future fundraising may affect the rights of investors, including the price at which the convertible promissory notes may convert to common equity shares of the company.***

In order to expand, the company is likely to raise funds again in the future, either by offerings of securities or through borrowing from banks or other sources. The terms of future capital raising, such as loan agreements, may include covenants that give creditors, including but not limited to secured creditors, greater rights over the financial resources of the company.

***The securities are unsecured indebtedness of the company and are subordinate to existing and future secured indebtedness of the company.***

The securities are convertible notes, which represent unsecured indebtedness of the company, which are convertible, in limited circumstances, to common equity interests in the company. This means that the convertible notes will rank junior to all existing and future secured indebtedness of the company and, if such notes are converted to common equity shares in the company such shares will rank junior to all existing and future indebtedness of the company and to other non-equity claims on the company with respect to assets available to satisfy claims on the company, including claims in liquidation. Any interest earnings on the convertible notes will not be payable but will instead accrete and increase the principal balance of a holder's notes. If the convertible notes are converted to equity, (1) any dividends thereon will only be payable when, as, and if declared by the Board, (2) dividends will not accumulate if they are not declared, and (3) because the company is a Delaware corporation, the company will be subject to restrictions on dividend payments and redemption payments out of lawfully available funds.

Further, the securities place no restrictions on the business or operations of the company or on its ability to incur additional indebtedness or engage in any transactions, subject only to the limited voting rights required under Delaware law which will only inure to holders' benefit if the securities are converted to common equity shares in the company.

***The company may default on its obligation to pay principal and/or interest on the convertible notes, and if such notes are converted to common equity shares in the company the company may not be able to declare and pay dividends on the shares of Common Stock.***

Subject to limitations under Delaware law, holders of Common Stock will be entitled to receive dividends, when, as and if declared by our Board of Directors, out of any assets at the time legally available for such dividends. We cannot assure you when dividends might first be paid, if ever.

***The amended and restated certificate of incorporation and the subscription agreement include forum selection provisions that require disputes to be resolved in specific forums regardless of convenience or cost to you, the investor.***

In order to invest in this offering, investors agree to resolve disputes arising under the subscription agreement in any court of competent jurisdiction in the County of Onondaga, New York for the purpose of any suit, action or other proceeding arising out of or based upon the agreement. Further, the amended and restated certificate of incorporation, specifies that the Court of Chancery in the State of Delaware is the exclusive forum for certain lawsuits, see "Securities Being Offered – Forum Selection Provisions". Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. We believe that the exclusive forum provisions apply to claims arising under the Securities Act, but there is uncertainty as to whether a court would enforce such a provision in this context. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision in Quadrant's amended and restated certificate of incorporation will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. You will not be deemed to have waived the company's compliance with the federal securities laws and the rules and regulations thereunder. This forum selection provisions may limit your ability to obtain a favorable judicial forum for disputes with us. Alternatively, if a court were to find either provision inapplicable to, or unenforceable in an action, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

***The holders of the majority of the outstanding shares of our capital stock may require other stockholders to participate in certain future events, including a sale of the company or the sale of a significant amount of the company's assets.***

In order to invest in this offering, investors will need to become a party to a stockholders' agreement which contains a drag along provision. Under this agreement, our stockholders (including but not limited to holders of convertible notes whose notes are converted to shares of Common Stock) will be subject to a drag-along provision related to a transaction in stockholders holding shares representing more than 60% of our outstanding capital stock agree to sell the company to a bona-fide third party. If you do not approve the transaction, or even if the majority of our board of directors does not approve the transaction, but the holders of the majority of the outstanding shares of the company's capital stock vote in favor of the transaction, you will still be required to participate in the transaction; see "Securities Being Offered – Stockholders' Agreement" below. Specifically, investors will be forced to sell their stock in that transaction regardless of whether they believe the transaction is the best or highest value for their shares, and regardless of whether they believe the transaction is in their best interests.

Moreover, there is uncertainty as to enforceability of drag-along provisions under Delaware law. Since the rights of common stock are determined in general by statute as opposed to by contract, and the drag-along provision is a contractual term, the extent to which this provision would be upheld by the courts in Delaware is unclear. If this provision is challenged, a sale of the company might not be effected, and all the stockholders could miss an opportunity to realize the value of their investment.

***Investors in this offering may be subject to transfer restrictions.***

In order to invest in this offering, investors will need to become a party to a stockholders' agreement which contains a "market stand-off" provision in the event the company has an underwritten public offering pursuant to an effective registration statement (e.g., an initial public offering), which may limit or delay an investor's ability to transfer shares for a period of time surrounding such an offering. See "Securities Being Offered – Stockholders' Agreement."

***There is currently no public market for the convertible notes or for our Common Stock, and a public market for the convertible notes and our Common Stock may never develop.***

The securities being sold in this offering are subject to restrictions on resale for one year. There is no formal marketplace for the resale of the convertible notes or our Common Stock. The convertible notes and our Common Stock may be traded over-the-counter to the extent any demand exists, but we have not (and may never) take steps necessary to permit such over-the-counter trading. These securities and our Common Stock are illiquid and there will not be an official current price for them, as there would be if we were a publicly-traded company with a listing on a stock exchange. Investors should assume that they may not be able to liquidate their investment for some time, or be able to pledge their convertible notes (or, if converted to Common Stock, their shares) as collateral. Since we have not established a trading forum for the convertible notes or the Common Stock, there will be no easy way to know what the convertible notes or the Common Stock is “worth” at any time. Even if we were to eventually list our Common Stock on Nasdaq or seek a quotation on the “OTCQX” or the “OTCQB” markets, there may not be frequent trading and therefore no market price for the Common Stock.

## RECENT OFFERING OF SECURITIES

We have made the following issuances of securities within the last three years:

- In July of 2018, we sold granted 10,449,367 shares of Common Stock in reliance on Rule 506(c) under Regulation D of the Securities Act, for consideration of \$13,061,709. The proceeds were used for working capital and a preference payment to convert all Preferred Stock to Common Stock.
- In September 2019, we sold 4,042,000 shares of Common Stock in reliance on Rule 506(b) under Regulation D of the Securities Act, for consideration of \$4,850,400. The proceeds of this offering were used for working capital.
- In February 2020, we sold 1,024,100 shares of Common Stock in reliance on Rule 506(b) under Regulation D of the Securities Act, for consideration of \$2,560,250. The proceeds of this offering were used for working capital.
- As of August 15, 2020 we have sold 186,853 shares of Common Stock via Regulation A of the Securities Act, for consideration of \$560,559. The proceeds of this offering are being used for working capital. We expect that the final sales numbers for our Regulation A offering will reflect sales of approximately 333,333 shares of Common Stock and proceeds slightly in excess of \$1 million.

## DILUTION

Dilution means a reduction in value, control or earnings of the shares the investor owns.

### Immediate dilution

An early-stage company typically sells its shares (or grants options over its shares) to its founders and early employees at a very low cash cost, because they are, in effect, putting their “sweat equity” into the company. When the company seeks cash investments from outside investors, like you, the new investors typically pay a much larger sum for their shares than the founders or earlier investors, which means that the cash value of your stake is diluted because all the shares are worth the same amount, and you paid more than earlier investors for your shares.

### Future dilution

Another important way of looking at dilution is the dilution that happens due to future actions by the company. The investor’s stake in a company could be diluted due to the company issuing additional shares. In other words, when the company issues more shares, the percentage of the company that you own will go down, even though the value of the company may go up. You will own a smaller piece of a larger company. This increase in number of shares outstanding could result from a stock offering (such as an initial public offering, another crowdfunding round, a venture capital round, or an investment by a private equity investor), employees exercising stock options, or by conversion of certain instruments (e.g. convertible bonds, preferred shares or warrants) into stock.

If the company decides to issue more shares, an investor could experience value dilution, with each share being worth less than before, and control dilution, with the total percentage an investor owns being less than before. There may also be earnings dilution, with a reduction in the amount earned per share (though this typically occurs only if the company offers dividends, and most early stage companies are unlikely to offer dividends, preferring to invest any earnings into the company).

The type of dilution that hurts early-stage investors most occurs when the company sells more shares in a “down round,” meaning at a lower valuation than in earlier offerings. An example of how this might occur is as follows (numbers are for illustrative purposes only):

- In June 2018 Jane invests \$20,000 for shares that represent 2% of a company valued at \$1 million.
- In December the company is doing very well and sells \$5 million in shares to venture capitalists on a valuation (before the new investment) of \$10 million. Jane now owns only 1.3% of the company but her stake is worth \$200,000
- In June 2019 the company has run into serious problems and in order to stay afloat it raises \$1 million at a valuation (before the new investment) of only \$2 million (the “down round”). Jane now owns only 0.89% of the company and her stake is worth only \$26,660.

This type of dilution might also happen upon conversion of convertible notes into shares. Typically, the terms of convertible notes issued by early-stage companies provide that in the event of another round of financing, the holders of the convertible notes get to convert their notes into equity at a “discount” to the price paid by the new investors, i.e., they get more shares than the new investors would for the same price. Additionally, convertible notes may have a “price cap” on the conversion price, which effectively acts as a share price ceiling. Either way, the holders of the convertible notes get more shares for their money than new investors. In the event that the financing is a “down round” the holders of the convertible notes will dilute existing equity holders, even more than the new investors do, because they get more shares for their money. Investors should pay careful attention to the amount of convertible notes that the company has issued (and may issue in the future), and the terms of those notes.

If you are making an investment expecting to own a certain percentage of the company or expecting each share to hold a certain amount of value, it’s important to realize how the value of those shares can decrease by actions taken by the company. Dilution can make drastic changes to the value of each share, ownership percentage, voting control, and earnings per share.

## **WHAT IT MEANS TO BE A MINORITY HOLDER**

As an investor in convertible promissory note of the company, you will not have any rights in regards to the corporate actions of the company, including additional issuances of securities, company repurchases of securities, a sale of the company or its significant assets, or company transactions with related parties. Even if your securities convert to equity of the company, investors in this Offering will hold minority interests, potentially with rights less than those of other investors, and will have limited influence on the corporate actions of the company.

## **PLAN OF DISTRIBUTION**

### **Plan of Distribution**

We are offering a maximum of \$1,070,000 in convertible promissory notes on a “best efforts” basis.

The minimum investment is \$100.

The minimum amount Quadrant needs to raise in order to close this round is \$50,000. If we are unable to raise at least \$50,000, all investments held in escrow will be returned to investors.

Wefunder has agreed to host this offering of our convertible promissory notes on its online platform. Prospective investors may subscribe for our shares in this offering only through the Wefunder website.

In oversubscriptions, we intend to prioritize investments on a first-come, first-served basis, but we reserve the right to prioritize investments in whatever manner we believe to be in the best interest of the Company.

If the company raises more than the maximum offering amount in this offering, it may conduct an offering for convertible promissory notes under Regulation D for subscribers who are accredited investors. The cash price per share in that offering will be the same as this offering.

More information about the investment process can be found in the “Wefunder Process” attached hereto as Exhibit A.

### **Transfer Agent and Registrar**

Integral Transfer Agency, located at 635 16<sup>th</sup> St., Niagara Falls, New York 14301, is the transfer agent and registrar for Quadrant Biosciences Inc.’s common stock, and the convertible notes issued hereunder.

## **USE OF PROCEEDS TO ISSUER**

Whether the offering is fully subscribed or if just the target amount is reached, Quadrant plans to use the net proceeds for working capital.

If we raise in excess of the oversubscription amount in a Regulation D offering, the amounts will be used for working capital and to advance our development of clinical diagnostic tools.

**The company reserves the right to apply the proceeds of the offering in different proportions, or to other related or unrelated uses without notice if management believes it is in the best interests of the company.**

## THE COMPANY'S BUSINESS

### Overview

The company is a biotechnology company focused on neuroscience research and the development of clinical diagnostics, therapeutics and related products and services. The company has research relationships with more than 30 academic medical or clinical sites in North America, Central America and Europe; these sites recruit research study participants and collect biological samples, medical histories, phenotypic characteristics and demographic data related to several large-scale, global health issues, including Covid-19, Autism Spectrum Disorder, Parkinson's Disease, concussion injuries, and several other neurodevelopmental and neurodegenerative diseases and disorders. Through 2019, the company has accumulated biological samples and data related to nearly 4,000 patients, ranging in age from new-born to over 90 years and including nearly every racial and ethnic background. The company analyzes these biological samples using next-generation sequencing technology for epigenetic and genetic content and further analyzes the results of this sequencing, along with medical histories, phenotypic characteristics and demographic data of the patients, using the artificial intelligence and machine learning tools developed by the company to identify molecular profiles which accurately differentiate patients with the subject disorder or disease from those without it.

In certain cases, the company believes the molecular profiles discovered through this process may yield appropriate targets for the development of new therapeutics.

The company has developed proprietary epigenetic and genetic research systems which align and quantify certain human and microbial molecules which may play a significant role in gene expression and observed phenotypic characteristics. The company extensively utilizes cloud-computing and database storage facilities offered by Amazon Web Services.

The technology pioneered by Quadrant has translated into the development of clinical diagnostic tools which are based on identifying certain profiles of biomarkers in biological samples, such as blood and saliva, that are highly correlated with medical conditions and can be used as part of the diagnostic workup of patients who may be affected by the conditions. The most important biomarkers used in the Quadrant tests consist of certain nucleic acid transcript sequences for microRNA and other small non-coding RNAs produced by the patient (human transcripts) and by the microbes present in the patient's mouth (microbial transcripts). The technology consists of:

- methods for determining sets of biomarker human transcripts and microbial transcripts that are present in different amounts in patients with certain conditions as compared to patients who do not have the condition, and
- specific ways of implementing the methods to identify the set of biomarker human transcripts and microbial transcripts that are most highly correlated with a particular condition.

The company has contractual agreements with one or more CLIA certified laboratories for the co-development and commercial sale of Quadrant's tests.

Further, due to the Covid-19, in March the company made the decision to pivot, and leverage its expertise in RNA analysis to directly address this serious pandemic. As a result, today we are involved in three significant COVID-19 projects addressing different ways to assess the presence and prevalence of COVID-19, as described herein.

The intellectual property associated with the technology includes:

- potential patent rights in the methods of using the key biomarkers that are associated with a particular condition, such as Autism Spectrum Disorder, Parkinson's Disease, or concussion injuries, together with the associated know-how necessary to implement the methods (patent applications), and trade secret rights in the specific algorithms that use the human and microbial RNA biomarker transcripts as inputs, and produce the best correlation with the target condition.

The company was incorporated in Delaware on March 13, 2015 as Motion Intelligence, Inc. On August 6, 2015, Motion Intelligence LLC, a New York limited liability company merged into Motion Intelligence Inc. The company changed its name to Quadrant Biosciences Inc. on September 7, 2017. The company is located at the Institute for Human Performance at the State University of New York Upstate Medical University and is a participant in the New York State START-UP NY economic development program, which provides the company and its employees with substantial tax and other benefits under New York law. Quadrant was recognized as the 2019 Technology Business of the Year by the New York State Small Business Development Center.

The company has six wholly owned subsidiaries:

- Motion Intelligence LLC sells ClearEdge Toolkits to end users utilizing distributors and agents.
- Quadrant Epigenetics LLC will record revenue from epigenetic activities, including revenues from Clarifi ASD.
- Quadrant IP Holdings LLC houses the company's patents.
- Quadrant Viral Testing LLC will be the entity through which we intend to engage in our Covid-19 diagnostic work.
- Quadrant Vision Technologies LLC has not yet engaged in any business activities.
- Quadrant Biosciences Canada Ltd has a single employee, resident in Canada, but has not yet engaged in any material business activities.

## **Principal Products and Services**

### Clarifi ASD

Clarifi ASD has been designed and developed in concert with Admera Health, a CLIA certified and College of American Pathologists ("CAP") accredited clinical laboratory, to assist clinicians in providing a diagnosis as to whether children aged 18-83 months have ASD. Clarifi ASD is an easy to administer, non-invasive, molecular test that helps provides objective support for earlier diagnosis of ASD, when treatment is most effective.

ASD is one of the most commonly diagnosed developmental disabilities in the United States; however, the current patient journey takes time to identify and address ASD. The average child waits well over a year for a diagnostic evaluation. The inadequacy of existing screening tools is causing pediatricians to over-refer patients for ASD evaluations. The availability of developmental specialists is limited (both by number and geography); this causes wait times for evaluation to exceed 12 months on average and may exceed 18 months in some locations. Autism is being diagnosed on average in the fifth year of life, but it should be reliably diagnosed earlier to expedite access to intervention services to maximize their effectiveness.

Early diagnosis leads to early intervention. It is imperative to initiate early intensive behavioral intervention ("EIBI") therapy as early as the second year of life, a dynamic period of brain growth and neuroplasticity:

- As has been demonstrated in hundreds of clinical research studies since 1987, between 45% and 50% of children on the autism spectrum who have the benefit of EIBI therapy are indistinguishable from their peers by the first grade. This outcome dramatically improves the quality of life for ASD children and their families.

Clarifi ASD is utilized by pediatricians, family physicians, and other clinicians with patients (18 months through 83 months of age) with a positive screening test or a clinical suspicion of ASD. The goal of Clarifi ASD is to accelerate the autism diagnostic process, with results available in 3 to 6 weeks, and thereby assist medical professionals in identifying the likelihood of an ASD diagnosis. This will ultimately help provide children earlier access to important services.

### ClearEdge Toolkit

In August 2017, the company began marketing the ClearEdge Toolkit, a data-driven clinical brain health assessment toolkit that is used to manage a number of conditions, including but not limited to general brain health, as measured through an assessment of cognitive processing speed and postural stability. The toolkit includes a suite of tests that includes cognitive assessment, balance and symptoms tracking. The toolkit includes three separate tests:

- ClearEdge DANA: an FDA-cleared Class II clinical neurocognitive tool developed by Anthrotronix Inc., measures and monitors subtle changes in cognitive function. ClearEdge DANA is efficient and effective for a wide range of preventive and acute healthcare uses.
- ClearEdge Balance: a Class II medical device that assesses changes in balance using our proprietary Edge™ Sensor. The Edge Sensor is a wireless inertial measurement unit worn on the patient's lower back, at the approximate center of mass. ClearEdge Balance was cleared by the FDA on October 22, 2019. ClearEdge Balance is an improved version of its predecessor ClearEdge Motion, a Class I balance module that also assessed changes in balance using the Edge Sensor. In June, 2020, ClearEdge Motion was discontinued and replaced by ClearEdge Balance in new production of ClearEdge Toolkits, and ClearEdge Toolkits in the market were upgraded with new software to replace ClearEdge Motion with ClearEdge Balance.

- Questionnaires: Questionnaires related to symptoms used for tracking and assessment.

While the ClearEdge Toolkit continues to gain clinical acceptance and has additional utility in clinical research applications, the company focuses its resources on the sale and marketing of Clarifi ASD and the development of other epigenetic diagnostic tools and services.

### Covid-19

Since March 2020, the company has been focusing on ways to utilize its technology to develop a comprehensive approach to assessing Covid-19.

