

## Treating stroke, migraine, chronic pain & incontinence through neuroplasticity



jogohealth.com

Bridgewater Township NJ



Technology

AR & VR

AI

Service

Health & Fitness

## Featured Investors

Investors include

Venkat Tadi

Mayo Clinic Ventures



Venkat Tadi

Syndicate Lead

Transformative, goal-oriented technology delivery leader in commercial life sciences industry with...

Invested in JOGO Health

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I am investing in JoGo Health because of their commitment for improving patient health for multiple neuromuscular conditions (stroke, cerebral palsy, chronic pain, incontinence) so that patients do not have to take medication or undergo surgeries. This venture has a large addressable global market of \$55 B. Co-founder of JoGo has previous experience of successful startup and they made significant progress since 2019 even during COVID times. I believe this will be a very successful

Read More

Invested \$25,000 this round & \$75,000 previously

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## Highlights

- 1 Treats 20+ neuromuscular (NM) conditions (stroke, migraine, chronic pain, incontinence)
- 2 \$86B Market. \$10B(SAM). \$105M(SOM)

- 3 Mayo Clinic is an investor and co-development partner
- 4 Co-Founder's previous AI venture was acquired by IQVIA, world's largest clinical research company.
- 5 JOGO has already treated more than 25,000 patients. Signed up 50+ hospital channel partners.
- 6 Medical Advisory Board is from Harvard, Yale, Boston University, Tufts, NYU and Columbia.
- 7 Patent Protected with 18 claims. FDA Breakthrough Device Designation.
- 8 Harvard study showed JOGO is better than opioids in treating chronic lower back pain.

## Our Team



**Dr. Gordon Silverman** Emeritus Product Visionary

Professor Emeritus and Chair Electrical/Computer Engineering, Manhattan College. Director, Sensory Feedback Unit at ICD Research & Rehab Center, Manhattan. Author "Cognitive Science: An Introduction to the Study of the Mind.". Inventor of EZPass.

More than 70% of patients with neuro-muscular conditions do not fully recover due to lack of access to world class rehab in their towns. That included my friend's daughter in India with cerebral palsy. JOGO treated her remotely from New York via telemedicine and made the little girl walk for the first time in her life.



**Siva Nadarajah** Co-Founder and President

Sold previous healthcare AI platform - currently used to track COVID-19 vaccine safety - to IQVIA(NYSE:IQV), a \$46B clinical research giant. 20+ yrs of experience in working with Pfizer, Roche, Novartis & Merck. Two healthcare AI patents.



**Sanjai Murali** Founder and CEO

AT&T, FedEx & Comcast. Spent last 10 years building JOGO to receive FDA clearance with researchers from NYU, Rockefeller University and Manhattan College.



**Gary Krasilovsky** Chief Scientific Officer

PhD from NYU. Senior Clinician at NYU Rusk Institute for Rehabilitation Medicine. Chair, Hunter College DPT Program, City University of New York. Clinical neurology, adult neurological rehabilitation, electroneuromyography.



**TIFFANY SUDOL BAKER, DPT** Lead, Women's Health

Doctor of Physical Therapy from City University, New York. Pursuing her PhD in Physical Therapy at Nova Southeastern University. Adjunct Assistant Professor of Physical Therapy at Hunter College, New York.



**DREW DENARDO** Technical Adviser

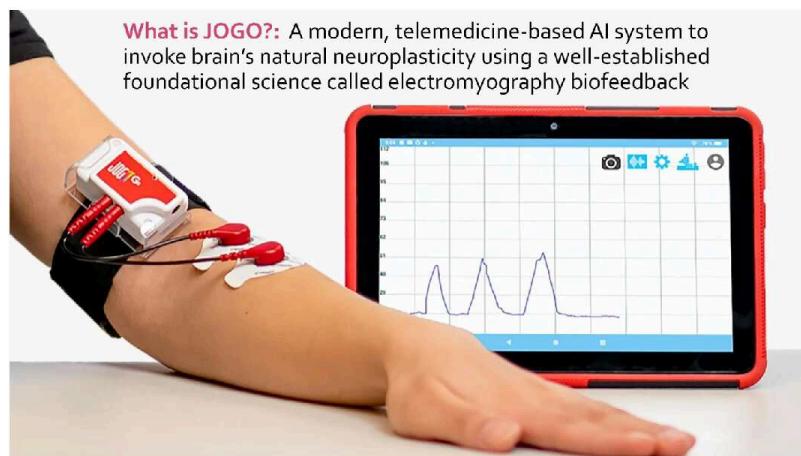
25 years of industry experience building mobile applications, platforms, and high-scale transactional systems.



