Brain-Computer
Interface Solution

Gbrain develops medical solutions based on brain-computer interfaces.

© 2022-2023 Gbrain | All rights reserved.
1902, Technopark IT Center M-dong, 172-1, Songdo-dong, Yeonsu-gu, Incheon

brain

Brain Computer Interface

- A interfacing tool to connect the brain to a computer
- Clinical application for a neural implant to maneuver diagnostics and therapeutics

Neural recording
(DECODING)

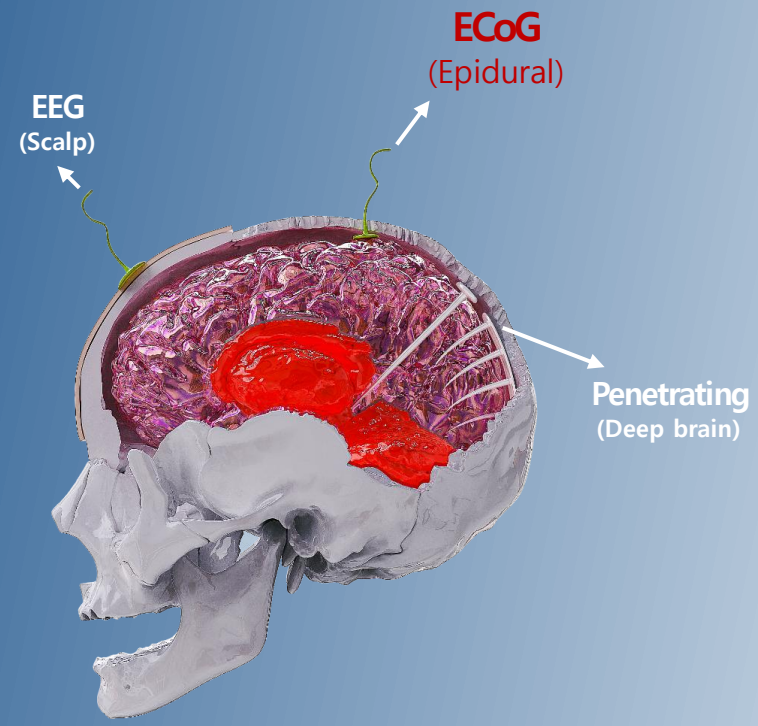
Neural impulse
(ENCODING)

Diagnostic Signal detection

Therapeutics Signal control

To obtain brain signals with a less invasive method
Not too DEEP, but not too SHALLOW

- Minimally invasive, effective electrocorticography (ECoG) neurostimulator
- Treatment of brain diseases via Brain Computer Interface (BCI)
- Primary target of our BCI is Parkinson's disease (PD)

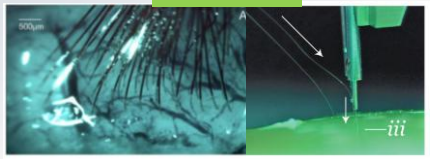


Therapeutic BCI
Disease treatment

Cognition control BCI
Device control

Gbrain

Neuralink



	EEG	ECoG	Spike
Implantation site	Scalp	Cortical surface	Deep brain
Brain damage	None	Minimally	Servere
Recording quality	Poor	Desirable	Superior

brain

Phin Array™

- Brain-Computer Interface for clinical trial
- Wired neurostimulator for neural recording
- The first implantable, medical device in Korea
- Clinical success to identify a brain region for epilepsy