The company is currently working on these three levels of testing:

- *Individual Testing - Clarifi Covid-19 Test Kit.* Partnering with SUNY Upstate Medical University, we developed an individual test for Covid-19. The Clarifi Covid-19 Test Kit is a non-invasive and easy to administer saliva swab, a kit of reagents for extraction of viral RNA and performing quantitative polymerase chain reaction (qPCR) testing to determine the presence or absence of SARS-CoV-2 viral RNA. The Clarifi Covid-19 Test Kit contains the saliva collection swab and the reagents needed to run the analysis, together with detailed instructions regarding performing the testing method / procedure. Upon receipt of Emergency Use Authorization the Clarifi Covid-19 Test Kit will be available for use by high-complexity clinical laboratories serving patients through physicians' offices, urgent care clinics and hospitals. We optimistically expect the FDA will approve our EUA, but there can be no assurance that they will.
- *Community/Municipal Screening: Wastewater Surveillance.* This project, funded by New York State and in collaboration with SUNY ESF, Upstate Medical University, and global civil engineering firm Arcadis, involves collecting and analyzing wastewater from county and municipal sewer systems for the presence of the Covid-19 virus. Our analysis of wastewater samples provide local health officials and policymakers with early indications and information regarding the presence and preponderance of Covid-19 infections in these communities.
- *Group/College Surveillance: Pooled Surveillance.* We have partnered with the State University of New York to provide test components and consulting services for use by SUNY in performing Covid-19 surveillance of over 250,000 students preparing to begin the fall semester at SUNY schools, by testing pooled samples of saliva from small groups of students. This pooled testing approach involves collecting saliva samples from a small group (for example 12) of students and combining them into one test. A negative test means that all students in the pooled group are presumed to be coronavirus-free. A positive test result for the pool would mean every student in that group would need to be individually tested. Screening groups of students at a time greatly reduces the cost of supplies, staffing and time required to perform tests.

### Products under development

The company believes its diagnostic solutions that are currently under development will help accelerate advances in healthcare. Market trends which have facilitated the company's development efforts include:

- reduced cost of genetic sequencing technology,
- increasing availability and access to data through cloud computing, and
- ongoing developments in artificial intelligence and machine learning.

The company is currently developing certain tests, products and services and other assets relating to the measurement and interpretation of epigenetic control of biochemical and metabolic pathways that are altered in patients with certain medical conditions. Biochemical and metabolic pathways are directly controlled by proteins, such as enzymes. These proteins are made by translation of messenger RNA, which is in turn made by transcription of genetic DNA. MicroRNAs are involved in controlling, via epigenetic mechanisms, the making of proteins by translation of messenger RNA. MicroRNAs therefore can be used as biomarkers to derive information about how epigenetic control mechanisms are altered in patients with a particular medical condition. In addition to Clarifi ASD, epigenetic diagnostic aids currently in development by the company include tests to evaluate the human and microbial transcripts associated with Parkinson's Disease and the microRNA profiles associated with concussion injuries. These tests are needed to provide clinicians with objective support in the diagnosis and management of these health conditions.

## Intellectual Property

The company's epigenetic technology is based on research originally conducted at SUNY Upstate Medical University and the Penn State College of Medicine and is licensed from the Research Foundation for the State University of New York and the Pennsylvania State Research Foundation ("Foundations"). The intellectual property associated with the technology includes:

- potential patent rights that may be obtained through the patent applications (together with associated know how) that are jointly invented and owned by the company and the Foundations,
- potential patent rights that may be obtained through the patent applications (together with associated know how) that are invented and owned by the Foundations, and
- trade secrets that are created and owned by the company.

The patent applications presently consist of a combination of provisional patent applications and non-provisional patent applications. The provisional patent applications must be converted into non-provisional applications within one year after filing the provisional application, and the non-provisional applications (current and future converted applications) must then be prosecuted at the USPTO, as well as select international patent offices, to attempt to obtain issued patent rights.

The company has entered into License Agreements with the Foundations, which grant the company the exclusive right to practice certain existing joint patent rights and Foundation-owned patent rights in fields of use consisting of products and services for the evaluation of ASD, Parkinson's Disease, and TBI. The company's ASD, Parkinson's, and TBI License Agreements have the same terms and conditions regarding the earned royalties payable, the term, and early termination by the Foundations.

Under the License Agreements, earned royalties are payable at the rate of 4% of revenue from licensed products if the licensed technology includes an issued patent, and at the rate of 2% of revenue if no patents are issued and the licensed technology includes only the know-how created in development of the technology covered by the License Agreement.

Further, each agreement requires Quadrant to pay a minimum amount of royalties per year, and if earned royalties are less than the minimum amount for a particular year, a minimum royalty payment is required so that the minimum amount is paid to the Foundations. The minimum royalties are:

Year	ASD License Agreement	Parkinson's License Agreement	TBI License Agreement
2019	\$ 5,000	\$ 1,000	\$ 500
2020	\$ 10,000	\$ 5,000	\$ 1,000
2021	\$ 25,000	\$ 10,000	\$ 5,000
2022	\$ 50,000	\$ 25,000	\$ 10,000
2023	\$ 50,000	\$ 25,000	\$ 10,000
2024	\$ 50,000	\$ 25,000	\$ 10,000
2025 through expiration (estimated to be 2038)	\$ 50,000	\$ 25,000	\$ 25,000

The total estimated payments, assuming paying the minimum through expiration, for the ASD, Parkinson's and TBI Licenses are \$840,000, \$416,000 and \$361,500, respectively.

Further, each License Agreement requires Quadrant to begin selling licensed products by the following agreed upon commercialization deadlines: Parkinson's licensed product, December 31, 2020 and TBI licensed product, December 31, 2022. Quadrant has already begun commercialization of the ASD licensed product. Quadrant has the option to extend the commercialization deadlines by a maximum of three six-month extensions, for the following fees: \$25,000 for the first extension; \$50,000 for the second extension, and \$100,000 for the third extension.

The term of the License Agreements, which include one or more issued patents, extends until expiration of the last issued patent. Issued patents expire 20 years after the earliest filing date, and most of Quadrant's patent applications have effective filing dates in 2018. The term of any License Agreement that covers only know-how is 10 years after the first commercial sale of the licensed product that embodies the know-how.

The Foundations can terminate the License Agreements early if the company fails to commercialize licensed products by agreed upon deadlines or the company fails to make required payments.

Quadrant has also entered into a license agreement with the SUNY Research Foundation (“SUNY RF”) in relation to its Covid-19 testing technology. The technology embodied in the Clarifi Covid-19 Saliva Test was jointly developed by Quadrant and SUNY Upstate Medical University personnel, and is therefore co-owned by Quadrant and SUNY RF. The technology consists of inventions and know-how related to the method of testing saliva samples for the presence of the SARS CoV 2 virus, and the test kit of materials and reagents that are used in the testing method. The testing method involves extraction of the SARS CoV 2 viral RNA and amplification and detection of the viral RNA using a qualitative polymerase chain reaction. SUNY Research Foundation has granted Quadrant an exclusive worldwide license of SUNY RF's ownership interest in the Covid Test technology in consideration for Quadrant's payment of a royalty in the amount of 50% of the net income realized on sales of products or services that embody the Covid Test technology. The term of the license extends for the entire time period during which Quadrant sells any product or service that embodies the Covid Test technology. SUNY RF has the right to terminate the license if Quadrant fails to commercialize the Covid Test technology before the end of calendar year 2021, if Quadrant defaults in performance of its obligations under the license, for example failing to pay royalties when due, and if Quadrant declares bankruptcy or becomes insolvent.

The company has filed patent applications with the USPTO in relation to intellectual property related to some significant epigenetic diagnostic tools it is developing based on the research conducted at one or both of the Foundations. The company believes it is a leader in the development of intellectual property, products and services and other diagnostic-related assets relating to human and microbial transcripts.

Quadrant has 29 pending patent applications, as of February 10, 2020, grouped in the following 8 patent families:

- Methods of determining the probability that a child is affected by ASD, using RNA biomarkers obtained from a sample of saliva; 9 national applications derived from 2 patent cooperation treaty (“PCT”) applications
- Methods of determining the probability that a patient is affected by mild Traumatic Brain Injury, using RNA biomarkers obtained from saliva; 7 national applications derived from 1 PCT application
- Methods of determining the probability that a patient is affected by Parkinson’s Disease, using RNA biomarkers obtained from saliva, 1 PCT application, to be nationalized subsequently
- Methods of determining the probability that a patient is affected by Anorexia Nervosa, using RNA biomarkers obtained from saliva, 1 PCT application, to be nationalized subsequently
- Methods of applying machine learning techniques to develop a system that classifies a set of RNA biomarkers according to patterns of relative abundance that are associated with a target medical condition, and methods of using the classification system to test samples of the biomarkers; 1 US application and 1 PCT application, to be nationalized subsequently
- Methods of normalizing micro RNA (miRNA) biomarkers to account for circadian variations in any testing process based on differentially expressed miRNAs; 7 national applications derived from 1 PCT application
- Methods of normalizing miRNA biomarkers to account for variations caused by exercise in any testing process based on differentially expressed miRNAs; 1 national application derived from 1 PCT application
- Method of identifying patterns of abundance of miRNA biomarkers in saliva that are associated with athletes who have indicia of a runner’s high and methods of using the patterns to determine or monitor the efficacy of exercise regimes, physical therapy, or other types of therapy; 1 US provisional application, the decision whether to file a standard application to be made subsequently

Quadrant has actively pursued the registration of the “Clarifi” mark, filing 34 applications in the U.S. and numerous countries. The current status of these efforts (and a brief, general, description of the terms “registered”, “filed and pending”, and “approved”) follows:

- Registered – i.e., the certificate of registration has issued and is in force: Australia, Canada, China, European Union, Great Britain, Indonesia, India, Japan, Korea, Norway, New Zealand, Philippines, Saudi Arabia, Singapore, Switzerland, Thailand, and Vietnam.
- Filed and pending/allowed – i.e., in this context the term “pending” means the application is in the examination process but has not yet been approved or allowed, and “allowed” means the examiner has approved/allowed the application but it has not yet been registered (it could be waiting for the opposition period to pass or for a Statement of Use to be filed (as in the U.S.) : United States (allowed), Brazil (allowed), Hong Kong (allowed), Taiwan (2 allowed, 1 pending), Malaysia (pending).

Every country conducts trademark examinations differently; some are limited to a formalities exam only (i.e., they do not look for conflicts).

Oppositions have been raised against our trademark filings in the European Union and Great Britain; it is currently unclear how these oppositions will be resolved.

## **Market - Epigenetics**

The global epigenetics market is a new and developing market. According to Grand View Research, Inc., the global epigenetics diagnostic market size was \$5.5 billion in 2018 and is expected to reach \$21.7 billion by 2026.

The target market for our different products will depend on the specific focus of the product, as outlined below:

### Autism Spectrum Disorder

For Clarifi ASD, we believe our target market is the subsection of children who, based on clinical observations, are at risk to have an Autism Spectrum Disorder diagnosis. Of the nearly 4 million children born in the United States every year, nearly 1 in 6 will have a developmental delay. Currently, children with a wide range of developmental delays are referred for an ASD diagnosis; these children represent the target market for Clarifi ASD.

ASD is a developmental disability that can cause significant social, communication and behavioral challenges. According to the US Centers for Disease Control and Prevention (“CDC”):

- About 1 in 54 children has been identified with Autism Spectrum Disorder according to the most recent estimates from CDC’s Autism and Developmental Disabilities Monitoring (“ADDM”) Network (2020).
- The reported prevalence of ASD has increased significantly: in 2002, this statistic was 1 in 150; in 2006, prevalence was 1 in 110; in 2010, prevalence was 1 in 68.
- ASD is reported to occur in all racial, ethnic, and socioeconomic groups.
- ASD is about 4 times more common among boys than among girls.
- Studies in Asia, Europe, and North America have identified individuals with ASD with an average prevalence of between 1% and 2%.

### Parkinson’s Disease

For our early-stage Parkinson’s Disease diagnostic (in development), we believe our target market is those adults who, based on clinical observations, are at risk to have a PD diagnosis. In clinical research, movement disorders such as tremor and parkinsonism are observed in approximately 21% of adults aged 50 or more; these adults represent the target market for our PD diagnostic. For the US population of nearly 330 million, approximately 115 million are aged 50 or older.

According to the CDC, PD is the second most common neurodegenerative disease after Alzheimer’s disease. Population prevalence of PD increases from about 1% at age 60 to 4% by age 80. Early symptoms of PD include tremor, rigidity, and difficulty walking; cognitive decline is common at later stages. The underlying pathology of PD is selective death of dopamine-generating cells in the substantia nigra, a part of the brain involved in movement, reward, and addiction. Treatment of PD with levodopa temporarily controls motor symptoms but does not slow disease progression. Like other common diseases, PD is thought to arise from complex interactions between genetic and environmental factors.

### Concussion Injuries (Traumatic Brain Injuries)

For our acute concussion injury diagnostic (in development), we believe our target market is children and adults who have experienced some form of trauma and, as a result, are at risk to have a concussion (or traumatic brain injury) diagnosis. In 2014, there were approximately 2.87 million traumatic brain injury-related emergency department visits, hospitalizations, and deaths in the US, including over 837,000 of these health events among children.

A concussion is a type of traumatic brain injury caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells.

According to the CDC, traumatic brain injury is a serious public health problem in the United States. Each year, traumatic brain injuries contribute to a substantial number of deaths and cases of permanent disability. Further information about TBIs:

- In 2014, falls were the leading cause of TBI. Falls accounted for almost half (48%) of all TBI-related emergency department (“ED”) visits. Falls disproportionately affect children and older adults:
  - o Almost half (49%) of TBI-related ED visits among children 0 to 17 years were caused by falls.
  - o Four in five (81%) TBI-related ED visits in older adults aged 65 years and older were caused by falls.
- Being struck by or against an object was the second leading cause of TBI-related ED visits, accounting for about 17% of all TBI-related ED visits in the United States in 2014.
- Over 1 in 4 (28%) TBI-related ED visits in children less than 17 years of age or less were caused by being struck by or against an object.
- Falls and motor vehicle crashes were the first and second leading causes of all TBI-related hospitalizations (52% and 20%, respectively).

### **Market – Cognitive Function and Balance Assessment Systems**

The market for clinical tools to measure cognitive function and balance changes in patients (e.g., ClearEdge Toolkit) is significant and includes the following sectors:

- Preventive Care, allowing clinicians to better
  - o Assess medical and psychological states.
  - o Track changes in performance over time.
  - o Screen for changes in neurobehavioral and cognitive function.
  - o Decipher changes in brain function as it pertains to cognitive decline and cognitive processing over time.
- Geriatric Care, allowing clinicians to better
  - o Monitor changes in cognitive efficiency over time to inform necessary lifestyle modifications.
  - o Promote quality of life in conjunction with wellness exams.
- Rehabilitative Care, allowing clinicians to better
  - o Assess and track changes in cognition and reaction due to causes such as head injury, post-traumatic stress, etc.
  - o Monitor changes and measure progress or decline after a stroke, illness, injury or other neurological incidents.
  - o Track detailed changes in cognitive performance throughout treatment and recovery.

### **Market-Covid-19**

Due to the scope, nature and severity of the current pandemic, there is currently significant need for fast, efficient, non-invasive individual tests. We anticipate the need for these tests will remain at least until there is a widespread eradication either through vaccination or otherwise of the disease. We are initially focused on receiving U.S. regulatory approval of our application for an EUA for our Covid-19 Test Kit for individuals. We are also focused on our work with SUNY Upstate Medical Center to conduct pooled surveillance of returning students for Covid-19 and on our work with SUNY Upstate Medical Center, SUNY ESF, Syracuse University and Arcadis in conducting tests to detect the presence of Covid-19 in wastewater samples collected from municipalities in the State of New York.

## **Competition**

There is a deep market need for improved diagnostic tools across a wide range of human health conditions and diseases and the company expects competition to increase, especially with respect to diagnostic tests related to ASD, Parkinson's Disease and traumatic brain injury. Further, due to the exigent nature of the Covid-19 pandemic, there is a significant need for fast, effective, and non-invasive diagnostic tools. The company expects to face significant competition from both emerging medical device, biotechnology and health care companies, and established market participants, some of whom may be larger and have more resources than the company.

## **Suppliers**

We source for products and laboratory substances used in the chemical reactions incorporated into our processes, or reagents, sequencers, equipment, and other materials which we use in our laboratory operations from a variety of suppliers. However, currently for several materials we rely on sole suppliers. For instance, DNA Genotek is the sole supplier of saliva swabs used in our Clarifi ASD test kits and Illumina is the sole supplier of sequencers and various associated reagents used in testing the saliva collected, and is the sole provider of maintenance and repair services for these sequencers.

## **Research and Development**

The amount expensed for research and development for the year ended December 31, 2019 was \$280,879 and for the year ended December 31, 2018 was \$145,993.

## **Employees**

The company currently has 42 employees. Employees are all at will, but we do have employment agreements with basic confidentiality, proprietary rights and non-compete provisions with all company employees.

## **Regulation**

Medical products and devices are regulated by the FDA in the United States and can be regulated by foreign governments for devices sold internationally. The Federal Food, Drug and Cosmetic Act and regulations issued by the FDA regulate testing, manufacturing, packaging, and marketing of medical devices.

Unless an exemption applies, each medical device or product we wish to distribute commercially in the United States will require marketing authorization from the FDA prior to distribution, which would be premarket notification, also called 510(k) clearance, or in cases where that may not be available premarket approval, also called PMA approval ("PMA"). However due to the exigent nature of the Covid-19 pandemic in the U.S., on February 4, 2020, the Secretary of the Department of Health and Human Services (HHS) upon determining that there is a public health emergency that has a significant potential to affect national security or the health and security of United States citizens living abroad, declared that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for the detection and/or diagnosis of Covid-19. This emergency use authorization ("EUA") approval is needed to distribute and/or use in vitro diagnostic test for Covid-19 in the United States.

The ClearEdge Toolkit includes modules that are regulated as medical devices and require premarket notification from the FDA. However, we believe that our epigenetic diagnostic tests are LDTs that are not subject to FDA regulation and do not require this notification. Notification requirements and the related exemptions are discussed in more detail below.

Our manufacturing processes and facilities are also subject to regulations, including the FDA's Quality System Regulation ("QSR") requirements. These regulations govern the way we manufacture our products and maintain documentation for our manufacturing, testing and control activities. In addition, to the extent we manufacture and sell products abroad, those products are subject to the relevant laws and regulations of those countries.

Finally, the labeling of our products and devices, our promotional activities and marketing materials are regulated by the FDA and various state agencies. Violations of regulations promulgated by these agencies may result in administrative, civil or criminal actions against us or our manufacturers by the FDA or governing state agencies.

### Pre-market clearance

To obtain 510(k) clearance for a medical device, an applicant must submit a premarket notification to the FDA demonstrating that the device is "substantially equivalent" to a device legally marketed in the United States that is not subject to PMA approval, commonly

known as the “predicate device.” A device is substantially equivalent if, with respect to the predicate device, it has the same intended use and has either (i) the same technological characteristics or (ii) different technological characteristics and the information submitted demonstrates that the device is as safe and effective as a legally marketed device and does not raise different questions of safety or effectiveness. A showing of substantial equivalence sometimes, but not always, requires clinical data. Generally, the 510(k) clearance process can exceed 90 days and may extend to a year or more.

#### Current 510(k) Applications

We submitted a 510(k) application for ClearEdge Balance, a new balance sensor, on December 27, 2018. The FDA grants 510(k) clearance when submitted information establishes that the proposed device is “substantially equivalent” to a legally marketed predicate device. On April 1, 2019, we received from FDA a list of deficiencies in the submission found by the reviewer. We filed supplemental material in connection with the 510(k) submission for ClearEdge Balance to address the deficiencies noted by FDA, and we obtained clearance of ClearEdge Balance on October 22, 2019.

The ClearEdge Toolkit consists of:

- a software module licensed from Anthrotronix that performs testing of cognitive reaction times, which is a Class II medical device for which Anthrotronix obtained premarket clearance, or 510(k);
- an accelerometer-based sensor for measuring balance which we manufacture, and which is a Class I medical device that does not require premarket clearance or approval from the FDA; and
- an internet-based network system for transmission and storage of the electronic test results generated by the first two sensors, which FDA regulates as a Medical Device Data System that is exempt from most FDA regulatory requirements.

ClearEdge Balance, the improved version of the balance module, has been cleared by the FDA and will be phased in to replace the predecessor balance module in 2020.