**UMA VENKATESA** Head of Pelvic Floor Rehab

Over 30 years of experience in uro-gynecology, obstetrician-gynecology, gastroenterology, prenatal, post-natal, incontinence, chronic pain, breast cancer & stroke.

# Invoking Brain's Natural Neuroplasticity to treat Stroke, Migraine, Cancer Pain, Incontinence, Constipation and Tremors

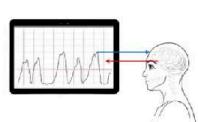


**What is JOGO?:** A modern, telemedicine-based AI system to invoke brain's natural neuroplasticity using a well-established foundational science called electromyography biofeedback

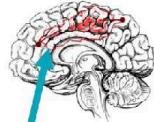
**Science:** JOGO taps into the neuroplasticity of the brain via wearable sensors and an app to address the root cause of pain and neuromuscular conditions



Brain loses connections during neuromuscular events or becomes too sensitive to pain

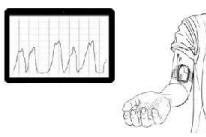


EMG-BF triggers neural plasticity – development of new pathways between neurons



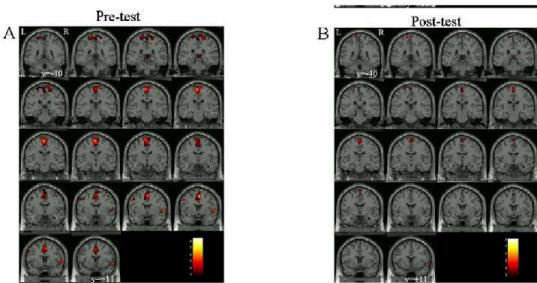
New pathways make the brain less sensitive to pain and help recruit muscles to help recover from neuromuscular conditions, even after nerve damage

Neuroplasticity is the brain's ability to reorganize itself by forming new neural connections. Neuroplasticity allows the neurons (nerve cells) in the brain to compensate for injury and disease and to adjust their activities in response to new situations or to changes in their environment.



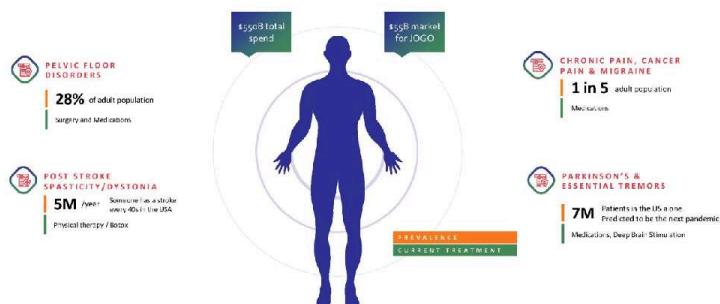
**fMRI studies:** showing structural changes in the brain after neuroplasticity-based treatments





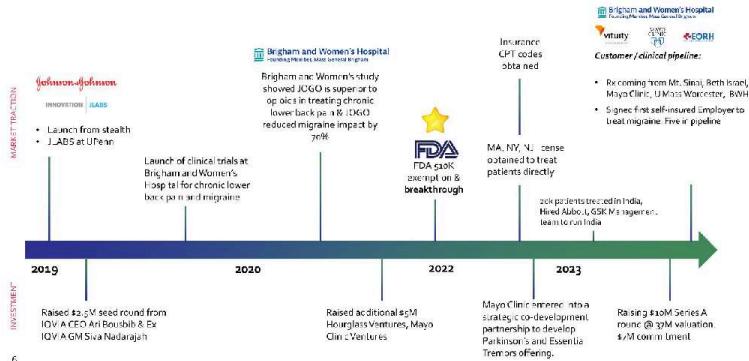
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## Market and Why Now: Current treatments are not effective and have serious side effects