Manufacturing / Commercialization

I Equipped with ISO 10,000 class MEMS

NeT 신기술인증 NEW EXCELLENT TECHNOLOGY

Clinical approval

I Approved GMP for clinical products

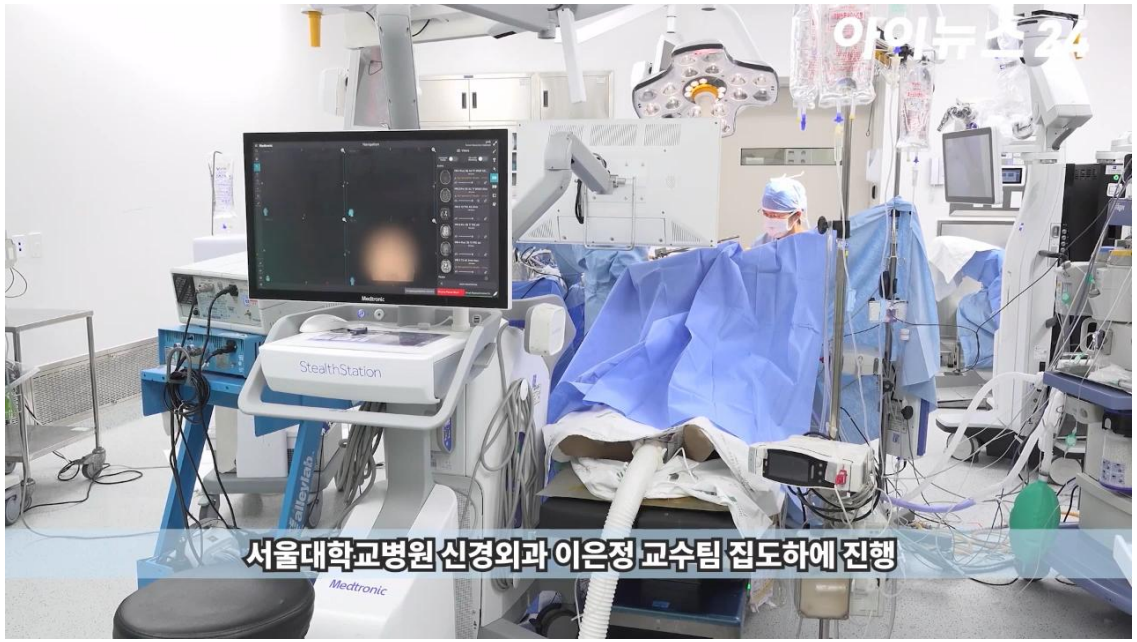
I Clinical approval of the Phin Array (Dec. 2024)

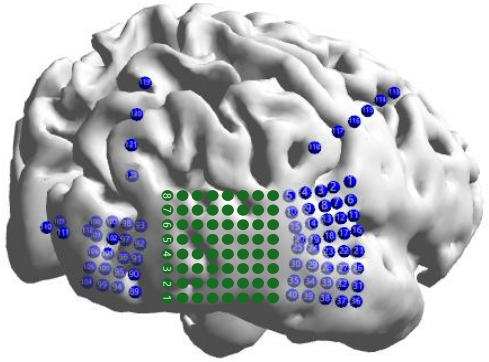
I The first clinical trial (May 2025)