#### EUA Application for Covid-19 Test Kit for individuals

The FDA has prescribed templates to be used for submissions to obtain EUAs for Covid-19 test kits, which enumerate the detailed information that FDA requires to issue the EUA. The information required includes the intended use of the test kit, the materials and reagents comprising the test kit, the step by step testing procedure in which the test kit is used, including laboratory equipment required to perform each step, and all laboratory and clinical testing that is required to demonstrate the accuracy of the test. The process to obtain an EUA typically consists of two phases, an initial Pre-EUA submission that is used to identify and resolve any significant problems that would preclude issuance of an EUA and a final EUA submission. The final EUA submission addresses the details that the FDA will require to demonstrate that the Covid-19 test kit will have acceptable sensitivity (to detect a high percentage of people who are infected) and specificity (to not generate a positive test result for someone who is not infected; i.e. limit false positive results). The company’s EUA submission is in the final phase of review, and the company is preparing supplemental information that was requested by the FDA to document the performance of the Clarifi Covid-19 test. We optimistically expect the FDA will approve our EUA, but there can be no assurance that they will.

#### Laboratory-Developed Tests

LDTs are clinical laboratory tests that are developed, validated and manufactured, and used by a single laboratory and then only performed in that laboratory (the test is not shipped to other laboratories). Historically, the FDA has exercised enforcement discretion with respect to most LDTs, and not required the CLIA-certified laboratories that perform such tests to comply with the agency’s requirements for medical devices (e.g., establishment registration, device listing, QSR, premarket clearance or approval, adverse event reporting).

In recent years, the FDA has indicated that it intends to end its policy of enforcement discretion and begin regulating LDTs as medical devices. In October 2014, the FDA published two draft guidance documents describing a proposed risk-based framework under which it might regulate LDTs. The FDA’s draft framework proposed, among other things, premarket review for higher-risk LDTs, such as those that have the same intended use as FDA-approved or cleared diagnostics currently on the market. The FDA stated that it did not intend to modify its policy of enforcement discretion until the draft guidance documents are finalized. Subsequently, on January 13, 2017, the FDA published a “discussion paper” in which the agency outlined a substantially revised “possible approach” to the oversight of LDTs. The discussion paper explicitly states that it is not a final version of the 2014 draft guidance and that it does not represent the agency’s “formal position”; rather, the discussion paper represents the latest iteration of the agency’s thinking on LDTs, which the agency posted to “spur further dialogue”. It is unclear at this time when, or if, the FDA will finalize its plans to end enforcement discretion, and even then, the new regulatory requirements are expected to be phased-in

over time. Nevertheless, the FDA may decide to regulate certain LDTs on a case-by-case basis at any time. We believe that the epigenetic tests that we initially intend to offer are considered LDTs.

Further, a relatively new type of LDT consists of tests that use software algorithms to analyze the results of next generation sequencing of nucleic acids, known as bioinformatics analysis. The Clarifi ASD test is an example of this new type of bioinformatics LDT. It is often the case that the bioinformatics and next gen sequencing parts of LDTs are performed at separate facilities, because of the inherent differences in the equipment and personnel who process specimens to extract the nucleic acids and sequence them and the equipment and personnel who design and implement the analytic software algorithms. In the case of Clarifi ASD, processing and sequencing of saliva specimens is done at Admera. Quadrant and Admera have a contractual arrangement for joint control of operations and personnel who perform the bioinformatics analysis for the Clarifi ASD test, and the bioinformatics analysis is under the control of Admera's quality assurance system, which is CLIA certified. FDA's regulation of bioinformatics LDTs is in its infancy, and there are not well-defined requirements regarding the joint control of the distributed sequencing and bioinformatics parts of these LDTs. There is therefore uncertainty about the risk that FDA may withdraw its enforcement discretion with respect to bioinformatics LDTs, such as Clarifi ASD, and decide to regulate them as medical devices.

If the FDA withdraws its enforcement discretion with respect to the Clarifi ASD test, it is likely that the Clarifi ASD test would be considered an In Vitro Diagnostic Device ("IVD"). IVDs are typically Class II devices, and there does not appear to be any existing IVD classification that would fit the Clarifi ASD test. As a result, there is no predicate device which could be used to obtain 510(k) clearance for the Clarifi ASD product, by demonstrating that Clarifi ASD was substantially equivalent to the predicate. Based on information gathering communications with FDA in August, 2017, we believe that it would be possible to use what is known as the de novo regulatory pathway to seek and obtain classification of the Clarifi ASD test as a Class II IVD medical device and obtain clearance to market and sell the Clarifi ASD test based on requirements very similar to the 510(k) process. However, there is no guarantee that the de novo regulatory pathway can be used, and if it is available, how long it will take to obtain de novo clearance to market the Clarifi ASD test.

If the de novo regulatory pathway cannot be used to obtain clearance to market Clarifi ASD, the Clarifi ASD test would be a Class III medical device, and it would be necessary to use the PMA process to obtain authorization to market the Clarifi ASD test. The PMA process is much more costly and time consuming than the 510(k) clearance pathway, because while 510(k) clearance requires demonstrating substantial equivalence to an existing predicate device by comparison to the predicate, the PMA process requires demonstrating the safety and efficacy of the candidate device by valid scientific evidence regarding its technology and clinical utility. If the PMA process were required for Clarifi ASD, it is uncertain whether we have the resources necessary to obtain approval or whether approval could be obtained within a feasible time frame for our business.

Legislation has been introduced in previous Congresses, and is being drafted in the current Congress, that would clarify FDA's role in the oversight of LDTs. For example, a congressional bill entitled the Verifying Accurate Leading-Edge In Vitro Clinical Tests Development (VALID) act, would create a new type of regulated product, called In Vitro Clinical Tests, which would be subject to regulation by the FDA. We expect that new legislative proposals will be officially introduced from time-to-time. That being said, the likelihood that Congress will pass any such legislation – and the extent to which such legislation would give the FDA authority to regulate our LDTs – is unclear at this time.

## **Litigation**

From time to time, the company may be involved in legal proceedings. The results of such legal proceedings and claims cannot be predicted with certainty, and regardless of the outcome, legal proceedings could have an adverse impact on the company's business because of defense and settlement costs, diversion of resources and other factors.

As a result of the company's novel discoveries in medical diagnostics, the company and its advisors have been, and remain involved in, ongoing discussions with regulatory authorities. While the company considers these continuing inquiries to be ordinary course in light of the nature of the company's projects, any failure by the company to satisfy regulatory authorities that it is in compliance with all applicable rules and regulations could have a material adverse effect on the company. At this time, the company is not aware of any proceedings against it which are expected to have a material adverse effect on its financial position or operations.

## **THE COMPANY'S PROPERTY**

The company does not currently own any property. We lease office space in (i) Syracuse, New York at SUNY Upstate Medical Center and at a local affiliated biotech accelerator, and (ii) San Antonio, Texas in a commercial/industrial area. The lease for office space located at SUNY Upstate Medical Center expires in October 2021; the lease for office space located at the biotech accelerator expires in September 2021; and the San Antonio commercial/industrial space is leased month-to-month.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes included in this Offering Memorandum. The following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements.

### Overview

The company was incorporated in Delaware on March 13, 2015 as Motion Intelligence, Inc. On August 6, 2015, Motion Intelligence LLC, a New York limited liability company merged into Motion Intelligence Inc. The company changed its name to Quadrant Biosciences Inc. on September 7, 2017.

Quadrant is a life science company focused on improving life quality through the discovery of epigenetic and functional changes resulting from neurodevelopmental disorders, neurodegeneration and brain trauma. The company operates primarily in the United States. Markets served include the healthcare, educational institution, and sports management fields. The company's commercial technology results from the translation of basic science developed by the company and in conjunction with academic partners.

Prior to the commencement of our Covid related work, the company had sold two products, Clarifi ASD and the ClearEdge Toolkit.

- Clarifi ASD is an epigenetic test that provides clinicians with objective support for earlier diagnosis of Autism Spectrum Disorder, when treatment is most effective. Regulators approved Clarifi ASD pursuant to the Clinical Laboratory Improvement Amendments in November 2019. Sales were initiated in December 2019 but have been limited to date.
- The ClearEdge Toolkit is a suite of tests and assessments healthcare providers use to measure and track a patient's balance and cognitive reaction time. Recently, the company developed an improved ClearEdge Balance module which was cleared by the FDA as a Class II medical device in October 2019. While the ClearEdge Toolkit continues to gain clinical acceptance and has additional utility in clinical research applications, the company focuses its resources on the sale and marketing of Clarifi ASD and the development of other epigenetic diagnostic tools and services. In August 2017, the company began marketing the ClearEdge Toolkit; sales to date are limited.

The company also recently completed a sale to SUNY Upstate of the materials needed to conduct pooled diagnostic surveillance of 250,000 students returning to school for Covid-19.

### Results of Operations

#### Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

For the year ended 2019, the company continued to focus its resources on the development of Clarifi ASD and other epigenetic diagnostic tools and services.

- *Revenues, Costs of Products Sold and Gross Profit Margins:*

Revenues, generated from net product sales, testing services, grant revenue, licensing and maintenance services, have been limited to services associated with the ClearEdge Toolkit and grant revenue received from the National Institutes of Health ("NIH"). Total revenues for the year ended December 31, 2019 ("Fiscal 2019") were \$413,811 compared with \$115,778 for the year ended December 31, 2018 ("Fiscal 2018"), an increase of approximately 257%. The increase was primarily due to grant revenue of \$316,299 in Fiscal 2019, and increases in testing services (\$51,283 in Fiscal 2019 compared with \$23,516 in Fiscal 2018) and licensing and maintenance services (\$42,775 in Fiscal 2019 compared with \$18,142 in Fiscal 2018). The increase was partially offset by the decline in product sales as the company had \$3,454 in Fiscal 2019 and \$74,120 in the corresponding period in 2018. ClearEdge Toolkit sales have been hampered as distributors sell off their previously purchased inventory before reordering new products.

Cost of products sold for Fiscal 2019 was \$426,512, compared to \$192,281 in Fiscal 2018, an increase of 122%. The increase was due to increased expenses associated with grant revenues.

The net revenues and cost of revenues described above resulted in a loss of \$12,701 in Fiscal 2019 and a loss of \$76,503 in Fiscal 2018, and negative gross profit margins 3% in Fiscal 2019 compared to negative 66% in Fiscal 2018.

For Fiscal 2019 and Fiscal 2018, the company believes that the main drivers for its cost and expenses were (i) research and development costs and (ii) salaries, wages and stock option compensation.

· *Research and Development Costs:*

Total research and development costs are recognized in two categories: capitalized costs and expensed costs. The costs that are capitalized are related to software development; all others are expensed when incurred. The majority of our costs are capitalized and are included on the consolidated balance sheet as “Software as service” under “Other Assets”, which includes but is not limited to software, software subscriptions, consultants, testing materials, sponsored research, legal fees, and salaries for employees based on estimations of time spent in development, design, testing, or otherwise supporting the software as service projects.

Total research and development expensed increased to \$280,879 for Fiscal 2019 from \$145,993 for Fiscal 2018, a 92% increase due to increases in research activity, not related to software development, related to the company’s epigenetics business.

Concurrently, the total of costs capitalized as “Software as service” (inclusive of certain research and development costs) grew to \$3,546,255 in Fiscal 2019 from \$2,766,796 in Fiscal 2018.

· *Salaries, Wages and Stock Option Compensation:*

Salaries, wages and stock option compensation decreased 18% to a total of \$3,614,608 in Fiscal 2019 from a total of \$4,381,842 in Fiscal 2018. The decrease was primarily due to a decrease in stock option compensation of \$2,136,546, and partially offset by an increase of salaries and wages of \$1,369,312. The increase in salary and wages is due to an increase in the number of employees (going from 27 on December 31, 2018 to 42 on December 31, 2019) and increases in annual pay for existing employees.

· *Net Loss:*

As a result of the foregoing along with other income and expenses, the company incurred a net loss of \$7,296,264 in Fiscal 2019, compared to a net loss of \$6,943,093 in Fiscal 2018.

## **Plan of Operations**

For the next year, Quadrant Biosciences intends to focus its efforts on several key areas, including:

- Continued sales, marketing, distribution and market development for Clarifi ASD. Key milestones for fiscal 2020 include:
  - o reimbursement of test expense by Medicaid,
  - o approval for sale in New York by the NYS Department of Health; and
  - o growth of sales in all 50 states.
- Ongoing clinical research related to the development of new epigenetic diagnostic tests related to Parkinson’s Disease and concussion injuries.
- Ongoing clinical research related to the refinement and enhancement of Clarifi ASD.
- Continue our efforts to obtain an EUA for our Covid-19 individual Test Kit, and commercialize such Test Kits; and continue our work with our university partners on pooled surveillance for Covid-19 and on testing wastewater for the presence of Covid-19.

Assuming this offering is fully subscribed and regardless of sales, the funds raised through this offering are expected to satisfy the company’s cash requirements through fiscal 2020.

## Liquidity and Capital Resources

As of August 15, 2020, the company's cash and cash equivalents were \$2.9 million, which includes funds recently received for our Covid-19 surveillance initiative.

To date, we have financed our operations primarily through the issuance of preferred stock, common stock, notes, debt, and research grants. In 2018, we converted our preferred stock into common stock. We have devoted substantially all of our financial resources and efforts to (i) developing our functional assessment and epigenetic diagnostic technology, identifying potential product candidates and conducting verification and validation testing and (ii) the development of diagnostic testing and surveillance techniques for Covid-19 in individuals and wastewater.

The company estimates that if it raises the maximum amount sought in this offering, it could continue at its current rate of operations through 2020 without raising additional capital.

The company has a line of credit with the borrowing capacity of \$500,000 from Pathfinder Bank, at an interest rate of Bank Prime plus 1.125%. The line of credit currently fully drawn. The line is secured by all the business assets of the company and certain of the personal assets of the CEO. The company also obtained a \$160,000 SBA loan in May 2020, which is secured by all the business assets of the company and a PPP loan of \$755,600 that the company believes will be forgiven.

## Trends

The end of 2019 marked two big milestones for the company.

- Regulators approved Clarifi ASD in November 2019 pursuant to the Clinical Laboratory Improvement Amendments.
- The ClearEdge Balance module was cleared by the FDA as a Class II medical device in October 2019.

We note that currently distributors have a large inventory of ClearEdge Toolkits, we therefore do not foresee an increase in sales of this product until the inventory has been cleared out.

Sales for Clarifi ASD began in December 2019. However, not long after we began to introduce Clarifi ASD to pediatric health care providers, the world was besieged by the Covid-19 pandemic. Our ability to access healthcare providers has been greatly restricted by social distancing mandates which, in turn, has limited our sales team's ability to introduce Clarifi ASD autism saliva test to potential customers. As a result of this serious impediment, our sales of the Clarifi ASD test have been well below expectations. In March, in response to the Covid-19 pandemic and its impact on our business and prospects, we made the decision to change our short-term focus, and leverage our expertise in RNA analysis to directly address this serious pandemic. As a result, today we are involved in three significant Covid-19 projects addressing different ways to assess the presence and prevalence of Covid-19. We anticipate that we will be involved in Covid-19 initiatives in a significant way in the short term, as Covid-19 remains a threat to national and worldwide health. (e.g., Due to this pivot, we have spent significant economic and personnel resources in the research and development of our new initiatives. We anticipate that these initiatives will be a significant part of our 2020 revenues.

## Relaxed Ongoing Reporting Requirements

If we become a public reporting company in the future, we will be required to publicly report on an ongoing basis as an "emerging growth company" (as defined in the Jumpstart Our Business Startups Act of 2012, which we refer to as the JOBS Act) under the reporting rules set forth under the Exchange Act. For so long as we remain an "emerging growth company", we may take advantage of certain exemptions from various reporting requirements that are applicable to other Exchange Act reporting companies that are not "emerging growth companies", including but not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- taking advantage of extensions of time to comply with certain new or revised financial accounting standards;
- being permitted to comply with reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and
- being exempt from the requirement to hold a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

If we become a public reporting company in the future, we expect to take advantage of these reporting exemptions until we are no longer an emerging growth company. We would remain an “emerging growth company” for up to five years, although if the market value of our Common Stock that is held by non-affiliates exceeds \$700 million as of any June 30 before that time, we would cease to be an “emerging growth company” as of the following December 31.

If we do not become a public reporting company under the Exchange Act for any reason, we will be required to publicly report on an ongoing basis under the reporting rules set forth in Regulation A for Tier 2 issuers and for Regulation CF issuers . The ongoing reporting requirements under Regulation A are more relaxed than for “emerging growth companies” under the Exchange Act. The differences include, but are not limited to, being required to file only annual and semiannual reports, rather than annual and quarterly reports. Annual reports are due within 120 calendar days after the end of the issuer’s fiscal year, and semiannual reports are due within 90 calendar days after the end of the first six months of the issuer’s fiscal year.

In either case, we will be subject to ongoing public reporting requirements that are less rigorous than Exchange Act rules for companies that are not “emerging growth companies”, and our stockholders could receive less information than they might expect to receive from more mature public companies.

## DIRECTORS, EXECUTIVE OFFICERS AND SIGNIFICANT EMPLOYEES

The company's executive officers, directors and significant employees are listed below. The executive officers and significant employees are full-time employees.

<b>Name</b>	<b>Current Position</b>	<b>Age</b>	<b>Date Appointed to Current Position</b>
<b>Executive Officers</b>			
Richard Uhlig	Chief Executive Officer	54	August 2015
Benjamin Perry, MS	President	29	November 2019
Naved Ameen	Executive VP of Corporate Strategy	53	August 2019
Richard Bongo	Chief Financial Officer	58	April 2018
James Croke, JD	General Counsel	61	January 2018
Bryan Greene	Chief Operating Officer	38	October 2015
Chris Horacek, JD	Deputy General Counsel	65	January 2018
David MacLean, JD	Chief Marketing Officer	59	August 2015
Kayla Wagner, MA	VP of Product Management	26	December 2018
Wade West	Executive VP of Sales	59	October 2017
Jeremy Williams, MS	Chief Technology Officer	42	November 2019
<b>Directors</b>			
Richard Uhlig	Chairman	54	August 2015
Richard Bongo	Director	58	October 2017
James Croke, JD	Director	61	April 2018
Wade West	Director	59	October 2017
Peter Cohen	Director	73	April 2018
Ira Fedder, MD	Director	65	October 2017
Andrew Rock	Director	56	August 2015
Mary Ann Tyszko	Director	62	August 2015

### Biographies of Executive Officers and Directors

#### *Richard Uhlig*

##### *Chairman & Chief Executive Officer*

Richard has been our Chairman and CEO since 2015. He has more than 30 years of business experience focused on the design and development of innovative products across various industries, Richard's management capabilities range from ownership of regional retail businesses to the start-up and management of major corporate divisions with domestic and international product sourcing and sales experience. Prior to serving as Chairman and CEO of Quadrant Biosciences, he was the Sole Member of Motion Intelligence LLC, a biotechnology company he founded in 2012 and which was merged into Quadrant in 2015. Previously, he was the Chairman and Chief Executive Officer of Morgan Stanley Bank, the principal banking subsidiary of Morgan Stanley, and was the Chief Investment Officer at Merrill Lynch Bank. He held other significant posts in the financial industry and served as an Executive in Residence at Cornell University's Johnson Graduate School of Management. Richard is a graduate of Cornell University.

#### *Benjamin Perry*

##### *President*

Benjamin's career originates from a technical background, where he spent over ten years in the software development industry. During that time, he both led and contributed to several successful projects in the public, private, and academic sectors. Benjamin's expertise revolves around a wide breadth of disciplines including cloud computing architecture, blockchain technology, and agile project management, where his experience spans all facets of the product development lifecycle. He strives to build both human and technical systems that are accessible to all, and scale rapidly with demand. Ben has been with Quadrant Biosciences since April 2016. Until his recent promotion to President of the company in November 2019, he served as the Chief Technology Officer for both Quadrant and our subsidiary Motion Intelligence LLC. Prior to 2018, he was the Vice President of Technology at both organizations. Prior to Quadrant Biosciences, Benjamin led projects for the federal statistical system and public opinion domain. More specifically, he was a software developer for the Cornell Institute for Social and Economic Research from June 2013 – April 2016, where his metadata management software was installed within the US Census Bureau as part of an NSF grant. In addition, Benjamin ran a

consulting business that provided data management expertise, and software development services. He received his master's degree in Information Science from Cornell University.