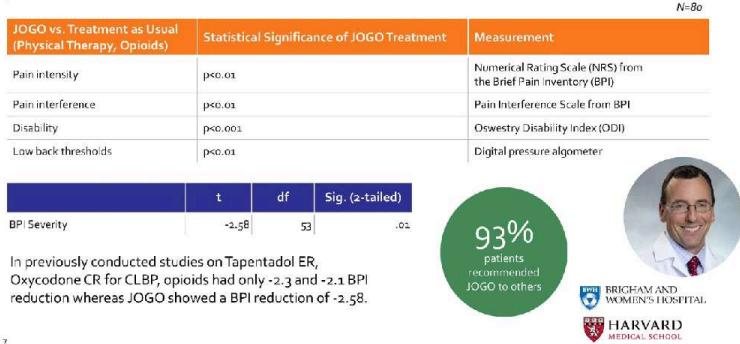
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## Timeline: Clinical validation to commercial traction



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## Clinical Validation (Chronic Lower Back Pain): Harvard / Brigham chronic lower back pain study showed JOGO has greater BPI reduction vs. opioids



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## Clinical Validation (Migraine): study showed JOGO reduced disability, anxiety and increased quality of life in patients with episodic migraine



(Physical Therapy, Opioids)	Statistical Significance of JOGO vs Therapies	Measurement
Lower Migraine Disability	p<0.05	Migraine disability assessment (MIDAS)
Anxiety	p<0.01	IAADS-A
Increase in quality of life	p<0.001	The Migraine-Specific Quality of Life Questionnaire (MSQ)
Temporal Summation	p<0.05	OST



Robert R. Edwards, M.D., PhD



Carolyn Bernstein, M.D.

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**Business Models:** JOGO provides flexibility to act as a tech vendor, a tech vendor + rehab services or bill as a provider



Every provider will have a different view on leveraging a tech vendor vs. a clinical solution and consideration around who bills.

JOGO provides flexibility to act as a tech vendor, a tech vendor + clinical services or act as a provider

Build clinical data points from providers, bill through existing CPT codes and then partner with providers to jointly target reimbursement at commercial payers and CMS

Physical Therapist, PTA, Clinical Psychologist or NP, NPA Codes (97110, 97112, 97120, 90912, 90913), supervision or incident to billing is needed for Clinical Social Worker.

Remote Therapeutics Monitoring Codes (98976, 98977, 98980), Clinical Social Worker can perform these tests.

PER PATIENT		
	JOGO as a tech vendor	JOGO as a provider
UNIT REVENUE	\$565	\$1,265
UNIT COST	\$125	\$625
UNIT PROFIT	\$440	\$640
MARGIN	78%	51%

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**Patient Testimonials:** What patients say about JOGO



Scott Walker, Atlanta, GA

I had a stroke which left my left side fully paralyzed. JOGO virtual rehab helped me fully recover in the comfort of my own home after the initial rehab failed. I am now able to walk, my range of motion improved dramatically, I am now able to open a water bottle and even drive a car!



J.S., Philadelphia, PA

I have been suffering from incontinence ever since I had my first child. Surgery was my last option. With a very high deductible plan, a surgery would have cost me \$19K. It was also a risky option. With 10 sessions of JOGO therapy, I have recovered 90%. JOGO also gave my confidence back!

sc

R.W., Toronto, Canada

I was suffering from chronic lower back pain for more than 15 years. I tried many years of physical therapy, back braces and was having a herniated disk for almost 10 years. My last option was surgery. With just 8 sessions of JOGO therapy, now I am pain free after 15 years. JOGO works!