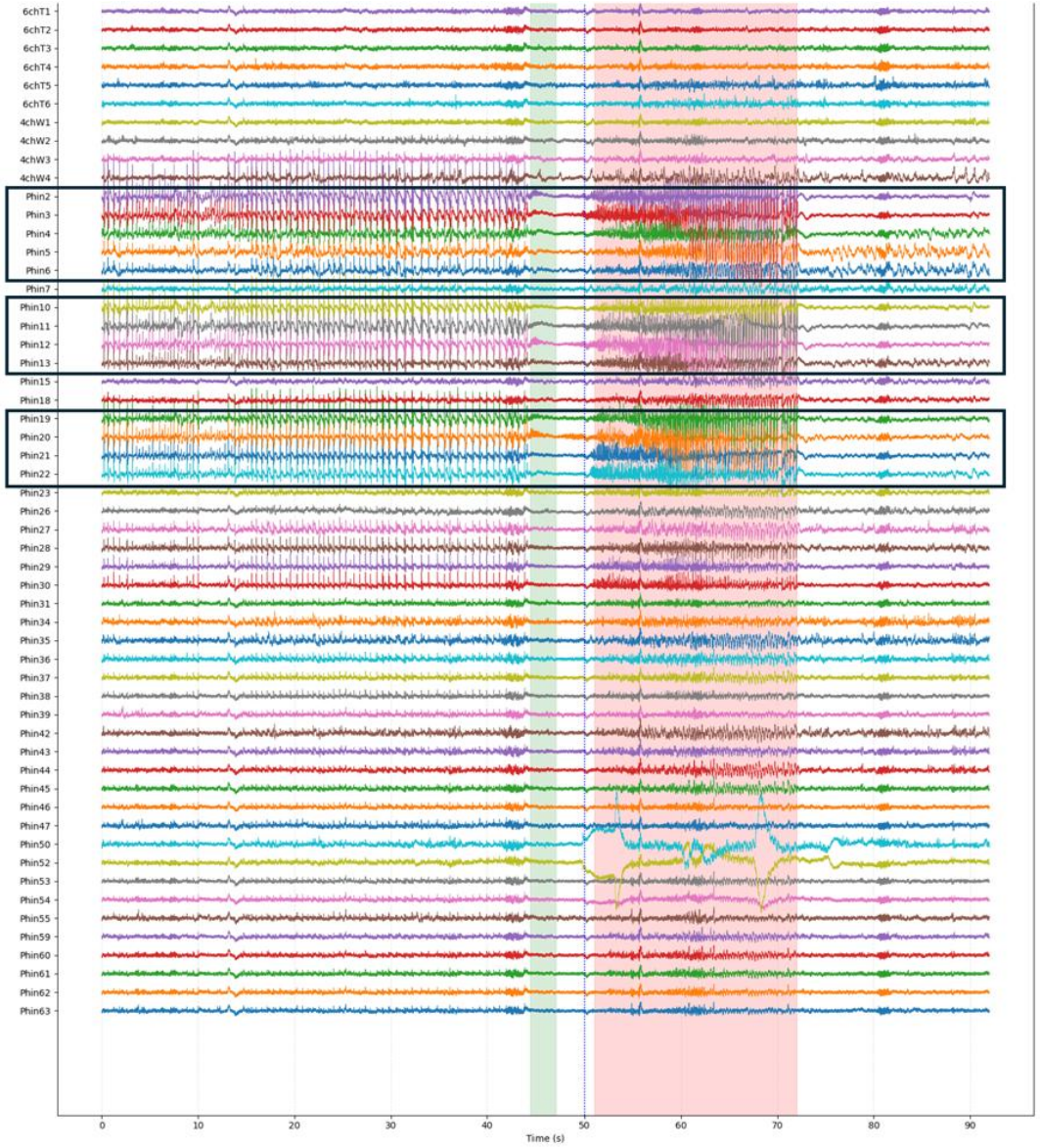
I Expected to complete FDA 510(k) approval (in 2025)

Phin Array™

- Phin Array successfully captures high-quality signals when clinically applied to actual epilepsy patients