*Naved Ameen*

*Executive Vice President of Corporate Strategy*

Naved joined Quadrant in August 2019 and has over 25 years' experience working in a variety of financial roles. He started his career in investment banking at Smith Barney, advising institutions ranging from credit card issuers, state housing authorities to the Resolution Trust Corporation. A majority of his career was involved with creating, marketing and trading innovative financial products for investors of every type both domestically and internationally. He also has experience as an investor as a fixed income portfolio manager at Dillon Read and most recently from August 2014 through March 2017 as founder and portfolio manager of Tevere Capital a hedge fund catering to insurance companies. Naved has lead trading desks at Bank of America, Lehman Brothers and Morgan Stanley. He holds a Bachelor's Degree in Economics from The University of Pennsylvania.

*Richard Bongo*

*Chief Financial Officer & Director*

Richard has over 30 years of finance experience while working at many major Wall Street firms. Richard has been our Chief Financial Officer since May 2018. He most recently was a Managing Director at BNP Paribas (April 2006 through April 2018), one of Europe's largest banks, and has also worked at such firms as Lehman Brothers, Credit Suisse, Merrill Lynch and Bank of America. Richard's experience spans several different disciplines in structured finance including structuring, trading and sales at the institutional level, where he helped to usher in several cutting-edge financial investment products such as Collateralized Mortgage Obligations and Commercial Mortgage Backed Securities and Collateralized Loan Obligations. Richard began his career at Coopers & Lybrand (Pricewaterhouse Coopers) where he received his CPA. He holds degrees in both Computer Information Systems and Accounting from Kings College.

*James Croke*

*General Counsel & Director*

Jim has been our General Counsel since January 2018. He is currently a principal at the law officers of James Croke, LLC where he has been since April 2014. Jim was previously a structured finance/banking partner at Chapman & Cutler, Orrick Herrington, Cadwalader Wickersham & Taft, and Hunton & Williams. Throughout his career, he served as counsel to underwriters and issuers in U.S. and global public offerings and private placements. Jim has been a member of the board of directors of the American Securitization Forum and a faculty member of the Practicing Law Institute. He has written and lectured on a variety of topics regarding legal and regulatory issues and annually served as a guest lecturer regarding U.S. corporate and finance law at The Universidad Panamericana in Guadalajara, Mexico. Jim practiced U.S. law in London from 1999 - 2004, as the head of Cadwalader, Wickersham & Taft LLP's London capital markets department. Jim earned his undergraduate degree in Mathematics from the University of Kentucky (in three years) and his J.D. degree from the University of Notre Dame Law School.

*Bryan Greene*

*Chief Operating Officer*

Bryan brings more than 15 years of experience in medical device operations, manufacturing, validation and new-product introduction at both large multinational and start-up corporations. He has been in charge of our operations since October 2015. He has a proven track record of successfully introducing Class I, II and III products at Life Technologies (Thermo Fisher Scientific), Pall Corporation and ImClone System (Eli Lilly). Most recently, Bryan was the manufacturing and operations leader during establishment and implementation of an FDA 21CFR820 compliant system at Rheonix, a medical device start-up (January 2013 – July 2015) and production and operations quality manager (July 2015 –October 2015) at Unilife Corporation. He received a BS in Chemical Engineering from Clarkson University.

*Chris Horacek*

*Deputy General Counsel*

Chris has more than 20 years of experience as corporate counsel on matters including transactions, business development, intellectual property, and regulatory compliance. Chris joined Quadrant in January 2018. Previously, he served as Deputy General Counsel and Compliance Officer for Welch Allyn, Inc. for more than 10 years, and in that capacity managed the attorneys in the legal department who worked in the areas of transactions, intellectual property, and compliance, and also served on the executive team that managed the Quality and Regulatory departments. Chris is an adjunct professor at the Syracuse College of Law and teaches a section of the class on technology commercialization. He received a BS in Medicine from the University of Nebraska, and a JD, with distinction, from the University of Nebraska College of Law.

*David MacLean*  
*Chief Marketing Officer*

David has more than 25 years of business, research and legal experience. He recently produced two award-winning feature and documentary films and founded an MMA website and clothing company. David was the co-owner of a mixed-martial arts promotion company and co-owner of a medical-device sales distribution company, MacLean Surgical Instruments, which he managed for over 20 years prior to joining us as our chief marketing officer in August 2015. Previously, he was a litigator at the firms of LeBoeuf, Lamb, Lieby & MacRae, and Nixon Hargrave Devans & Doyle. Earlier, he was a research biologist for the Cornell University Lab of Ornithology. David earned a BS from Cornell University and a JD from the University of Buffalo Law School, where he was a member of the Law Review.

*Kayla Wagner*  
*Vice President of Product Management*

Kayla has spent her career dedicated to working with children and adolescents with neurodevelopmental disorders in both clinical and research settings. In her clinical work she provided diagnostic and counseling services to children and adolescents with psychiatric disorders. Her research spans many areas of child psychopathology, including autism spectrum disorder, ADHD and 22q11.2 Deletion Syndrome. More specifically, she has investigated the comorbidity between autism and ADHD, genetic and familial relationships within RDOC constructs, and factors related to poor social outcomes (e.g., relationship development/maintenance with friends, family, romantic partners) in children, adolescents, and adults with neurodevelopmental disorders. Kayla joined Quadrant in May 2017; previously, she was a Therapist at Syracuse University (January 2017 to May 2017) and a Research Coordinator at SUNY Upstate Medical University (August 2014 to August 2016). Kayla earned a BS in neuroscience and psychology and an MS in Clinical Psychology at Syracuse University.

*Wade West*  
*Executive Vice President of Sales & Director*

Wade brings over 39 years of entrepreneurial business experience in leadership, sales, marketing and business development. He has been our executive vice president of sales since January 2019. Prior to that and for over thirty years, he has been the founder and President of General Orthopedics, orthopedic and neurosurgery focused medical sales and distribution company based in San Antonio, Texas. Wade began his career with Minolta Reprographic Systems, eventually becoming a national account executive. He then transitioned into the orthopedic market, taking a sales position with Biomet where he was recognized as the top sales representative for four consecutive years. In 1992, Wade became the first Biomet Spine distributor in the United States, at which time he founded General Orthopedics. A driven entrepreneur, Wade has provided consulting services to a number of startups and growing companies in the orthopedic and medical device industry. He is actively involved in several charitable organizations including Wish For Our Heroes.

*Jeremy Williams*  
*Chief Technology Officer*

Jeremy has developed software solutions in the financial sector, the GIS industry and in support of large-scale social science research. He has held leadership roles in a number of successful projects, both academically and commercially. He was responsible for designing a citizen science project funded by the NEH and used in secondary schools and colleges across the country. He has also led the development of restricted access Census Bureau metadata repository software funded by the NSF. His experience spans complex systems integration, mapping software used by state and municipal governments to manage geo-spatial data, and applications for research data analysis and dissemination. During Jeremy's career, he has developed expertise in a variety of technologies, with a focus on information system architecture. Until his recent promotion to Chief Technology Officer of the company in November 2019, he served as a Vice President of Technology starting in April 2016. Prior to Quadrant Biosciences, Jeremy was a software developer for the Cornell Institute for Social and Economic Research from September 2007 – April 2016. He graduated with a master's degree in Information Science from Cornell University.

*Peter Cohen*  
*Director*

Peter was recently Chairman of the Board of Cowen Inc., a well-known diversified financial services firm. From November 1992 to May 1994, Peter was Vice Chairman and director of Republic New York Corporation, as well as Chairman of Republic's subsidiary, Republic New York Securities Corporation. Earlier, he was Chairman of the Board and Chief Executive Officer of Shearson Lehman Brothers from 1983 to 1990. During that time, Mr. Cohen played a prominent role in the RJR Nabisco takeover deal that later became the subject of the book and movie "Barbarians at the Gate." Over his career, Mr. Cohen has served on a number of corporate,

industry and philanthropic boards, including the New York Stock Exchange, The Federal Reserve International Capital Markets Advisory Committee, The Depository Trust Company, The American Express Company, Olivetti SpA, Telecom Italia SpA, and Kroll Inc. He is presently a Trustee of Mount Sinai Medical Center, Vice Chairman and Lead Director of the Board of Directors of Scientific Games Corporation and a director of Safe Auto Insurance. Mr. Cohen received a Bachelor of Science from The Ohio State University in 1968 and his Master of Business Administration from Columbia University in 1969.

*Andrew Rock*  
*Director*

Andrew earned a reputation as a successful serial entrepreneur in the global medical technology industry. He is co-founder of K2M Group, a medical device developer based in Leesburg, Va., which became listed as a publicly traded company on NASDAQ on May 5, 2014. While at K2M, Andrew developed over 17 utility and method patents for the treatment of complex spine pathologies including scoliosis, tumor and trauma, as well as for minimally invasive implants. Before his involvement in K2M, Andrew was a member of the executive management team at American Osteomedix, where he co-developed a minimally invasive approach to access and treat osteoporotic compression fractures and tumors in the thoracic spine. From 1993 to 2003, he was Chairman and CEO of Rock Surgical Associates, Inc., a distributor of Orthopedic and Neurosurgical Products in the Mid-Atlantic region. Currently, Andrew is the Chairman and CEO of Minneapolis-based St Teresa Medical Inc., a developer of nanotechnology-based hemostatic and dural sealants; he is also the founder and managing Director of Neuro Spine Ventures LLC, an 82-member global angel investor group. Andrew is also a Co-Founder and Executive Director of DP Enterprises Group Inc., which provides product development and global marketing services for med-tech companies. Andrew serves as the on the Board of Directors for several corporations, including St. Teresa Medical, Quadrant Biosciences, Inc. which focuses on brain health and epigenetics diagnostics; and Connecticut based Woven Orthopedics, LLC which specializes in fixation and osteoporotic and osteopenic. He is on the board of advisors for Indianapolis-based Recovery Force, LLC, and a pioneer in wearable technology for the medical, sports and defense industry sectors Andrew graduated from Linsly and West Virginia University.

*Ira Fedder, MD*  
*Director*

Ira is a fellowship trained orthopedic spine surgeon practicing at the University of Maryland, St. Joseph Medical Center in Towson, Maryland. Ira is Board Certified by the ABOS as well as the ABSS and an active member of a number of professional organizations. Ira has participated in a number of clinical trials, has published widely in both the orthopedic and pharmacology literature, and has been an active lecturer speaking about the current and future use of stem cells and other biologics in orthopedics. Dr Fedder received his Doctor of Pharmacy degree from the U of Maryland School of Pharmacy in 1979. Subsequently, Ira completed a fellowship in Clinical Pharmacology at Thomas Jefferson University School of Medicine. After teaching at Northeastern University College of Pharmacy and the Veterans Administration in Boston, Ira then returned to the University of Maryland where he graduated from the School of Medicine in 1986. After completing his residency in Orthopedic Surgery at the University of Maryland he completed a fellowship at St Joseph Medical Center in Towson. He has practiced as an orthopedic spine surgeon since 1992.

*Mary Ann Tyszko*  
*Director*

Mary Ann has over 30 years of experience in program planning, execution, and management. She served as Chief Executive Officer and President of SRCTec Inc. from its inception until August 2010. Prior to that, she served as an Executive Vice President, Operations for SRC, responsible for the day-to-day management and financial results of SRC's four business centers. Mary Ann is Chair of the Greater Syracuse Chamber of Commerce Board of Directors, and a Member of Le Moyne College Management Division Advisory Board. She is a National Director of the Association of Old Crows (AOC) and a Member of the Armed Forces Communications and Electronics Association (AFCEA), the Association of the United States Army (AUSA), the United States Field Artillery Association (USFAA), and the National Association of Corporate Directors (NACD). Mary Ann also has been Corporate Chair of Go Red for Women, American Heart Association, as well as a Board Member of Manufacturers Association of Central New York (MACNY). She received her MBA and MS in Computer Science from Syracuse University and a BS in Biology from Le Moyne College.

## COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS

For the fiscal year ended December 31, 2019, we compensated our three highest-paid Directors and Executive Officers as follows:

Name	Capacities in which compensation was received	Cash compensation (\$)	Other compensation (\$) (1)	Total compensation (\$) (2)
Naved Ameen	EVP of Corporate Strategy	\$ 61,538	\$ 456,000(3)	\$ 517,538
Peter Cohen	Director	\$ 0	\$ 477,280(4)	\$ 477,280
Richard Uhlig	Chairman and CEO	\$ 250,000	\$ 152,000(5)	\$ 402,000

- (1) Other compensation is limited to stock options; the Black-Scholes formula was used to determine the value of the options at the date of grant.
- (2) Total compensation is the sum of cash compensation and other compensation.
- (3) 600,000 stock options were granted to Naved Ameen for his forthcoming services as an Executive Officer.
- (4) 628,000 stock options were granted to Peter Cohen as compensation for (i) advisory services provided prior to his directorship (28,000 options), and (ii) his forthcoming service as a member of the Board of Directors (600,000 options).
- (5) 200,000 stock options were granted to Richard Uhlig for his services as Chairman and CEO.

For the fiscal year ended December 31, 2019, one of our directors was granted 600,000 options for joining our Board of Directors, which is consistent with the company's practice of granting stock options to incoming members of our Board of Directors. There was no other compensation paid to our directors in their capacity as directors. Including the director who was granted options, there are a total of eight directors in this group.

## SECURITY OWNERSHIP OF MANAGEMENT AND CERTAIN SECURITYHOLDERS

Our authorized capital stock consists of 125,000,000 shares, all of which are Common Stock with a par value \$0.0001 per share. As of August 15, 2020, there were 88,834,278 shares of our Common Stock issued and outstanding, all of which were fully paid, non-assessable and entitled to vote. Each share of our Common Stock entitles its holder to one vote on each matter submitted to the stockholders.

The following table sets forth information as of August 15, 2020, with respect to the beneficial ownership of our Common Stock (represented as the sum of Common Stock owned plus Common Stock acquirable through the exercise of options) by (i) each person or entity which holds a beneficial ownership of 5% or more of our Common Stock, (ii) the beneficial ownership held by our Executive Officers and Directors (as listed above), and (iii) the beneficial ownership held by our Directors (which includes four Executive Officers as noted above):

Name and address of beneficial owner (1)	Number of Common Shares Owned	Number of Common Shares Acquirable (2)	Percent of ownership (3)
Richard Uhlig, Chairman and CEO	32,775,821	6,547,350	41.23%
Research Foundation for the State University of New York	5,959,241	--	6.71%
James Croke, General Counsel and Director	2,020,298	3,203,109	5.68%
Richard Bongo, CFO and Director	1,180,993	3,259,381	4.82%
All Directors and Executive Officers (16 total)	47,106,703	18,511,285	60.76%
All Directors (8 total)	39,711,473	15,643,125	52.77%

- (1) The address of each beneficial owner is in the care of Quadrant Biosciences Inc, 505 Irving Ave., Suite 3100 AB, Syracuse, New York 13210.
- (2) Represents shares of Common Stock acquirable upon exercise of options which are vested or which vest on or before June 30, 2020.
- (3) Percent of ownership includes a calculation of the amount the person (or group) owns now, plus the amount that person (or group) is entitled to acquire. That amount is then shown as a percentage of the outstanding amount of securities in that class if no other people exercised their rights to acquire those securities. The result is a calculation of the maximum amount that person could ever own based on their current and acquirable ownership, which is why the amounts in this column will not add up to 100%.

## **INTEREST OF MANAGEMENT AND OTHERS IN CERTAIN TRANSACTIONS**

In 2019, the company entered into a month-to-month lease agreement for the use of 1,500 square feet of commercial office space at 619 W. Rhapsody Drive, San Antonio, Texas 78216. Monthly rent for this lease is \$2,250; the beneficial owner of this property is Wade West, the company's Executive Vice President of Sales and a member of the Board of Directors.

In 2017, the company entered into a \$1.25 million line of credit agreement with Pathfinder Bank; as of the date of this offering, this line of credit is currently fully drawn with \$500,000 outstanding. This line of credit has been secured by all the business assets of the company and certain of the personal assets of Richard Uhlig, the company's Chairman and CEO. As compensation, Richard Uhlig received 6,480,683 stock options in 2018.

In 2017, the company entered into an \$800,000 consortium loan agreement with several members of the Board of Directors, including Richard Bongo, Wade West, Ira Fedder, Andrew Rock and Mary Ann Tyszko. The terms of this consortium loan provided for monthly interest only payments at WSJ Bank Prime plus 1.125% through December 2020 with a balloon payment of the remaining principal balance. This loan was paid in full in 2018. In the aggregate, these Directors received 4,077,372 stock options in 2018 as compensation for their participation in the consortium loan agreement.

## **SECURITIES BEING OFFERED**

The following description is a brief summary of the material terms of this offering and is qualified in its entirety by the terms contained in the convertible promissory notes.

The convertible promissory notes sold in this offering bear an interest rate of 6% per year, computed on the basis of a year of 365 days, and have a maturity date of August 25, 2025. Interest will accrue on the outstanding principal amount of the convertible promissory notes (i.e., it will not be periodically paid) until the notes are paid in full or converted. At maturity, the principal and accrued and unpaid interest thereon will convert to common equity shares of the company.

While the convertible promissory notes are still outstanding, the convertible promissory notes will convert into common equity shares at the earlier of a "change of control" (such as the sale, merger or acquisition of the company in which more than fifty percent (50%) of the company's voting power is transferred, or the sale or transfer of all, or substantially all, of the company's intellectual property) or a "qualified equity financing" (which is an initial public offering of the company's common stock or an equity financing through which the company raises more than \$15 million).

The price at which the convertible promissory notes sold in this offering will convert will be:

- If conversion takes place prior to a qualified equity financing (e.g., at maturity or in a change of control): (i) in the case of a change in control, at a 20% discount to the share price at which such change in control occurred, and (ii) at maturity, at a 20% discount to the offering share price at which the company last sold \$500,000 or more of the company's Common Stock; or
- If the conversion takes place pursuant to a qualified equity financing, at a discount of 20% to the share price in the qualified equity financing.

If the company ever fails to timely pay principal or interest on the convertible promissory notes, or if the company becomes subject to certain bankruptcy or related insolvency/reorganization proceedings, the company's obligation to pay principal and interest on the notes will be accelerated and be then due and payable.

### **The Company's Common Stock**

The following description summarizes the most important terms of the company's capital stock. This summary does not purport to be complete and is qualified in its entirety by the provisions of Quadrant's amended and restated certificate of incorporation, as amended, and bylaws. For a complete description of Quadrant's capital stock, you should refer to the amended and restated certificate of incorporation, as amended, and bylaws and to the applicable provisions of Delaware law.

Under the certificate of amendment of restated certificate of incorporation of the company, adopted December 14, 2018, the company has 125,000,000 shares of Common Stock authorized.

### **Rights, Preferences and Privileges of Our Common Stock**

#### ***Voting Rights***

Each holder of our Common Stock will be entitled to one vote for each share held of record by such holder on all matters submitted to a vote of the holders of our Common Stock, including the election of directors. Subject to a quorum requirement of one-third of shares entitled to vote at any meeting the affirmative vote of a majority of the shares present or represented by proxy at the meeting and entitled to vote will be the act of the holders of our Common Stock (except with respect to elections of directors, which will be determined by a plurality of the votes of shares present in person or represented by proxy at the meeting).