**Competition:** JOGO provides a clinically superior, safe and convenient solution vs medications and surgery

Characteristics	JOGO	Medications and Surgery
Clinical Effectiveness	Clinically superior	Moderate
Patient Convenience	Requires effort from patients	Easy (mostly pills)
Safety	No side effects	Serious side effects
Reimbursement	Moderate	Reimbursement is standard

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**Management Team:** 150+ years of experience, including a record of successfully building and exiting healthcare startup



Sanjai Murali  
Founder and CEO



Siva Nadarajah  
President & Co-Founder



Gordon Silverman, PhD.  
Product Visionary



Kristen Buchbach, DPT  
Women's Health



Steve Caruso  
Regional Business Director

- Product vision and execution: worked with NYU experts for 5 years to develop the current version.
- Product technology leadership positions at AT&T, FedEx
- One US patent



- 24+ years of clinical research and commercialization experience in pharmaceutical and medical device industry.
- Serial entrepreneur: Scenarimill, an AI-based drug safety prediction and tool; licensed to Johnson & Johnson and became GM for that product line at J&J; sold the business to J&J for 10 years.
- Owns two US patents



- Developer of EZ-Pass
- One of the original creators of JOGO's first prototype
- Professor Emeritus, Marquette University
- Co-author of the textbook, "Cognitive Science: An Introduction to the Study of the Mind."



- 35 years of neuro-rehab experience
- Women's health specialist



Beth Israel  
Lahey Health



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**Advisory Board:** Industry leaders in medical advisory board from Harvard, Yale, Tufts and Boston University



**Kanapa Sena, M.D.**  
Clinical Professor of Neurology  
Yale University School of Medicine



**Asimina Lazaridou, Ph.D.**  
Pain Researcher at Harvard Medical School and Tufts Medical School



**Didi Thava, M.D.**  
Commonwealth Scholar in  
Reconstructive Urology,  
Boston University



**Gary Krasilovsky, Ph.D.**  
Hunter College, New York,  
NYU, Rockaway



**Robert R. Edwards, M.D., Ph.D.**  
Head of Pain Research  
Harvard Medical School



- Clinical Professor, Department of Clinical Sciences, Florida State University College of Medicine
- Chairperson, Department of Neurology and Director of Division of Headache, American Headache Society
- Fellow, Stroke Council, American Heart Association



- Clinical Assistant Professor at Tufts Medical Center
- Postdoctoral Fellow in Pain Medicine at Harvard Medical School



- Fellow in Female Incontinence and Pelvic Health
- Commonwealth Scholar
- American Urological Association Fellowships and Publications on Urinary Incontinence



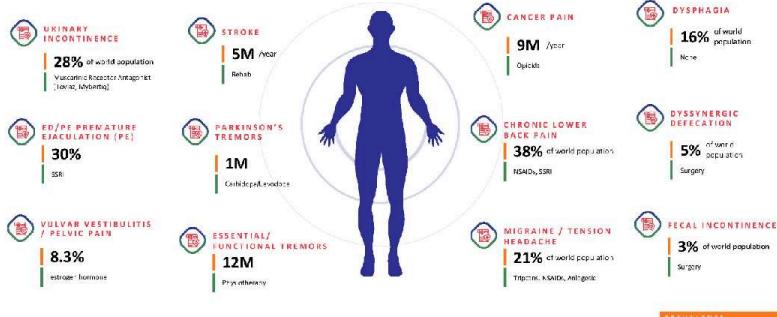
- International EZ-Pass in the lab studies
- Internationally recognized Clinical Investigator
- Leading voice in BMG Biofeedback



- Associate Professor of Anesthesia and a Licensed Clinical Psychologist in the Pain Management Center at Brigham and Women's Hospital / Harvard Medical School
- President's positions in the American Pain Society (APS) and the International Association for the Study of Pain (IASP)

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**Potential:** Science supports to treat over 21 indications including the following:



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Thank You

**JOGO**

#GetMoving

For more information, please contact:

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