I Product 2

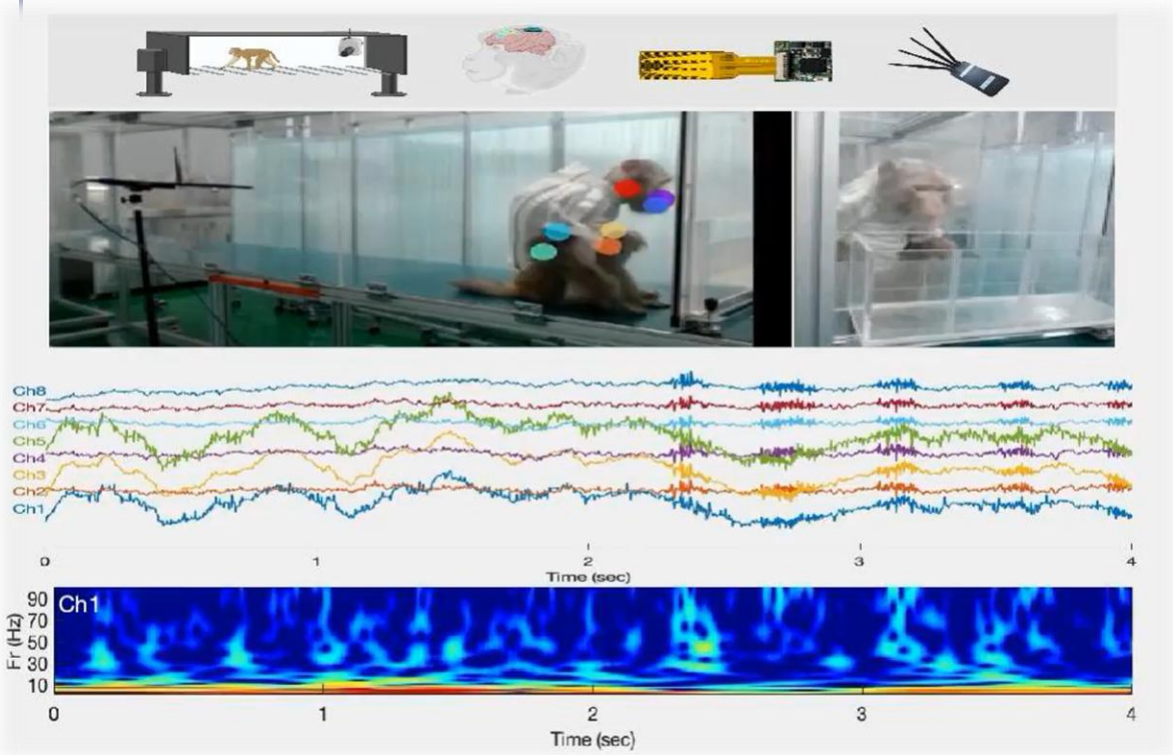
Phin Stim™

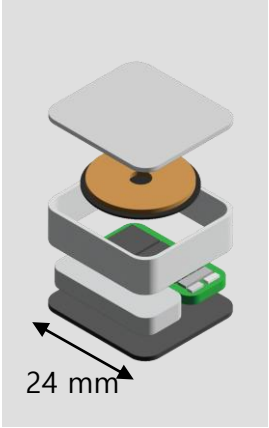
- Total implantable Brain-Computer Interface
- Wireless BCI for neural recording and stimulation

CES Innovation Awards 2025 Honoree

CES Innovation Awards 2026 Honoree

- **Neural recording via the Phin Stim in a monkey**





Top case (packaging)

Charging Coil

Side case

Rec/Stim system
+ Rechargeable battery

Bottom case

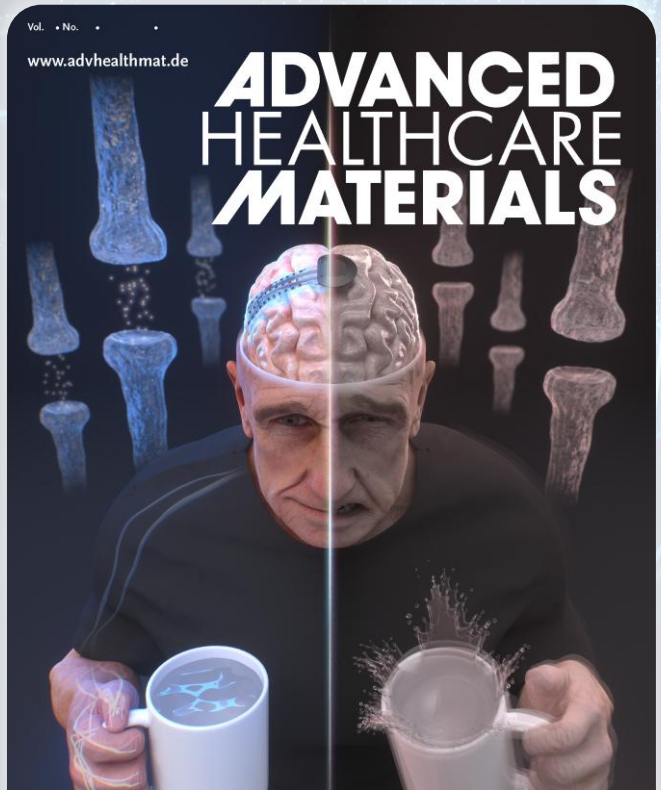
| Product 2

Phin Stim™

- Total implantable Brain-Computer Interface
- Wireless BCI for neural recording and stimulation