#### ***Dividends***

Subject to limitations under Delaware law, holders of our Common Stock are entitled to receive dividends, when, as and if declared by our Board of Directors, out of any assets at the time legally available for such dividends. Holders of Common Stock will be entitled to receive ratably those dividends, if any, when, as and if declared from time to time by the board of directors out of legally available funds, when, as and if declared by our Board of Directors. We cannot assure you when dividends might first be paid, if ever.

### ***Other Rights and Preferences***

Holders of Common Stock have no preemptive, conversion or subscription rights. However, holders of Common Stock will be subject to drag-along provisions, see “Stockholders’ Agreement” below. There are no redemption or sinking fund provisions applicable to our Common Stock.

### ***Stockholders’ Agreement***

Holders of Common Stock (including holders of convertible notes which are convertible to Common Stock) will enter into the Stockholders’ Agreement with the company, pursuant to which such holders will have drag-along and market stand-off obligations. Under the market stand-off provision, in the event the company has an underwritten public offering pursuant to an effective registration statement (e.g., an initial public offering), a holder’s ability to sell or transfer their shares may be limited for up to 180 days plus such reasonable period to accommodate certain regulatory restrictions following the date of the final prospectus of such offering. Under the drag-along provision, if at any time, any unaffiliated third party makes a *bona fide* fully-financed good faith offer to purchase all or substantially all of the outstanding capital stock of the company and holders of more than sixty percent (60%) of the issued and outstanding shares of common stock of the company accept, then, upon not less than 30 days’ written notice from the company or the selling stockholders to all stockholders of the company and the company, each stockholder shall be obligated to accept the terms of such transaction, and shall sell, transfer and deliver, or cause to be sold, transferred and delivered, to such offer, the shares pursuant to the terms of such transaction.

### ***Forum Selection Provisions***

The subscription agreement includes a forum selection provision that requires any claims against the company based on that agreement to be brought in a state or federal court of competent jurisdiction in the County of Onondaga, New York for the purpose of any suit, action or other proceeding arising out of or based upon that agreement. Further, the amended and restated certificate of incorporation includes a forum selection provision that requires any claims against the company based on the agreement to be brought in the Court of Chancery in the State of Delaware, for the purpose of any (i) any derivative action or proceeding brought on behalf of the company, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee to the company or the company’s stockholders, (iii) any action asserting a claim against the company, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the company’s certificate of incorporation or bylaws or (iv) any action asserting a claim against the company, its directors, officers or employees governed by the internal affairs doctrine. Although we believe the provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies and in limiting our litigation costs, to the extent it is enforceable, the forum selection provision may limit investors’ ability to bring claims in judicial forums that they find favorable to such disputes and may discourage lawsuits with respect to such claims. The company has adopted the provision to limit the time and expense incurred by its management to challenge any such claims. As a company with a small management team, this provision allows its officers to not lose a significant amount of time travelling to any particular forum so they may continue to focus on operations of the company. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. We believe that the exclusive forum provision applies to claims arising under the Securities Act, but there is uncertainty as to whether a court would enforce such a provision in this context. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision in the amended and restated certificate of incorporation will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Investors will not be deemed to have waived the company’s compliance with the federal securities laws and the rules and regulations thereunder.

## **VALUATION**

The company determined the valuation cap, discount, and interest rate of the convertible promissory notes in this offering internally based on its own assessment of the company’s current and future value, as well as relative risk for investors investing in similarly situated companies. The convertible promissory may convert to equity securities of the company in the future if the company engages in prescribed future equity financings, as described herein. At that time, the valuation of the company will be determined through negotiations with prospective investors. Those prospective investors may determine the value of the company through one or multiple methods which include:

*Liquidation Value* — The amount for which the assets of the company can be sold, minus the liabilities owed;

*Book Value* — This is based on analysis of the company’s financial statements, usually looking at the company’s balance sheet; and

*Earnings Approach* — This is based on what the prospective investor will pay (the present value) for what the prospective investor expects to obtain in the future.

## **REGULATORY INFORMATION**

### **Disqualification and Compliance Failure**

Neither the company nor any of our officers or managing members is disqualified from relying on Regulation Crowdfunding. The company has not previously failed to comply with the requirements of Regulation Crowdfunding.

### **Ongoing Reporting**

For Regulation CF, our annual reports are posted on our website at <https://www.quadrantbiosciences.com/investor-relations/> within 120 days after the end of each fiscal year. In addition, the company has reporting requirements under Regulation A. Under Regulation A, the company is required to make annual and semi-annual filings with the SEC. We will make annual filings on Form 1-K, which will be due by the end of April each year and will include audited financial statements for the previous fiscal year. We will make semi-annual filings on Form 1-SA, which will be due by September 28 each year, which will include unaudited financial statements for the six months to June 30. We will also file a Form 1-U to announce important events such as the loss of a senior officer, a change in auditors or certain types of capital-raising.

We will be required to keep making these reports unless we file a Form 1-Z to exit the reporting system, which we will only be able to do if we have less than 300 stockholders of record and have filed at least one Form 1-K.

All these filings will be available on the SEC's EDGAR filing system. You should read all the available information before investing.

### **Updates**

Updates on the status of this offering may be found at: <https://wefunder.com/quadrantbiosciences>.

**FINANCIAL STATEMENTS**

**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of  
Quadrant Biosciences, Inc. and Subsidiaries

**Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of Quadrant Biosciences, Inc. and Subsidiaries (“the Company”) as of December 31, 2019 and 2018, and the related consolidated statements of operations, stockholders’ equity, and cash flows for the years then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

*Dannible & McKee, LLP*

We have served as Quadrant Biosciences, Inc.'s auditor since 2019.

Syracuse, New York  
April 10, 2020

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES**

**CONSOLIDATED FINANCIAL STATEMENTS**

**Years Ended  
December 31, 2019 and 2018**

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
CONSOLIDATED BALANCE SHEETS  
December 31,**

**ASSETS**

	2019	2018 As adjusted
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 1,289,474	\$ 4,945,726
Accounts receivable, net of allowance for doubtful accounts of \$0 in 2019 and 2018	12,653	24,077
Prepaid expenses and other current assets	39,547	64,863
R&D tax credit receivables	413,841	225,724
NY tax credit receivable	16,150	11,792
Inventories	307,000	292,691
<b>TOTAL CURRENT ASSETS</b>	<b>2,078,665</b>	<b>5,564,873</b>
<b>FURNITURE AND EQUIPMENT:</b>		
Furniture & equipment	38,292	38,292
Less: accumulated depreciation	24,294	17,887
<b>TOTAL FURNITURE AND EQUIPMENT</b>	<b>13,998</b>	<b>20,405</b>
<b>OTHER ASSETS:</b>		
Right-of-use lease asset	135,866	218,898
Line of credit origination fees	17,099	17,099
Software as service	7,046,853	3,500,598
Less: accumulated amortization	620,248	229,882
<b>TOTAL OTHER ASSETS</b>	<b>6,579,570</b>	<b>3,506,713</b>
<b>TOTAL ASSETS:</b>	<b>\$ 8,672,233</b>	<b>\$ 9,091,991</b>

The accompanying notes are an integral part of the consolidated financial statements.

**LIABILITIES AND STOCKHOLDERS' EQUITY**

	2019	2018 As adjusted
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 238,730	\$ 162,988
Contract liabilities	69,656	81,367
Current portion lease liability	80,567	80,497
Accrued payroll and related liabilities	46,330	186,224
Accrued liabilities	76,439	64,883
Pledges payable	225,000	75,000
<b>TOTAL CURRENT LIABILITIES</b>	<b>736,722</b>	<b>650,959</b>
<b>LONG-TERM DEBT:</b>		
Lease liability, net of current portion	60,918	139,806
Pledges payable - long term	-	225,000
Note payable	5,288,146	5,033,333
<b>TOTAL LONG TERM LIABILITIES</b>	<b>5,349,064</b>	<b>5,398,139</b>
<b>STOCKHOLDERS' EQUITY:</b>		
Common stock, par value \$0.0001 per share, 125,000,000 shares authorized, 87,932,825 and 82,481,721 issued and outstanding, respectively	8,793	8,248
Additional paid in capital	22,680,362	15,841,089
Accumulated deficit	(20,102,708)	(12,806,444)
<b>TOTAL STOCKHOLDERS' EQUITY</b>	<b>2,586,447</b>	<b>3,042,893</b>
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY:</b>	<b>\$ 8,672,233</b>	<b>\$ 9,091,991</b>

The accompanying notes are an integral part of the consolidated financial statements.

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF OPERATIONS  
For the Years Ended December 31,**

	2019	2018 As adjusted
<b>REVENUES:</b>		
Product sales, net	\$ 3,454	\$ 74,120
Testing services	51,283	23,516
Grant revenue	316,299	-
Licensing and maintenance services	42,775	18,142
<b>TOTAL REVENUES</b>	<u>413,811</u>	<u>115,778</u>
<b>COST OF PRODUCTS SOLD</b>	<u>426,512</u>	<u>192,281</u>
<b>GROSS PROFIT</b>	(12,701)	(76,503)
<b>SALES AND MARKETING EXPENSES</b>	1,012,132	717,599
<b>RESEARCH AND DEVELOPMENT COSTS</b>	280,879	145,993
<b>SELLING AND ADMINISTRATIVE EXPENSES:</b>		
Charitable contributions	90,035	555,332
Depreciation and amortization	6,407	6,407
Employee benefits and taxes	365,595	216,246
Office expenses	413,167	206,433
Other expenses	190,865	134,237
Professional fees	879,641	228,912
Rent & lease expense	100,568	68,938
Salaries and wages	2,724,030	1,354,718
Stock option compensation	890,578	3,027,124
Travel	307,338	377,705
<b>TOTAL SELLING AND ADMINISTRATIVE EXPENSES</b>	<u>5,968,224</u>	<u>6,176,052</u>
<b>LOSS FROM OPERATIONS</b>	(7,273,936)	(7,116,147)
<b>OTHER (EXPENSES) INCOME:</b>		
Toolkit rental income	5,460	-
Interest income	22,787	1
Interest expense	(254,842)	(64,463)
<b>TOTAL OTHER (EXPENSES) INCOME</b>	<u>(226,595)</u>	<u>(64,462)</u>
<b>NET LOSS BEFORE INCOME TAX</b>	(7,500,531)	(7,180,609)
<b>INCOME TAX BENEFIT</b>	204,267	237,516
<b>NET LOSS</b>	<u>\$ (7,296,264)</u>	<u>\$ (6,943,093)</u>
Per share data:		
Basic and diluted loss		
Per common share	\$ (0.09)	\$ (0.19)
Shares used in computing net loss per common share:		
Basic and diluted	84,183,139	70,063,912

The accompanying notes are an integral part of the consolidated financial statements.

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY  
Years ended December 31, 2019 and 2018**

	Common Shares	Preferred Shares	Treasury Stock Common Shares	Common Stock Par Value	Preferred Stock Par Value	Treasury Stock (Common)	Additional Paid-in Capital	Accumulated Deficit	Total
<b>BALANCE, DECEMBER 31, 2017, AS ADJUSTED</b>	56,586,642	19,194,900	4,270,790	\$ 5,658	\$ 1,919	\$ (427)	\$ 6,076,119	\$ (5,863,351)	\$ 219,918
Vested common shares	-	-	-	-	-	-	-	-	-
Retired treasury stock	(4,270,790)	-	(4,270,790)	(427)	-	427	-	-	-
Exercise stock options (\$0.003 per share)	521,602	-	-	53	-	-	1,605	-	1,658
Recapitalization, conversion of preferred shares	19,194,900	(19,194,900)	-	1,919	(1,919)	-	-	-	-
Capital dividend paid	-	-	-	-	-	-	(6,119,942)	-	(6,119,942)
Issuance of common stock, at \$1.25 per share	10,449,367	-	-	1,045	-	-	13,060,664	-	13,061,709
Stock option compensation	-	-	-	-	-	-	3,027,124	-	3,027,124
Stock issuance costs	-	-	-	-	-	-	(204,481)	-	(204,481)
Net loss	-	-	-	-	-	-	-	(6,943,093)	(6,943,093)
<b>BALANCE, DECEMBER 31, 2018, AS ADJUSTED</b>	82,481,721	-	-	8,248	-	-	15,841,089	(12,806,444)	3,042,893
Exercised stock options (\$0.003 per share)	40,000	-	-	4	-	-	116	-	120
Purchase of treasury stock, at \$1.25 per share	(40,000)	-	40,000	(4)	-	(4)	(49,996)	-	(50,000)
Retired treasury stock	-	-	(40,000)	-	-	4	-	-	-
Issuance of common stock, at \$1.25 per share	4,042,000	-	-	404	-	-	5,052,096	-	5,052,500
Exercised stock options (\$0.003 per share)	652,288	-	-	65	-	-	1,893	-	1,958
Exercised stock options (\$0.39 per share)	434,816	-	-	44	-	-	169,618	-	169,662
Issuance of common stock, at \$2.50 per share	322,000	-	-	32	-	-	804,968	-	805,000
Stock option compensation	-	-	-	-	-	-	890,578	-	890,578
Stock issuance costs	-	-	-	-	-	-	(30,000)	-	(30,000)
Net loss	-	-	-	-	-	-	-	(7,296,264)	(7,296,264)
<b>BALANCE, DECEMBER 31, 2019</b>	<u>87,932,825</u>	<u>-</u>	<u>-</u>	<u>\$ 8,793</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 22,680,362</u>	<u>\$ (20,102,708)</u>	<u>\$ 2,586,447</u>

The accompanying notes are an integral part of the consolidated financial statements.

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
Years ended December 31,**

	2019	2018 As adjusted
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net loss	\$ (7,296,264)	\$ (6,943,093)
Adjustments to reconcile net loss to net cash used in by operating activities:		
Depreciation and amortization	396,773	180,190
Employee stock option compensation	890,578	3,027,124
Changes in income tax credit receivable	(192,475)	(237,516)
Changes in accounts receivable	11,424	6,377
Changes in accounts payable	75,742	67,243
Changes in contract liabilities	(11,711)	67,881
Changes in accrued interest	254,813	33,333
Changes in inventories	(14,309)	(159,622)
Changes in right-of-use lease asset	83,032	(218,898)
Changes in pledges payable	(75,000)	300,000
Changes in lease liability	(78,818)	220,303
Changes in prepaid expenses and other current assets	25,316	(63,363)
Changes in accrued employee benefits	-	(4,230)
Changes in accrued payroll and related liabilities	(139,894)	115,092
Changes in accrued liabilities	11,556	35,629
<b>CASH USED IN OPERATING ACTIVITIES</b>	<b>(6,059,237)</b>	<b>(3,573,550)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Payments of software development costs	(3,546,255)	(2,766,796)
<b>CASH USED IN INVESTING ACTIVITIES</b>	<b>(3,546,255)</b>	<b>(2,766,796)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Proceeds from convertible debt	-	5,000,000
Capital dividend paid	-	(2,569,942)
Principal payments on notes payable to related parties, net	-	(500,000)
Proceeds from sale of stock and exercise of options, net of issuance costs	5,999,240	9,008,887
Purchase of treasury stock	(50,000)	-
<b>CASH PROVIDED BY FINANCING ACTIVITIES</b>	<b>\$ 5,949,240</b>	<b>\$ 10,938,945</b>
<b>NET CHANGE IN CASH</b>	<b>(3,656,252)</b>	<b>4,598,599</b>

The accompanying notes are an integral part of the consolidated financial statements.

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
Years ended December 31,**

	2019	2018 As adjusted
<b>NET CHANGE IN CASH:</b>	(3,656,252)	4,598,599
<b>CASH, beginning of year</b>	4,945,726	347,127
<b>CASH, end of year</b>	\$ 1,289,474	\$ 4,945,726

	2019	2018 As adjusted
<b>Cash paid during the year for:</b>		
Interest	\$ 29	\$ 31,130
Income taxes	12,845	99

**Non-Cash Investing and Financing Activities:**

In 2018 notes payable in the amount of \$300,000 were converted into common stock.

In addition \$3,550,000 of capital dividend due to preferred stockholders was converted into additional common stock.

The accompanying notes are an integral part of the consolidated financial statements.

**QUADRANT BIOSCIENCES INC.  
AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
Years ended December 31, 2019 and 2018**

**A. Summary of Significant Accounting Policies:**

1. Quadrant Biosciences Inc. (“the Company,” “Quadrant”) is a high-technology company focused on improving life quality through the discovery of epigenetic and functional changes resulting from neurodevelopmental disorders, neurodegeneration and brain trauma. The Company operates primarily in the United States. Markets served include the healthcare, educational institution, and sports management fields.

The Company’s commercial technology results from the translation of basic science developed by the company and in conjunction with academic partners.

Quadrant Biosciences Inc. is the parent company and owns 100% of its subsidiaries, Motion Intelligence LLC, Quadrant Epigenetics LLC, Quadrant IP Holdings LLC, Quadrant Vision Technologies LLC, and Quadrant Biosciences Canada Ltd.

Motion Intelligence LLC is a wholly owned subsidiary which sells ClearEdge toolkits to end users utilizing distributors and agents.

Quadrant Epigenetics LLC is a wholly owned subsidiary which will record revenue from epigenetic activities.

Quadrant IP Holdings LLC is a wholly owned subsidiary which houses the Company’s patents.

Quadrant Vision Technologies LLC is a wholly owned subsidiary created to partner with a health provider.

Quadrant Biosciences Canada Ltd is a wholly owned subsidiary created to pay an employee residing in Canada.

2. Principles of Consolidation – The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Motion Intelligence LLC, Quadrant Epigenetics LLC, Quadrant IP Holdings LLC, Quadrant Vision Technologies LLC and Quadrant Biosciences Canada, Ltd. All intercompany balances and transactions have been eliminated in consolidation.
3. Cash – For the purposes of cash flow disclosures, cash is defined as cash deposited in financial institutions and any investments that mature within three months or less from the initial purchase date.
4. Furniture and Equipment – Furniture and equipment acquisitions are recorded at cost. Depreciation is computed using the straight-line method based on the expected useful lives of the assets, which range from 5 to 7 years. Expenditures for repairs and maintenance are charged to expense as incurred, whereas major betterments are capitalized. Depreciation expense is included in selling and administrative expenses. Depreciation expense for the years ended December 31, 2019 and 2018 was \$6,407, respectively.

5. Inventories – Inventories are stated at the lower of cost or market using the average cost method or net realizable value.  
Net realizable value is determined as the estimated selling price in the normal course of business minus the cost of completion, disposal and transportation.
6. Accrued Vacation – Employees are eligible to receive 80 hours paid vacation time after one year of service, after three years of service eligible employees will receive 120 hours paid vacation. During 2019 the vacation policy changed from an accrual policy to a use it or lose it policy. The accrued vacation liability was insignificant at December 31, 2018.
7. Income Taxes – The Company accounts for income taxes under FASB ASC 740-10. Deferred tax assets and liabilities are based on the difference between the financial statement and tax basis of assets and liabilities as measured by the enacted tax rates which are anticipated to be in effect when these differences reverse. The deferred tax provision is the result of the net change in the deferred tax assets and liabilities. A valuation allowance is established when it is necessary to reduce deferred tax assets to amounts expected to be realized. As described in note H the Company has provided a full valuation allowance against its deferred tax assets.  
  
The Company follows FASB ASB 740-10, which clarifies the accounting for uncertainty in income taxes recognized in an entity’s financial statements and prescribes a recognition threshold and measurement attributes for financial statement disclosure of tax positions taken or expected to be taken on a tax return. Additionally, it provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. The Company will include interest on income tax liabilities in interest expense and penalties in operations if such amounts arise. The Company determined it has no uncertain tax positions and therefore no amounts are recorded.  
  
The Company is a certified Start-Up New York business. As such the Company is exempt from New York franchise tax for 10 years due to their Start-Up New York locations.
8. Research and Development Expenditures – Research and development expenditures of \$280,879 and \$145,993 for the years ended December 31, 2019 and 2018, respectively, were expensed as incurred.
9. Accounts Receivable – Accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the Company’s best estimate of the amount of probable credit losses in the Company’s existing accounts receivable. The Company reviews its allowance for doubtful accounts on an ongoing basis. Past due balances are reviewed individually for collectability. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. Presently no allowance has been established for potential losses. The Company does not have any off-balance-sheet credit exposure related to its customers.
10. Other Assets – Line of credit origination fees of \$17,099 in 2019 and 2018, net of accumulated amortization of \$17,099 and \$9,571 at December 31, 2019 and 2018, respectively, are being amortized on a straight-line basis over the expected term of the loan, which is 24 months. Amortization expense for the line of credit origination fees for the years ended December 31, 2019 and 2018 was \$7,528 and \$8,550, respectively.

11. Concentration of Business Risk – In 2019 and 2018, all of the Company’s ClearEdge inventory was assembled and shipped by one vendor.  
In 2019 and 2018, all of the Company’s Clarifi inventory was purchased from two vendors and held by another two vendors. Product sales were all generated from the sales of ClearEdge Toolkits.
12. Advertising – The Company expenses all advertising costs. Advertising expenses totaled \$965,412 and \$682,252 for the years ended December 31, 2019 and 2018, respectively.
13. Sales Tax – Certain states impose a sales tax on the Company’s sales to nonexempt customers. The Company collects the required sales tax from customers and remits the entire amount to the respective states. The Company’s policy is to exclude the tax collected and remitted from revenues and expenses and record a liability for the tax at the time of invoicing.
14. Stock-Based Compensation – The Company is accounting for stock options under the provisions of ASC 718 Stock Compensation. For options granted in 2019 and 2018, compensation expense is recognized over the requisite service periods of the option agreements based on their fair value computed under Black-Scholes option-pricing model. See Note H.
15. Treasury Stock – The Company repurchased common stock shares of 40,000 in the year ending December 31, 2019 at \$1.25 per share. During 2019 and 2018, 40,000 and 4,270,790 shares of treasury stock were retired, respectively.
16. Estimates and Assumptions – Management of the Company uses estimates and assumptions in preparing consolidated financial statements in accordance with generally accepted accounting principles. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could vary from the estimates that management uses.
17. Shipping Costs – Shipping costs are included in cost of goods sold.
18. Grant Revenue – The Company evaluates terms and conditions of individual grants to determine whether they meet the characteristics of an exchange transaction or a nonexchange transaction. Revenue from grants that are determined to be exchange transactions are recognized according to ASC 606. Revenue from grants that are nonexchange transactions are recognized over the period of performance, to match the revenue with the related expenses in a systematic manner. In 2019 and 2018, the Company recognized revenue on a grant from National Institute of Mental Health (NIH), which was classified as a nonexchange transaction, of \$316,399 and \$0, respectively.
19. Earnings Per Share – The Company presents basic earnings per share (“EPS”), computed based on the weighted average number of common shares outstanding for the period, and when applicable diluted EPS, which gives the effect to all dilutive potential shares outstanding (i.e. options) during the period after restatement for any stock dividends. Loss used in the EPS calculation is net loss for each year. During 2018 a \$6,119,942 dividend was paid to the preferred stockholders as an inducement to convert to common shares during a

recapitalization and this has been added to Net Loss Available to Common Stockholders to arrive at a total loss of \$13,063,035 for purposes of computing per share data. There are outstanding dilutive stock options for the years ended December 31, 2019 and 2018 that were not included in the calculation of fully diluted earnings per share due to being antidilutive.

20. Impairment of Long-Lived Assets – The carrying values of long-lived assets other than goodwill are generally evaluated for impairment only if events or changes in facts and circumstances indicate that carrying values may not be recoverable. Any impairment determined would be recorded in the current period and would be measured by comparing the fair value of the related asset to its carrying value. Fair value is generally determined by identifying estimated undiscounted cash flows to be generated by those assets. No impairments have been recorded for the years ended December 31, 2019 and 2018.

21. Software – In accordance with authoritative accounting guidance, costs related to the development of internal use software are evaluated based upon the development stage of the software and expensed or capitalized based upon this evaluation.

Expenses are reviewed on a quarterly basis for inclusion in the software as service capitalization and include but are not limited to software, software subscriptions, consultants, testing materials, sponsored research, legal fees, and salaries for employees based on estimations of time spent in development, design, testing, or otherwise supporting the software as service projects. The capitalized costs are amortized over the estimated lives of the products, which is generally three years. See Note F.

22. Leases – The Company has recognized right-of-use assets and lease liabilities resulting from operating leases where the Company is the lessee, as described in Notes B and D. The Company has made an accounting policy election to not recognize lease assets and lease liabilities for leases with a term of 12 months or less.

23. Revenue from Contracts with Customers – All of the Company’s revenue from contracts with customers are in the scope of ASC 606 and are included in revenues on the Consolidated Statement of Operations. Revenue is measured based on consideration specified in a contract with a customer and excludes any sales discounts. The Company recognizes revenue when it satisfies a performance obligation by transferring control of a product or service to a customer. No incremental contract costs are incurred in obtaining contracts.

Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue. See Note C.

**B. Adoption of New Accounting Standard:**

On January 1, 2019, the Company adopted ASU 2016-02 “Leases” and all subsequent amendments to the ASU (collectively, “Topic 842”), which create recognition of assets and liabilities that arise from leases. All of the Company’s leases, which consist of the leases of office space, are classified as operating leases and are within the scope of Topic 842. Refer to note D, Operating Lease Commitments for further discussion on the Company’s accounting policies for leases. The Company adopted Topic 842 using a modified retrospective approach. As a result of the adoption, leases with terms in excess of 12 months were recognized on the balance sheet with a right-of-use asset and lease liability. Additionally, certain accounts in the prior year financial statements have been reclassified for comparative purposes to conform with the presentation in the current year consolidated financial statements. The impact on the consolidated financial statements was as follows:

Consolidated Balance Sheet	2018		
	As previously reported	Adjustments	As Adjusted
Right-of-use lease asset	\$ -	\$ 218,898	\$ 218,898
Total other assets	3,287,815	218,898	3,506,713
Current portion lease liability	-	80,497	80,497
Lease liability, net of current portion	-	139,806	139,806
Accumulated deficit	(12,805,039)	(1,405)	(12,806,444)
Total Stockholders' Equity	3,044,298	(1,405)	3,042,893
Total Liabilities and Stockholders' Equity	8,873,093	218,898	9,091,991

Consolidated Statement of Operations	2018		
	As previously reported	Adjustments	As Adjusted
Rent	\$ 67,533	\$ 1,405	\$ 68,938
Loss from Operations	(7,114,742)	(1,405)	(7,116,147)
Net Loss	(6,941,688)	(1,405)	(6,943,093)

**C. Revenue from Contracts with Customers:**

**Performance Obligations and Significant Judgments**

The following is a description of the Company's performance obligations from contracts with customers accounted for under ASC 606:

ClearEdge toolkit sales – ClearEdge toolkit sales typically consist of toolkits sold to distributors for resale or through agents to healthcare providers and other end users. The toolkit is used to provide end users with access to the Company's proprietary network through a communications network built into the toolkit. The Company recognizes revenue from toolkit sales in Product sales, net when a customer takes possession of the device. This usually occurs upon shipment of the product. The amount of revenue recognized is net of discounts provided and adjusted for expected returns, which are estimated using the most likely amount method. Estimated returns are \$0 for the years ended December 31, 2019 and December 31, 2018, respectively. 40% of the total consideration is due upon placement of the order and the remaining 60% is due upon shipment.

Credits provided as incentives on toolkit sales – At times, the Company provides credits to certain customers who purchase ClearEdge toolkits to be redeemed for future testing services. The Company allocates a portion of the consideration received from the toolkit sales to these credits based on the observable stand-alone selling price of \$1 per credit and allocates the remaining consideration to the toolkit using the residual approach as an estimate of the toolkit’s stand-alone selling price. The amount allocated to the credits is deferred in contract liabilities on the balance sheet and is recognized as revenue when the credits are redeemed for testing services. Revenue is recognized in net product sales.

Testing services – Testing services consist of diagnostic tests and assessments performed by the Company using its ClearEdge technology. The Company recognizes revenue at the time the service is provided. Customers typically prepay for testing services by purchasing credits to be redeemed for future testing services. The credits are deferred in contract liabilities on the balance sheet and recognized as testing services revenue at the time of performance.

Licensing services – Licensing services consist of a license granted to end users in order to access the ClearEdge network, including its database of test results, via the communications interface incorporated into the toolkit. Revenue is recognized on a monthly basis after the month of licensing services are complete.

Maintenance services – Maintenance services consist of an agreement to replace a customer’s toolkit with a replacement unit if the equipment fails to operate in accordance with its performance specifications during the term of the agreement due to ordinary wear and tear or accidental damage. The plan is limited to one replacement unit in any 12-month period and a new unit after 5 years. Revenue is recognized on a monthly basis after the month of maintenance services are complete.

Clarifi tests – In 2019, the Company launched Clarifi, a new clinically-validated saliva test aiding in the diagnosis of autism spectrum disorder. The Company recognizes revenue at the time the test results are delivered to the customer. Customers prepay for the test upon submitting the saliva sample. The payments are deferred in contract liabilities on the balance sheet and recognized as Clarifi tests revenue at the time of performance. As of December 31, 2019, no test results have yet been delivered to the customer.

#### **Disaggregation of Revenues**

The following table presents the Company’s sources of net revenues, disaggregated by major product and service lines, and timing of revenue recognition for the year ended December 31,

Major products/service lines	2019	2018 As adjusted
ClearEdge toolkit sales	\$ 3,454	\$ 74,120
Testing services run on ClearEdge platform	51,283	23,516
Licensing and maintenance services	42,775	18,142
	<u>\$ 97,512</u>	<u>\$ 115,778</u>

Timing of revenue recognition	2019	2018 As adjusted
Transferred at a point in time	\$ 54,737	\$ 97,636
Transferred over time	42,775	18,142
	<u>\$ 97,512</u>	<u>\$ 115,778</u>

### **Contract Balances**

The following table provides information about receivables and contract liabilities from contracts with customers as of December 31,

	2019	2018 As adjusted
Receivables, which are included in "Accounts receivable"	\$ 3,373	\$ 22,865
Contract liabilities	69,656	81,367

Full payment on toolkits is due at the time of shipment. Receivables represent Quadrant's unconditional rights to such consideration. Contract liabilities represent advance consideration received from customers for test runs. Customers typically prepay for test runs. At the time of payment, such customers receive credits to use at their discretion.

As of December 31, 2019, all payments received for the Clarifi tests, totaling \$2,967, are included in contract liabilities on the balance sheet.

Significant changes in the contract liabilities balances during the period are as follows:

	2019	2018 As adjusted
Revenue recognized that was included in the contract liability balance at the beginning of the period	\$ 54,737	\$ 13,486
Increases due to cash received, excluding amounts recognized as revenue during the period	(43,026)	(94,853)

### Allocation of Transaction Price to Remaining Performance Obligations

Estimated revenues expected to be recognized in the future relating to performance obligations that are unsatisfied (or partially satisfied) as of December 31, 2019 and 2018 are \$69,656 and \$81,367, respectively. Unsatisfied (or partially satisfied) performance obligations mainly consist of testing services redeemable from credits provided as incentives on toolkit sales and prepaid credits. The Company recognized all of the revenue from remaining performance obligations as of December 31, 2018 in 2019 and expects to recognize all revenue from remaining performance obligations as of December 31, 2019 in 2020.

#### **D. Operating Lease Commitments:**

The Company has entered into a number of lease arrangements. Specifically, operating leases for office space have been entered into in Ithaca and Syracuse, NY and San Antonio, TX.

In addition, the Company has elected the short-term lease practical expedient related to office space rentals. Two of the Company's office space leases include optional renewal periods. The Company does not consider these additional renewal periods to be reasonably certain of being exercised, as comparable locations could be identified within the same trade areas for comparable lease rates.

The provisions of the Company's leases include both fixed rental payments and lease payments that increase at pre-determined dates. While the majority of the Company's leases are gross leases, there is a lease where separate payments are made to the lessor based on the pro-rata share of operating expenses including real property taxes, insurance and common area maintenance expenses. The Company has elected the practical expedient not to separate lease and non-lease components for all office space leases.

During the years ended December 31, 2019 and 2018, rent expenses were recognized associated with operating leases as fixed rent expense of \$89,369 and \$39,826 respectively.

Amounts recognized as right-of-use assets related to operating leases are included in other assets, while related lease liabilities are shown as current liabilities and long-term debt. As of December 31, 2019 and 2018, right-of-use assets and lease liabilities relating to operating leases were as follows:

	2019	2018
	\$	As adjusted
Operating lease right-of-use assets	\$ 135,866	\$ 218,898
Operating lease liabilities		
Current portion of long-term debt	80,567	80,497
Long-term debt	60,918	139,806

During the years ended December 31, 2019 and 2018, the Company had the following cash and non-cash activities associated with operating leases:

	2019	2018 As adjusted
<b>Cash paid for amounts included in the measurement of lease liabilities:</b>		
Operating cash flows from operating leases	\$ 83,369	\$ 39,826
No non-cash activity during the period		

The future minimum annual payments due under operating leases as of December 31, 2019 are as follows:

2020	\$ 88,987
2021	69,901
	<u>\$ 158,888</u>

As of December 31, 2019, and 2018, the weighted-average remaining lease term for all operating leases is 1.75 and 2.75 years, respectively.

Because the Company does not have access to the rate implicit in the lease, the incremental borrowing rate is utilized as the discount rate. The weighted average discount rate associated with operating leases as of December 31, 2019 and 2018 is 4.44% and 4.43%, respectively.

**E. Inventories:**

Inventories consisted of the following:

	2019	2018 As adjusted
Clarifi		
Inventory	\$ 144,809	\$ 130,500
ClearEdge		
Raw materials	95,851	95,851
Finished goods	66,340	66,340
	<u>\$ 307,000</u>	<u>\$ 292,691</u>

**F. Software as Service:**

The Company capitalized software costs of \$3,546,255 and \$2,766,796 for the years ended December 31, 2019 and 2018, respectively.

The Company amortized \$382,838 and \$165,233 of capitalized costs for the years ended December 31, 2019 and 2018, respectively. The Company has software development costs of \$2,423,991 for which amortization has not started as the software as not yet been place in service for the year ended December 31, 2019. Amortization expense is included in cost of goods sold. Future amortization for assets placed in service will be \$1,485,980, \$1,375,825, and \$1,158,220 for 2020, 2021, and 2022, respectively.

**G. Common and Preferred Stock:**

In January 2018, the Company amended its certificate of incorporation to authorize 32,000,000 shares in common stock with a par value of \$0.0001 per share, and 6,700,000 shares of Series A Preferred Stock with a par value of \$0.0001 per share.

In February 2018 the Company effected a 3.136 for 1 stock split. To effect the split, the Company's authorized \$0.0001 par value common stock and \$0.0001 par value preferred stock were increased from 32,000,000 to 100,366,300 and from 6,700,000 to 21,014,200, respectively. The stock split is shown retrospectively on the consolidated balance sheets and consolidated statements of stockholders' equity.

During 2018, the Company approved a plan of recapitalization under which all of the previously issued shares of preferred stock were converted into shares of common stock and the Company canceled the former class of preferred stock. As an inducement for preferred shareholders to voluntarily convert the convertible preferred stock to common stock the Company declared an extraordinary dividend in an aggregate amount of approximately \$0.32 per share, or \$6,119,942.

As a result of the transactions, the shares of former Preferred Stock were eliminated and were reduced by \$1,919 for the 19,194,900 shares that were converted.

In December 2018, the Company amended its certificate of incorporation to authorize 125,000,000 shares of common stock with a par value of \$0.0001 per share. The additional shares were authorized to reserve for issuance of shares for the potential conversion of a convertible note.

**H. Stock Option Plan:**

Under the Company's 2016 Equity Incentive Plan (the Plan), the Company, at the discretion of the board of directors, may issue stock awards for shares of the Company's common stock. The board may, in its discretion, determine restrictions and conditions on the exercisability of the stock options and stock purchase rights. No option shall be exercisable after expiration of ten years from the date it was granted. Shares issued for exercised options are newly-issued from shares authorized.

The price of common stock covered by any option granted under the Plan shall be determined by the board at the time such option is granted, provided, however, that in the case of incentive stock options the option price shall not be less than the fair market value of the common stock on the date of grant. No options have been granted for less than 100% of the fair market value of common shares at the date of option grant.

Vesting periods for these awards generally range from under one year to three years.

The fair value of the awards is determined and fixed on the grant date based on the Company's most recent stock valuation report. The stock valuation report is a 409A estimation of fair value report prepared by a qualified outside party. The traditional valuation techniques and methodologies used in determining the fair market value included market, income and cost valuation approaches. Changes in the assumptions made in the valuation may contribute to significant changes in the fair market value of the underlying stock during the period. This estimation of fair value is considered highly complex and subjective.

The Company's calculation for the stock awards under its stock-based compensation arrangements was made using the Black-Scholes model with the following assumptions:

	2019	2018 As adjusted
Dividend yield	0%	0%
Volatility	50.00%	50.00%
Discount rate	3.03%	1.92%
Expected life	5.77	5 - 5.77 years
Fair value of common stock per share	\$ 1.25	\$ 1.22
Expected rate of forfeitures	0.00%	6.00%

Management has estimated forfeitures at 6% during 2018 based on knowledge of the circumstances of the company and its employees. During 2019 management has changed its policy to account for forfeitures as they occur. Total compensation cost related to nonvested awards not yet recognized is \$2,203,849 as of December 31, 2019. It is expected to be recognized over the weighted-average period of 2.006 years. Stock option compensation of \$890,578 and \$3,027,124 was recognized for the years ending December 31, 2019 and 2018, respectively.

A summary of the status of the Company's stock option plan as of December 31, 2019 is presented below:

Fixed Options	Shares	Weighted Average Exercise Price
January 1, 2018	8,044,978	\$ 0.003
Granted	18,333,135	0.390
Exercised	(521,602)	0.003
December 31, 2018	25,856,511	0.277
Granted	6,332,930	1.25
Forfeited	(4,739,647)	0.368
Exercised	(1,127,104)	0.152
December 31, 2019	<u>26,322,690</u>	0.456
Exercisable:		
December 31, 2019	19,484,429	
Weighted average fair value of options granted in 2019	\$ 1.25	

## I. Income Taxes:

The components of the benefit for income taxes in the accompanying consolidated statements of operations are as follows:

	2019	2018 As adjusted
Current:		
Federal	\$ 188,117	\$ 225,724
State	16,150	11,792
Tax benefit	<u>\$ 204,267</u>	<u>\$ 237,516</u>

The components of the benefit for income taxes differs from the amount that would result from applying the federal statutory rate for the years ended December 31, 2019 and 2018 as follows:

	2019		2018 As adjusted	
	Amount	%	Amount	%
Statutory tax rate	\$ (1,901,010)	25.3%	\$ (1,053,963)	21.0%
Valuation allowance change	1,705,054	-22.7%	1,025,816	-20.4%
Permanent differences	195,956	-2.6%	28,147	-0.6%
	<u>\$ -</u>	<u>0%</u>	<u>\$ -</u>	<u>0%</u>

The temporary differences which give rise to deferred tax assets and (liabilities) at December 31 are as follows:

	2019	2018 As adjusted
Accelerated depreciation	\$ (1,604)	\$ (2,133)
Other assets	(1,803,818)	(915,890)
Charitable contribution carryovers	91,638	56,981
Stock option compensation	500,686	825,599
Research and development tax credit carryforward	52,882	52,882
NOL carryforward	6,176,564	3,293,855
Valuation allowance	(5,016,348)	(3,311,294)
Net deferred tax position	<u>\$ -</u>	<u>\$ -</u>

The increase in the valuation allowance was approximately \$1,705,000 and \$1,025,000 for the years ended December 31, 2019 and 2018, respectively.