CES Innovation Awards 2025 Honoree

CES Innovation Awards 2026 Honoree



Phin Stim, the future of DBS

Improved Safety and Convenience with Equal Efficacy

Parkinson's Disease treatment

Deep Brain Stimulation (DBS)

SAFETY

CONVENIENCE

=

EFFICACY

Gbrain's Phin Stim™

brain

Parkinson's Disease treatment

Improved Safety and Convenience

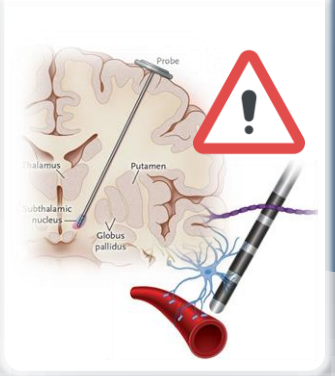
- Minimally invasive, simple surgical procedure, stable recording and stimulation

Deep Brain Stimulation (DBS)

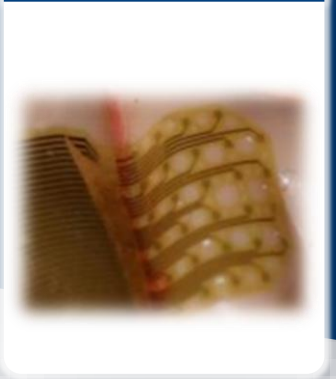
SAFETY

CONVENIENCE

Invasive



Minimally Invasive



Gbrain's Phin Stim™

Phin Stim, the future of DBS

Improved Safety and Convenience

- **Closed-loop system** after the detection of digital biomarkers

Parkinson's Disease treatment

Phin Stim, the future of DBS

Parkinson's Disease treatment

Improved Safety and Convenience with Equal Efficacy

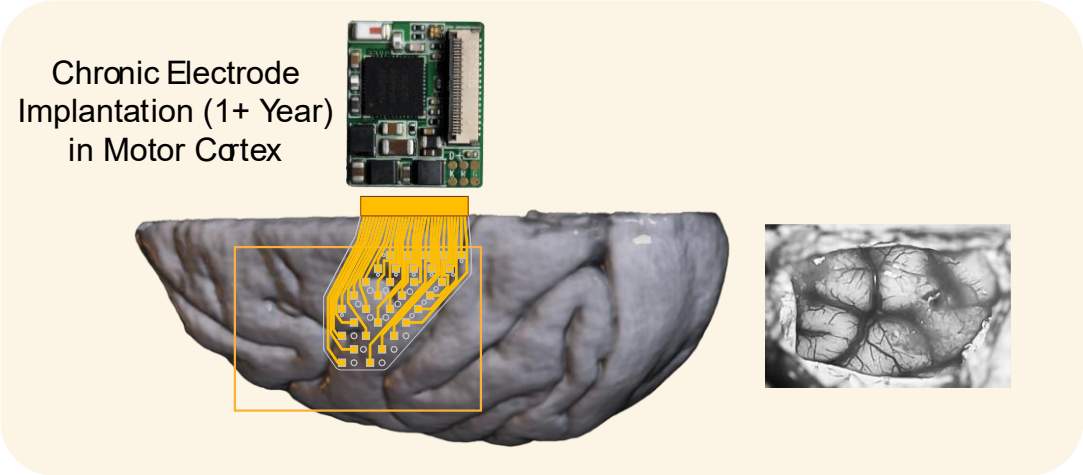
Phin Stim, beyond DBS

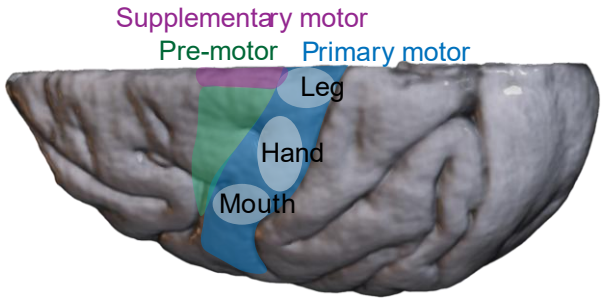
brain

Parkinson's Disease treatment

Diagnosis and treatment in a monkey PD model

Surgical procedure for implanting our Phin stim.