As required by FASB ASC 740 the Company has evaluated the positive and negative evidence bearing upon the realization of its net deferred tax assets. The Company has determined that, at this time, it is more likely than not that the Company will not realize all of the benefits of federal and state net deferred tax assets, and, as a result, a valuation allowance was established. The research and development tax credit carryforwards and NOL carryforwards generated through December 31, 2019, of approximately \$53,000 and \$22,950,000, respectively, expire at various time through 2038. The company has recorded income tax credit receivable amounts of \$204,267 and \$237,516 for the years ending December 31, 2019 and 2018, respectively. These credits consist of \$188,117 and \$225,724 of federal research and development credits which the Company as a qualified small business elected as a payroll tax credit, and \$16,150 and \$11,792 from New York State QETC employment credit. Pursuant to the ACT, any of the Company's newly generated Federal NOL carryforwards can be carried forward indefinitely, while being limited to 80% of taxable income (determined without regard to the deduction). The Company is currently open to audit under the statute of limitations by the Internal Revenue Service for the years ended December 31, 2016 through December 31, 2019. The Company has no uncertain tax positions. As of December 31, 2019, and 2018 there is no accrual for interest or penalties related to uncertain tax positions.

**J. Pension Plan:**

The Company utilize the Pinnacle Employee Services, LLC 401(k) and profit sharing plan, as all employees of Quadrant Biosciences Inc. are provided through Pinnacle Employee Services, LLC. All employees are eligible to participate. Employees receive a 3% non-elective company contribution after 90 days of employment. Company contributions totaled \$51,860 and \$52,856 for the years ended December 31, 2019 and 2018, respectively.

**K. Line of Credit:**

In November 2017 the Company obtained a line of credit with a borrowing capacity of \$1,250,000, at an interest rate of Bank Prime plus 1.125%. The interest rate at December 31, 2019 and 2018 was 5.875% and 6.625%, respectively. The line of credit had a zero balance at December 31, 2019 and 2018.

This line of credit has been secured by all the business assets of the Company and certain of the personal assets of Richard Uhlig, the Company's Chairman and CEO. As compensation, Richard Uhlig received 6,480,683 stock options in 2018 with a value of \$1,555,364 based on the Black-Scholes model calculation.

**L. Long-Term Debt:**

Long-Term debt consists of the following as of December 31:

	2019	2018 As adjusted
Loan from VEP Biotech Ltd, with a maturity date of October 2023, an interest rate of 5%, and no required payment of principal or interest until maturity.	\$ 5,288,146	\$ 5,033,333
	5,288,146	5,033,333
Less: current portion	-	-
	<u>\$ 5,288,146</u>	<u>\$ 5,033,333</u>
Future minimum annual debt payments are as follows:		
2020	\$ -	
2021	-	
2022	-	
2023	5,288,146	
	<u>\$ 5,288,146</u>	

Accrued interest included in the outstanding loan balance due VEP Biotech, Ltd., was \$254,813 and \$33,333 for the years ending December 31, 2019 and 2018, respectively.

In 2017, the Company entered into an \$800,000 consortium loan agreement with several members of the Board of Directors, including Richard Bongo, Wade West, Ira Fedder, Andrew Rock and Mary Ann Tyszko. The terms of this consortium loan provided for monthly interest only payments at WSJ Bank Prime plus 1.125% through December 2020 with a balloon payment of the remaining principal balance. This loan was paid in full in 2018. In aggregate, these Directors received 4,077,372 stock options in 2018 as compensation for their participation in the consortium loan agreement with a value of \$98,569 based on the Black-Scholes model calculation.

During 2018, notes payable to related parties were settled via \$500,000 in net repayments, and a \$300,000 conversion of remaining balance due to 240,000 shares of common stock. As the conversion did not use cash, it has been excluded from the consolidated statements of cash flows.

**M. Pledges Payable:**

The Company pledged contributions to Autism Speaks, a 501(c)(3) not-for-profit corporation dedicated to promoting solutions, across the spectrum and throughout the life span, for the needs of individuals with autism and their families. The total pledged contribution is \$350,000. The remaining balance on the pledge includes \$100,000 due on or before February 28<sup>th</sup>, 2020, and \$125,000 due on or before August 31<sup>st</sup>, 2020.

**N. Concentration of Credit Risk:**

The Company may, at times, have cash on deposit in financial institutions in excess of FDIC or NCUA insured amounts.

**O. Reclassification:**

Certain accounts in the prior-year financial statements have been reclassified for comparative purposes in order to conform with the presentation in the current year consolidated financial statements.

**P. Industry Segment Data:**

The Company's primary business segments involve the operation of Quadrant Biosciences Inc and Motion Intelligence LLC. Quadrant Biosciences Inc researches, designs, and develops technological tools to identify epigenetic and functional disorders resulting from neurodegeneration and brain trauma. Motion Intelligence sells and operates toolkits, testing and licensing services.

**Q. Legal Matters:**

None.

**R. Liquidity:**

Over the past several years, the Company's cash flow has been funded primarily through private equity investors. As of December 31, 2019, and 2018, the Company had approximately \$1,290,000 and \$4,946,000, respectively, of unrestricted cash. During December 2019 the company issued 322,000 shares at a share price of \$2.50 per share, generating proceeds of approximately \$805,000.

The Company is in its product launch stage and has experienced recurring negative cash flows from expenses related to research and product development along with other normal business expenses associated with bringing the product to market. Although the Company has received approximately \$2.3 million in National Institute of Health (NIH) Grants to cover further Autism Spectrum Disorder (ASD) research by several sub-award Universities, the Company sponsors additional out of pocket expense beyond the scope of these grants and in other neurological areas as it looks to expand its product line. These expenses contributed to the accumulated deficits experienced by the Company. The Company has launched its ASD product in December 2019 and expects to begin to recognize revenue through product sales.

As of December 31, 2019, the Company had a \$1.25 million line of credit available to assist in addressing any cash requirements before the next capital raise or until revenue from product sales are realized.

Given the Company's early stage, the spending on critical areas of business and new product development may necessitate an ongoing requirement for additional capital investment. The Company expects that it may need to raise additional capital to accomplish its business plan over the next several years. The Company expects to seek to obtain additional funding through public as well as private equity; however, there is significant uncertainty as to the availability of required financing or terms thereupon. Management believes in its ability to continue to successfully raise equity capital and generate revenue to fund its growth plans and is confident that its strong investor base will continue to support the Company in the event that future equity financing may be necessary.

#### **S. Subsequent Events:**

On February 10, 2020 Quadrant completed its most recent raise that started in December 2019. The total raise was 1,024,100 shares at \$2.50 per share or \$2,560,250. Of the 1,024,100, 322,000 shares or \$805,000 is reported in the 2019 financials and 702,100 shares or \$1,755,250 occurred after December 31, 2019 and is considered a subsequent event.

In March 2020 the Company was approved by the SEC for a Regulation A Offering of 5,000,000 Shares, at \$3.00 per share. As of April 10, 2020, 104,843 shares for \$314,529 have been subscribed, but not issued.

In March 2020, the Company drew \$500,000 on their line and credit and removed the personal assets of Richard Uhlig, the Company's Chairman and CEO as security, effectively lowering the maximum limit to \$500,000. The Company can raise this back to \$1,250,000 by posting additional collateral.

Subsequent to December 31, 2019, local, U.S., and world governments have encouraged self-isolation to curtail the spread of the global pandemic, coronavirus disease (COVID-19), by mandating temporary work stoppage in many sectors and imposing limitations on travel and size and duration of group meetings. Most industries are experiencing disruption to business operations and the impact of reduced consumer spending. In addition, global markets have seen significant declines. There is unprecedented uncertainty surrounding the duration of the pandemic, its potential economic ramifications, and any government actions to mitigate them. As of April 10, 2020, the Company is pursuing relief through Federal stimulus programs, such as its Paycheck Protection Program and Economic Injury Disaster Loan program to lessen the financial burden of the crisis. Accordingly, while management cannot quantify the financial and other impacts to the Company as of April 10, 2020, there is a reasonable possibility that the impact on the Company's financial position and results of future operations could be material. The Company has evaluated subsequent events through April 10, 2020, the date which the financial statements were available for issue.

Due to these uncertainties, the Company has taken some decisive proactive steps to protect itself. Middle managements salaries have been reduced by 10% and senior management took between 25%-75% salary reductions. These above items amount to a \$1,077,700 annualized cost savings or approximately 31% per annum. The salary reductions will be accrued to employees and paid out when and in a manner determined appropriate by management.

## EXHIBIT A

### WEFUNDER PROCESS

#### DELIVERY & CANCELLATIONS

##### *How will the issuer complete the transaction and deliver securities to the investors?*

If we reach our target offering amount prior to the deadline, we may conduct an initial closing of the offering early if we provide notice about the new offering deadline at least five business days prior to the new offering deadline (absent a material change that would require an extension of the offering and reconfirmation of the investment commitment). Wefunder will notify investors if we conduct an initial closing. Thereafter, we may conduct additional closings from time to time at our and Wefunder's discretion until the deadline date.

The following describes the process to invest in the company, including how the company will complete an Investor's transaction and deliver securities to the investor.

1. Investor Commitment. The Investor will submit, through Wefunder Portal, a requested investment amount. When doing so, the Investor will also execute an investment contract with the company ("Investment Agreement"), using the Investor's electronic signature.
2. Acceptance of the Investment. If the Investor Agreement is complete, the Investor's commitment will typically be recorded within a few minutes. The commitment will also be available on the Investor's "My Investments" screen on the wefunder.com website. After the offering closes, the contract will be counter-signed by the company. The executed investment contract will then be sent to the investor via email, and is also available to download on the "My Investments" screen.
3. Investor Transfer of Funds. Upon receiving confirmation that an investment has been accepted, the Investor will be responsible for transferring funds from a source that is accepted by Wefunder Portal into an escrow account held with a third party bank on behalf of issuers offering securities through Wefunder Portal.
4. Progress of the Offering. The Investor will receive periodic email updates on the progress of the offering, including total amounts raised at any given time, and will be notified by email and through the "My Investments" screen when the target offering amount is met.
5. Closing: Original Deadline. Unless we meet the target offering amount early, Investor funds will be transferred from the escrow account to the company as soon as practicable after the deadline date identified in the Cover Page to this Form C and the company's Wefunder Portal Profile.
6. Early Closings. If the target offering amount is met prior to the original deadline date, we may close the offering earlier, but no less than 21 days after the date on which information about the company, including this Form C, is posted on our Wefunder Portal Profile. We will reschedule the offering deadline, and at least five days prior to the new deadline, investors will receive notice of it by email and through the "My Investments" screen. At the time of the new deadline, your funds will be transferred to the company from the escrow account, provided that the target offering amount is still met after any cancellations.
7. Book Entry. Investments may be in book entry form. This means that the Investor may not receive a certificate representing his or her investment. Each investment will be recorded in our books and records and will be recorded in each Investors' "My Investments" screen. The Investor will also be emailed the Investment Agreement again. The Investment Agreement will also be available on the "My Investments" screen. At the option of the company, you may receive an electronic certificate.

##### *How can an investor cancel an investment commitment?*

NOTE: Investors may cancel an investment commitment until 48 hours prior to the deadline identified in these offering materials.

The intermediary will notify investors when the target offering amount has been met. If the issuer reaches the target offering amount prior to the deadline identified in the offering materials, it may close the offering early if it provides notice about the new offering deadline at least five business days prior to such new

offering deadline (absent a material change that would require an extension of the offering and reconfirmation of the investment commitment).

If an investor does not cancel an investment commitment before the 48-hour period prior to the offering deadline, the funds will be released to the issuer upon closing of the offering and the investor will receive securities in exchange for his or her investment.

If an investor does not reconfirm his or her investment commitment after a material change is made to the offering, the investor's investment commitment will be cancelled and the committed funds will be returned.

An Investor's right to cancel. An Investor may cancel his or her investment commitment at any time until 48 hours prior to the offering deadline.

If there is a material change to the terms of the offering or the information provided to the Investor about the offering and/or the company, the Investor will be provided notice of the change and must re-confirm his or her investment commitment within five business days of receipt of the notice. If the Investor does not reconfirm, he or she will receive notifications disclosing that the commitment was cancelled, the reason for the cancellation, and the refund amount that the investor is required to receive. If a material change occurs within five business days of the maximum number of days the offering is to remain open, the offering will be extended to allow for a period of five business days for the investor to reconfirm.

If the Investor cancels his or her investment commitment during the period when cancellation is permissible, or does not reconfirm a commitment in the case of a material change to the investment, or the offering does not close, all of the Investor's funds will be returned as soon as practicable.

Within five business days of cancellation of an offering by the company, the company will give each investor notification of the cancellation, disclose the reason for the cancellation, identify the refund amount the Investor will receive, and refund the Investor's funds.

The company's right to cancel. The Investment Agreement you will execute with us provides the company the right to cancel for any reason before the offering deadline.

If the sum of the investment commitments from all investors does not equal or exceed the target offering amount at the time of the offering deadline, no securities will be sold in the offering, investment commitments will be cancelled and committed funds will be returned.

#### **RESTRICTIONS ON TRANSFER OF THE SECURITIES BEING OFFERED:**

The securities being offered may not be transferred by any purchaser of such securities during the one year period beginning when the securities were issued, unless such securities are transferred:

- to the issuer;
- to an accredited investor;
- as part of an offering registered with the U.S. Securities and Exchange Commission; or
- to a member of the family of the purchaser or the equivalent, to a trust controlled by the purchaser, to a trust created for the benefit of a member of the family of the purchaser or the equivalent, or in connection with the death or divorce of the purchaser or other similar circumstance.

NOTE: The term "accredited investor" means any person who comes within any of the categories set forth in Rule 501(a) of Regulation D, or who the seller reasonably believes comes within any of such categories, at the time of the sale of the securities to that person.

The term "member of the family of the purchaser or the equivalent" includes a child, stepchild, grandchild, parent, stepparent, grandparent, spouse or spousal equivalent, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of the purchaser, and includes adoptive relationships. The term "spousal equivalent" means a cohabitant occupying a relationship generally equivalent to that of a spouse.

#### **ONGOING REPORTING**

***The issuer will file a report electronically with the Securities & Exchange Commission annually and post the report on its website, no later than:***

120 days after the end of each fiscal year covered by the report.

***Once posted, the annual report may be found on the issuer's website at:***

<https://www.quadrantbiosciences.com/investor-relations/>

The issuer must continue to comply with the ongoing reporting requirements until:

- the issuer is required to file reports under Section 13(a) or Section 15(d) of the Exchange Act;
- the issuer has filed at least one annual report pursuant to Regulation Crowdfunding and has fewer than 300 holders of record and has total assets that do not exceed \$10,000,000;
- the issuer has filed at least three annual reports pursuant to Regulation Crowdfunding;
- the issuer or another party repurchases all of the securities issued in reliance on Section 4(a)(6) of the Securities Act, including any payment in full of debt securities or any complete redemption of redeemable securities; or the issuer liquidates or dissolves its business in accordance with state law.

# Quadrant Biosciences Inc.

We develop novel, saliva based tests for Autism, Parkinson's, and COVID-19.

Main Street Software Technology Healthcare  
Bio Tech

[QUADRANTBIOSCIENCES.COM](#) SYRACUSE NEW YORK



*Covid-19 testing chose us more than we chose it! Our expertise in saliva based, RNA testing - as part of our mission to develop diagnostic tests for autism and other neurological conditions - serendipitously placed us in a position to help address this global pandemic.*

**Richard Uhlig** CEO and Founder @ Quadrant Biosciences Inc.  
ADMIN-ONLY: [dyan.tomaselli@quadrantbiosciences.com](mailto:dyan.tomaselli@quadrantbiosciences.com)

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## Why you may want to support us...

- 1 Quadrant is leading the development of epigenetic diagnostic tools for multiple health conditions
- 2 Developed & commercialized world's first saliva based epigenetic test for autism spectrum disorder
- 3 Applied our expertise in RNA analysis to co-develop COVID-19 saliva test w/SUNY - FDA EUA pending.
- 4 Member of consortium approved by NY State to test municipalities' wastewater for COVID-19.
- 5 Working with SUNY on pooled diagnostic surveillance of returning college students for COVID-19.
- 6 Development of Parkinson's disease, concussion, and Anorexia Nervosa, diagnostic tools in progress.
- 7 Led by former Chairman & CEO of Morgan Stanley Bank and a seasoned management team.

WE'VE RAISED \$34,026,959 SINCE OUR FOUNDING

## Our team

AND OUR MAJOR ACCOMPLISHMENTS



### Richard Uhlig

CEO and Founder

*More than 25 years of business experience focused on the design and development of innovative products across various industries. Former CEO of Morgan Stanley Bank and CIO at Merrill Lynch Bank. Graduate of Cornell University.*



### Benjamin Perry

President



Over 10 years of experience in the software development industry, with deep experience in cloud computing architecture, blockchain technology, and agile product management. Graduate of Cornell University.



**Richard Bongo**

Chief Financial Officer

Over 30 years of experience in structured finance, Managing Director at one of Europe's largest banks, positions at multiple Wall Street firms such as Lehman Brothers, Credit Suisse, Merrill Lynch and Bank of America. Graduate of Kings College.



**James Croke**

General Counsel

Experienced counsel to underwriters and issuers in the US and global public offerings and private placements as well as a writer and lecturer on legal and regulatory issues. Graduate of University of Kentucky and University of Notre Dame Law School.



**Dave MacLean**

Chief Marketing Officer

More than 25 years of business, legal and research experience including film production, entrepreneurship, litigation and research for Cornell University. Graduate of Cornell University and Buffalo Law School.



**Syed Ameen**

Executive Vice President Corporate Strategy

Over 25 years of experience as an investment banker, founder and portfolio manager of Tevere Capital. He led multiple trading desks at Bank of America, Lehman Bros, and Morgan Stanley. Graduate of the University of Pennsylvania.



**Jeremy Williams**

Chief Technology Officer

Experienced developer and leader spanning complex systems integration, mapping software used by state and municipal governments to manage geo-spatial data, and applications for research data analysis and dissemination. Graduate of Cornell University.



**Bryan Greene**

Chief Operating Officer

More than 10 years of experience in medical device operations, manufacturing, validation, and new product introduction. Graduate of Clarkson University.



**Wade West**

Executive Vice President - Sales

Over 39 years of entrepreneurial business experience in leadership, sales, marketing and business development, provided consulting services to a number of startup and growing companies in the orthopedic and medical device industry.



**Chris Horacek**

Deputy General Counsel

Over 30 years' experience working in healthcare arena, and related areas of regulatory compliance and patent protection.



**Kayla Wagner**

Vice President of Product Management

Experienced researcher with a career dedicated to working with children and adolescents with neurodevelopmental disorders in both clinical and research settings. Graduate of Syracuse University.



**In the news**



**Downloads**

[Final Reg CF Investor Deck.pdf](#)

# From Epigenetic Diagnostics to Comprehensive COVID-19 Testing - How Did We Get Here?

Leaders in the Development of Epigenetic Diagnostic Tools

Quadrant Biosciences is a life science company working with universities across the US to develop and commercialize epigenetic diagnostic solutions for autism spectrum disorder, Parkinson's disease, and concussions. Working closely with medical researchers such as SUNY Upstate Medical University and Penn State College of Medicine, we have developed a novel, saliva-based diagnostic platform called **Clarifi™**.

In December 2019 we launched **Clarifi ASD™**, the **world's first** saliva test for autism spectrum disorder. The test, intended for children 18 months through six years of age, provides a probability of an autism diagnosis based on epigenetic markers in the saliva.