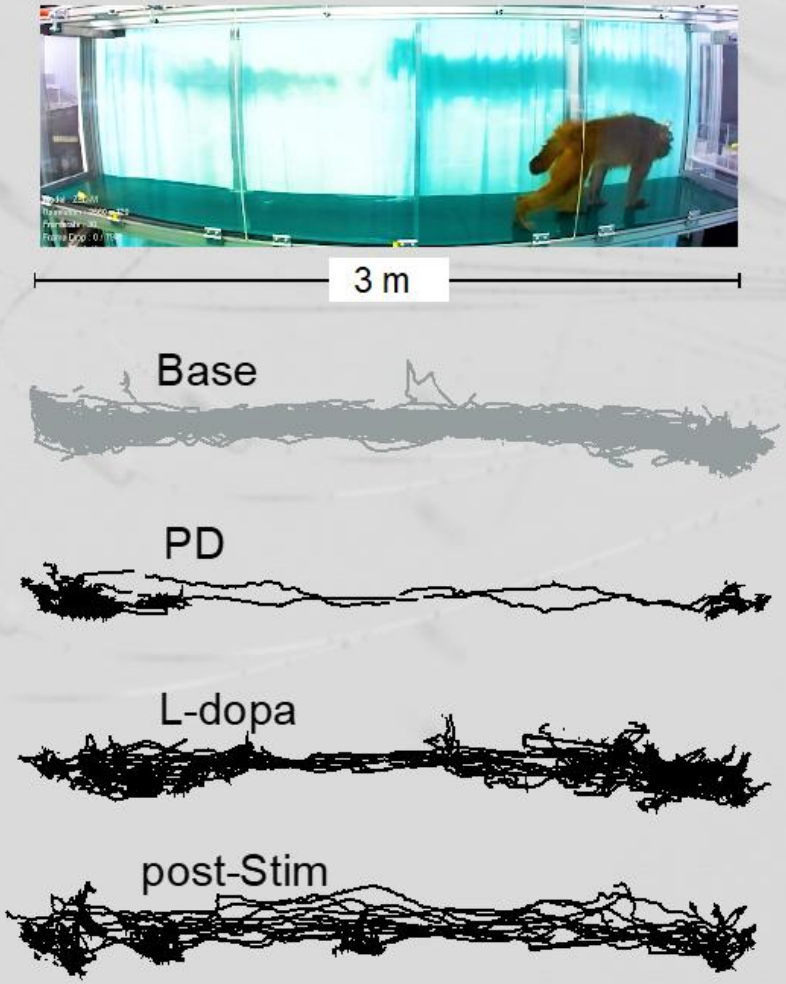
Phin Stim, beyond DBS

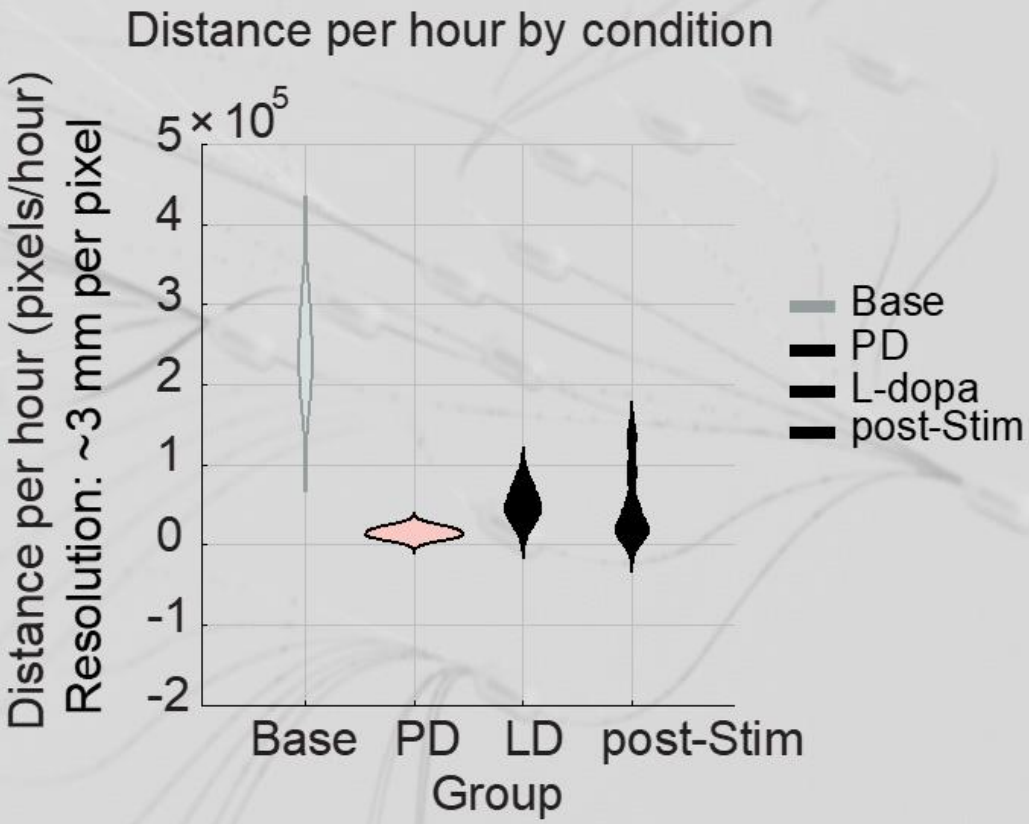
brain

Parkinson's Disease treatment

Diagnosis and treatment in a monkey PD model

Representative X–Y movement trajectories across experimental conditions





| Phin Stim, beyond DBS

Diagnosis and treatment for paralyzed patients

Dr. In Your Brain

brain

Paralysis

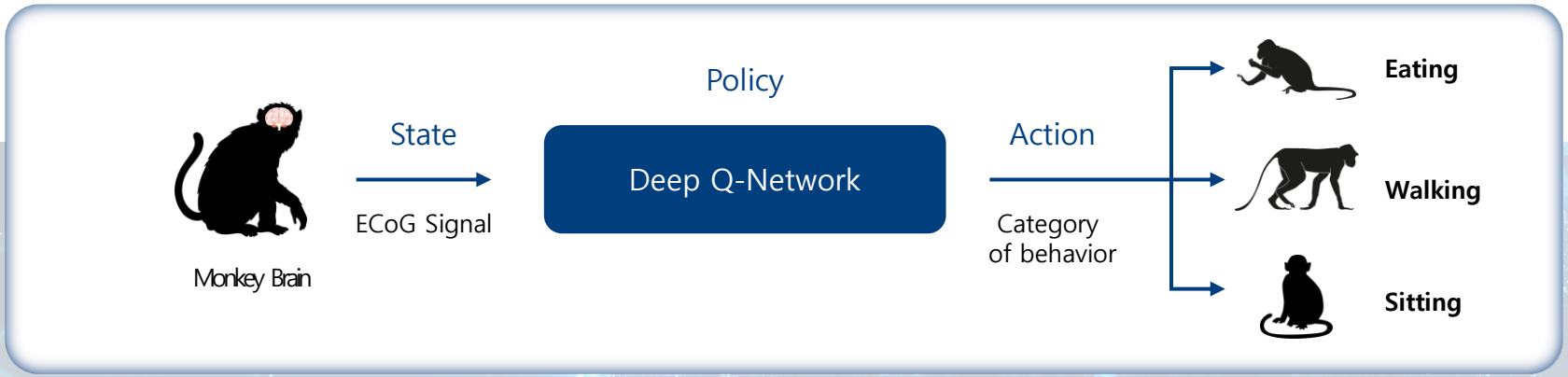
Device control

- Motor
- Sensory
- Language

brain

Diagnosis and treatment for paralyzed patients
Motion control via AI algorisms linked with our phin stim