Then the COVID-19 Pandemic happened

Not long after we began to introduce Clarifi ASD to pediatric health care providers, the world was besieged by the COVID-19 pandemic. Our ability to access healthcare providers and share the scientific and practical utility Clarifi ASD provides to parents and physicians has been greatly restricted by social distancing mandates and virus concerns which, in turn, has limited our sales team's ability to affect sales and increased commercial demand for Clarifi ASD. As a result, our sales of the Clarifi ASD test have been below expectations.

So, we adapted!

In response to the COVID pandemic we immediately reduced our operating costs and, given our existing experience with RNA analysis - and the fact that COVID-19 is an RNA virus - we made the decision to pivot and work with our university partners to develop diagnostic tools for COVID-19. As a result, today we are involved in three significant, complementary COVID-19 projects to aid in the detection of COVID-19 in individuals and communities across the U.S.



## Three Levels of Testing: A comprehensive Approach to Assessing COVID-19

### 1. Individual Testing - Clarifi COVID-19 Test Kit

Partnering with Upstate Medical University, we first embarked on the development of an individual test for COVID-19. This proved to be a natural extension of our work with Clarifi ASD™ which used a similar saliva collection methodology. Coincidentally, two features of

our Clarifi approach - using a simple saliva swab and employing an RNA stabilizing solution - happened to address two key challenges experienced by many of the early COVID-19 tests: patient discomfort from nasal swabbing, and RNA degradation giving rise to false-negative test results.

The Clarifi COVID-19 Test Kit contains a non-invasive and easy to administer swab that is used to collect saliva, which is analyzed to determine the presence or absence of SARS-CoV-2 viral RNA. The Clarifi COVID-19 Test Kit contains the saliva collection swab and the reagents needed to run the analysis and will be immediately available for use by high-complexity clinical laboratories serving patients through physicians' offices, urgent care clinics, and hospitals.

The Clarifi COVID-19 Test Kit was initially submitted to the FDA on [May 22, 2020] for Emergency Use Authorization ("EUA"). We have been in active dialogue with the FDA regarding our EUA request and we hope to receive approval in the coming weeks. Please note, however, that there are no guarantees that the FDA will provide this authorization for commercial use, and if we do not receive EUA approval it would materially impair our company's business and prospects.

## 2. Community/Municipal Screening: Wastewater Surveillance

This project, funded by New York State, involves our collaboration with SUNY ESF, Upstate Medical University, Syracuse University, and global civil engineering firm Arcadis, to collect and analyze wastewater from the county and municipal sewer systems for the presence of the COVID-19 virus. Our analysis of wastewater samples provides local health officials and policymakers with early indications and information regarding the presence and preponderance of COVID-19 infections in these communities.

*"This can be a real game-changer in the detection and monitoring of COVID-19," said Quadrant Biosciences CEO Richard Uhlig. "Information from this testing will allow municipalities to estimate COVID-19 transmission in real time, provide instant feedback on social distancing and reopening phases, help predict hospitalizations and provide confidence for locations with zero transmission to resume normal activity."*

Because this allows for large regions to be effectively tested for the presence of the COVID-19 virus, it provides a cost-effective and efficient way to screen residents in towns, cities, states, and universities, even in the absence of individual testing.

## 3. Group/College Testing: Pooled Testing

Finally, in response to an overwhelming need to efficiently test university students prior to attending classes, we have partnered with the Upstate Medical University to conduct pooled testing of over 150,000 students preparing to begin the fall semester at SUNY schools.

Each of these pooled tests for COVID-19 involves a single test of saliva samples collected from a group of 12 students. A negative test result means that all 12 students are presumed to be coronavirus-free. A positive test for the pool would mean every student in that group would need to be individually tested. Performing single tests of groups of students greatly reduce the cost of supplies, staffing, and time required to perform and interpret tests.

**Disclaimer: Despite the fact that we have the expertise, capability and customer demand for these COVID-19 tests, the supplies needed to perform quantitative PCR are becoming increasingly difficult to obtain. This, and supply chain disruptions generally throughout the industry, could impair our ability to successfully commercialize one or all of these tests**

## But, we are still very much an Epigenetics Diagnostic Company!

### The Clarifi ASD™ Test - A Game-Changer for Autism Diagnostics

We continue to maintain a focus on our core mission to develop epigenetic diagnostic tools, such as **Clarifi ASD™**, the **world's first** saliva test for autism spectrum disorder.





### What is it?

Clarifi ASD is a saliva test that indicates the probability that a child has autism spectrum disorder.

### Who is it for?

Clarifi ASD is being used primarily by pediatricians and family physicians with patients (18 months through 6 years of age) with a positive autism screening test or a clinical suspicion to aid in a formal diagnosis.

### Why is it needed?

With 1 in 54 children being diagnosed with autism in the US according to the CDC, it is one of the most commonly diagnosed developmental disabilities in the country. Unfortunately, the current diagnostic process involves long wait times, largely the result of a small number of trained clinicians to administer behavioral tests. This, in turn, leads to delays in children receiving critical intervention services. If autism is identified and treatment is initiated early, the trajectory of a child's life can be positively changed.

### How Clarifi ASD Can Make a Difference

For the first time, clinicians have an accurate biological tool to aid in the early diagnosis of autism. With this simple saliva test, Clarifi ASD can:

- ~ Help start services earlier, when treatment is most effective
- ~ Provide specialists biological data to support their behavioral assessments
- ~ Facilitate cost savings through improving the diagnostic process

### When was it launched?

Clarifi ASD was launched commercially in the US in 49 states (excluding New York), in December 2019.

### Watch a short video about Clarifi ASD here:



### Who we are

Quadrant Biosciences Inc was started in 2015 by Founder and CEO Rich Uhlig, and we have since grown to over 40 employees. Our team has a shared passion in being a part of positive changes in healthcare.

*"As a company, we are committed to looking outside ourselves, and deploying our resources to assist other organizations and research efforts dedicated to improving the lives of people with autism and their families." Richard Uhlig, Founder and CEO, Quadrant Biosciences*





### Capital Raised to Date

As of January 2020, we have raised over \$30 million in previous financing rounds from private investors who have recognized the value in how we intend to change the landscape of diagnostics in the future.

2015 / 2016	NOV 2017	MAR / APR 2018	NOV 2018	JUN 2019	Dec 2019
Series A Preferred funding	Established bank credit line	Converted Series A Preferred to common equity; sold 10% equity interest	A 5-year convertible note (convertible to common equity)	Common Equity	Common Equity
\$6.1 M	\$1.25 M	\$12.5 M	\$5.0 M	\$5.0 M	\$2.5 M

### Research Grants Received To Date

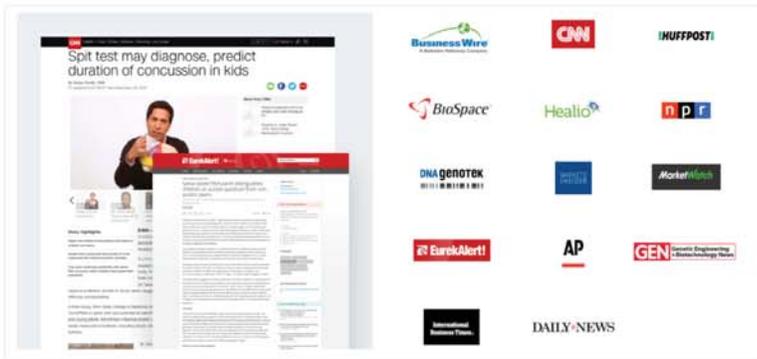
We have received numerous grants to support our research efforts.\*

2016	2016	2018	2019
Private research foundation	NIH Phase I STTR Grant	NIH Phase II STTR Grant	NIH supplemental funding
\$201,000	\$225,000	\$2.0 M	\$330,000

(\*The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.)

### Quadrant Biosciences in the Media

Our company has been featured many times in national news and scientific media outlets regarding our research and technology accomplishments in the areas of autism, concussion, and Parkinson's disease.



### Clarifi ASD is just the Beginning! Future products in the works.

One of the most exciting things that we've discovered is that our Clarifi epigenetic diagnostic platform has applications for many other health issues. Diagnostic solutions for early-stage Parkinson's disease, mTBI/concussion, anorexia, and schizophrenia are currently in development. Several peer-reviewed research papers have already been published on the application of this approach to these worldwide neurological health concerns.

<p><b>Clarifi™</b> parkinson's saliva test</p> <p><b>Parkinson's disease</b> Designed to detect Parkinson's disease from other common look-alike conditions (e.g., essential tremor, multiple system atrophy) with high specificity</p>	<p><b>Clarifi™</b> tbi saliva test</p> <p><b>TBI (brain injury)</b> Designed to be a diagnostic test that will rapidly detect brain changes and assist with developing personalized treatment plans</p>	<p><b>Clarifi™</b> anorexia saliva test</p> <p><b>Anorexia nervosa</b> Designed to be a molecular indicator of treatment progress during hospitalization for the diagnosis with highest mortality rate of any psychiatric disorder</p>	<p><b>Clarifi™</b> schizophrenia saliva test</p> <p><b>Schizophrenia</b> Designed to be a diagnostic test that will differentiate schizophrenia from other diagnoses with similar or overlapping symptom presentation</p>
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## We have numerous peer-reviewed publications supporting our science

To date, there have been 18 peer-reviewed papers published supporting our development of epigenetic biomarkers for autism, mild traumatic brain injury, Parkinson's disease, anorexia nervosa, and Pantothenate kinase-associated neurodegeneration disease (PKAN). These have been published in a variety of scientific journals including JAMA Pediatrics, Frontiers in Genetics, Journal of Neurotrauma, Journal of Oral Microbiology, Journal of Experimental Neuroscience, and Autism Research.



## Research Partnerships

We are honored to partner with a number of outstanding research universities and organizations to help further the understanding of epigenetics.



## International Research Partnerships

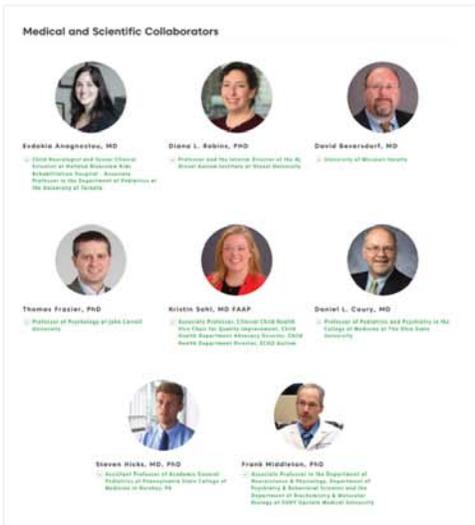
We also actively partnered with several international research organizations:

*European Autism Interventions, A Multicentre Study for Developing New Medications (EU-AIMS)* - first Europe-wide collaboration between organizations with the goal of identifying markers of autism that would help in earlier and more accurate diagnosis, prognosis, and the development with new therapies

*Comprehensive Care Center for Disability (CAID)* - centers in Santiago, San Juan, Higüey and Santo Domingo, the Dominican Republic dedicated to the evaluation, diagnosis and rehabilitation of children from zero to ten years with Autism Spectrum Disorder.

## Our Clinical Advisory Board

Our clinical advisory board comprises some of the leading autism and epigenetic researchers and clinicians. It is our privilege to work alongside these luminaries in the field to help families and children with autism.



Want to learn more?



## Investor Q&A

### What does your company do? ▾

— COLLAPSE ALL

We translate cutting edge research into practical diagnostic solutions for some of the most critical public health issues facing the world today. Specifically, we have been early pioneers in identifying and developing epigenetic biomarkers in saliva. We recently launched the first ever epigenetic saliva test for autism, and are actively involved in several Covid-19 testing projects. We are currently working on developing similar tests for Parkinson's disease, concussion, and Anorexia nervosa.

### Where will your company be in 5 years? ▾

Our goal is to have the Clarifi epigenetic diagnostic tests become the standard of care, positively impacting millions of people across the globe. (We also want to be on the forefront of RNA analysis and continue to be in a position to positively contribute to the fight against RNA viruses such as Covid-19.)

### Why did you choose this idea? ▾

Covid-19 testing chose us more than we chose it! Our expertise in saliva based, RNA testing - as part of our mission to develop diagnostic tests for autism and other neurological conditions - serendipitously placed us in a position to help address this global pandemic.

### Why is this a good idea, right now? What changed in the world? Why wasn't this done a few years ago? ▾

We are the pioneers and the early market leader of this new approach to epigenetic diagnostics. Developing an epigenetic saliva test like Clarifi ASD has only been possible in recent years for a few reasons. One, the science behind our tests, particularly involving epigenetics and the microbiome, has been evolving at a rapid pace in recent years. For example, it was only in the past 10-15 years that scientists began to understand the biological significance of microRNAs in the body. Also, the science and large scale data management needed to identify, categorize and analyze microRNA and the microbiome, and to use AI and machine learning to identify related patterns, has only recently become possible. Finally, we had the good fortune of partnering with university researchers on the cutting edge of this new science.

### How far along are you? What's your biggest obstacle? ▾

We just commercially launched the first of these epigenetic tests, Clarifi ASD, in December 2019! Clarifi ASD is the world's first epigenetic diagnostic tool for autism spectrum disorder. Our Covid-19 diagnostic work has commenced in the form of our work as part of a consortium selected by NY State to test municipalities' wastewater for Covid-19 and our work with SUNY Upstate to conduct pooled surveillance testing of students returning to school this Fall. We have also submitted to the FDA an emergency use authorization (EUA)

application for an individual Covid-19 diagnostic test -- this submission is pending. Our biggest obstacle is having sufficient resources to continue to work with our university partners to research, develop and commercialize diagnostic tools to the market as quickly as we have to date.

#### **Who competes with you? What do you understand that they don't?** ▾

Though we believe we do not currently have any direct competitors for our Clarifi ASD product, we believe that a number of organizations are or may be working to develop human health and disease diagnostic and preventative mechanisms, and or other novel technologies that may be competitive with our technology. We have numerous capable competitors in the area of detection and diagnosis of Covid-19, many of which are further along and better funded than we are.

#### **How will you make money?** ▾

By selling our epigenetic products commercially to pediatricians and clinicians; first in the United States and then globally; and by selling our Covid-19 diagnostic tools and services.

#### **What are the biggest risks? If you fail, what would be the reason? What has to go right for you to succeed?** ▾

The following are only some of the risks associated with this offering. Please refer to our offering document which contains a comprehensive list of risk factors that could adversely affect our business and prospects.

1. We are an early stage revenue producing company and have incurred losses since our inception. We expect to incur losses for the foreseeable future as we further expand our product offerings and may never achieve or maintain profitability. Any valuation of the company at this stage is difficult to assess.
2. There is currently no public market for our Common Stock or our convertible notes, and a public market for our Common Stock or our convertible notes may never develop.
3. Even if any of our product candidates receives marketing clearance or approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.
4. We have limited experience with the manufacturing and delivery processes and systems needed for us to commercialize our products on a large scale.
5. If the company loses certain senior management and key personnel or are unable to attract and retain skilled employees when needed, it may not be able to operate successfully.

For more risks, see the Offering Document.

#### **What is your proudest accomplishment?** ▾

With a relatively small team of highly dedicated individuals, we were able to accelerate the transformation of a what we believe is a revolutionary scientific finding into a viable commercial product accessible to the public - Clarifi ASD. More recently, post-Covid we quickly applied our experience in RNA detection and analysis to develop commercial products and services for the detection and analysis of Covid-19.

#### **What do you understand that your competitors don't?** ^

That we are the first company to develop an epigenetic saliva test for autism speaks volumes about the current approach being taken to identify biological markers for autism. Significant time and money has been spent by many in the pursuit of a genetic biomarker for autism, however to date it has failed to yield a biomarker with any practical utility. On the other hand, we believe our novel approach, developed in research labs at SUNY Upstate Medical University and Penn State College of Medicine, and backed by peer-reviewed research, provides accurate diagnostic biomarkers for autism, and appears to hold promise as well for other neurological conditions such as Parkinson's disease, concussion and Anorexia nervosa.

#### **What do you need the most help with?** ^

Achieving sufficient funding to permit us to remain liquid and to grow and advance our concurrent development and regulatory approval of our suite of epigenetic and Covid-19 diagnostics and services.

#### **What would you do with the money you raise?** ^

1. Use the money for working capital purposes.

2. Continue to grow and expand the development and regulatory approval of our epigenetic diagnostic tests and our Covid-19 diagnostics and services.

### **Tell me about how the company started? ^**

How we got here - our "origin story"

It began almost a decade ago in a cold ice rink in upstate New York. There, Quadrant Biosciences' founder and CEO Rich Uhlig was watching a youth hockey game when his son suffered a severe concussion. Frustrated with the diagnosis and management of his son's concussion, he was determined to do something about it, and thus Quadrant Biosciences was born. In the process of developing and launching a technology to objectively test balance and cognitive function called ClearEdge, Rich moved the company to the SUNY Upstate Medical University in Syracuse to leverage their highly regarded concussion clinic and motion analysis lab. That move changed everything.

It just so happened that our office was in the same building that housed the Neuroscience departments and molecular core facility -- and its director Dr. Frank Middleton. Rich learned that Frank, and his then grad student Steve Hicks, MD/PhD, had stumbled upon an exciting discovery that certain molecules in the saliva of children were different in kids with autism. Unfortunately, the funding had run out and the research was at risk of being shelved indefinitely. Recognizing the groundbreaking nature of their findings, we entered into a relationship with SUNY Upstate to support the research and work on turning this amazing discovery into a viable commercial product.

Fast forward seven years and lots of research, development, peer-reviewed publications, and hard work, the Clarifi ASD test is now available to the public.

### **What does your product pipeline look like? ^**

One of the most exciting things about our epigenetic approach to autism diagnoses is that it has proven to have similar diagnostic utility to many other neurological conditions. In fact, we have published peer-reviewed research papers on epigenetic tests for Parkinson's disease, mild traumatic brain injury (concussion), and Anorexia nervosa. Commercial development of the Parkinson's disease product is currently slated for Q3 2021. Our Covid-19 work as part of a consortium selected by NY State to perform wastewater testing for communities around NY is ongoing, and subject to supply chain availability of materials needed to conduct the tests, looks promising. Our partnership with SUNY Upstate in conducting pooled surveillance testing of students returning to school looks very promising - we are currently contracted to provide test materials and services in relation to the testing of 250,000 students. Our partnership with SUNY Upstate in developing a saliva test for Covid-19 in individuals has resulted in our joint submission to the FDA of an application for an EUA for this test. This submission is pending.

### **How much capital have you raised to date? ^**

As of January 2020, we have raised over \$30 million from private investors who have recognized the value in how we intend to change the landscape of diagnostics in the future.

### **Why is a Test Like Clarifi™ ASD So Critical Today? ^**

1) Autism Prevalence is increasing at a rapid rate

The prevalence of Autism has increased from 1 in 150 in 2000, to 1 in 59 according to estimates from the CDC. There are several theories related to this rise in prevalence, but answers remain unknown.

2) Early diagnosis and intervention can change the trajectory of a child's life

Decades of scientific research continuously show that children make greater improvements when intervention is started early in development. With early intensive behavioral intervention, initiated in the second or third year of life, approximately 50% of children with autism become functionally indistinguishable from their peers by the time they get to first grade. However, in the absence of such early intervention, only about 2% achieve average educational and intellectual equivalency.

3) Children need to be diagnosed before they can begin intervention services. Unfortunately, many aren't being diagnosed until after age 4, even though autism can be diagnosed as early as 18 months. This is due to several reasons but chief among them is the relatively small number of specialists trained to administer behavioral-based diagnostic assessments. In fact, the wait time for a child to be evaluated by a specialist is up to 1.5 years in some areas of the U.S.!

This means that children in the United States, and many other countries, are not receiving a timely diagnosis or access to critical services until well after the point where they are most effective.



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