Paralysis

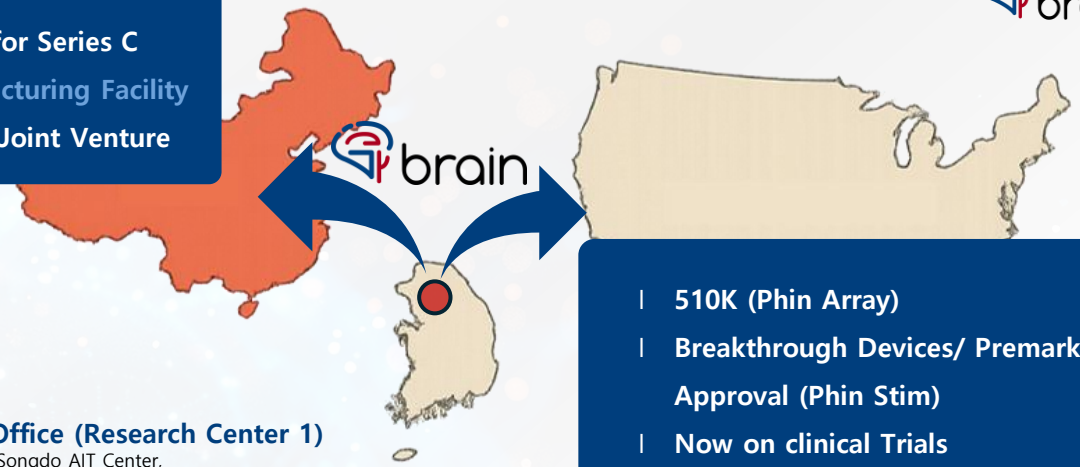


Original | Virtual Environment | Quadruped Robot

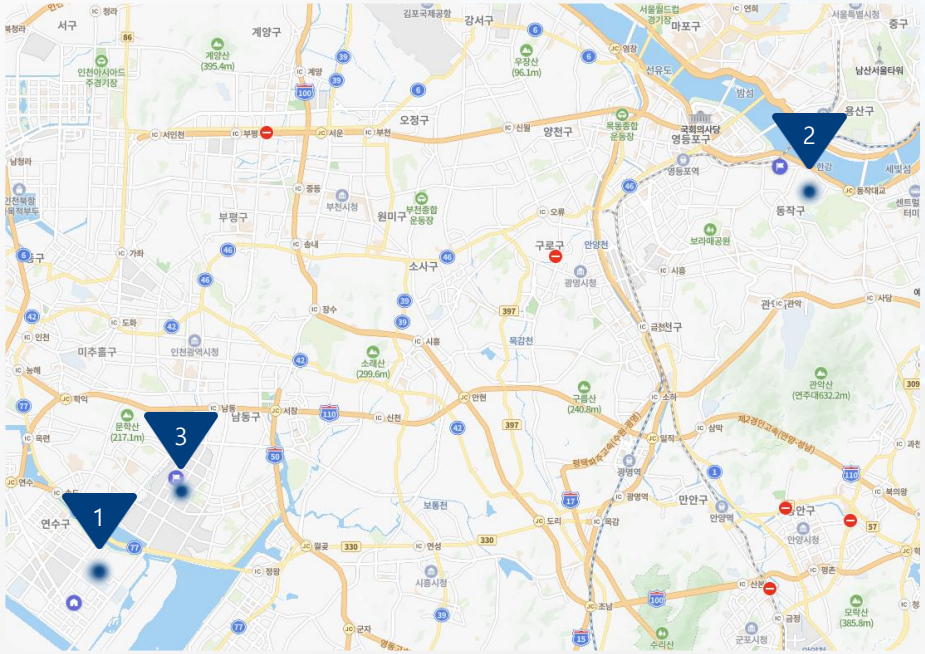
Go-to-Market Strategy

- **Series B round completed**
- **valuation: USD 23.3 million**
- **3 offices: Yeonsu-gu and Namdong-gu in Incheon**

- Fundraising for Series C
- GMP Manufacturing Facility
- Korea-China Joint Venture



- 510K (Phin Array)
- Breakthrough Devices/ Premarket Approval (Phin Stim)
- Now on clinical Trials



1 Incheon Songdo Office (Research Center 1)

Room 2403, Building 101, Songdo AIT Center,
80 Songdo-gwahak-ro, Yeonsu-gu, Incheon, Republic of Korea

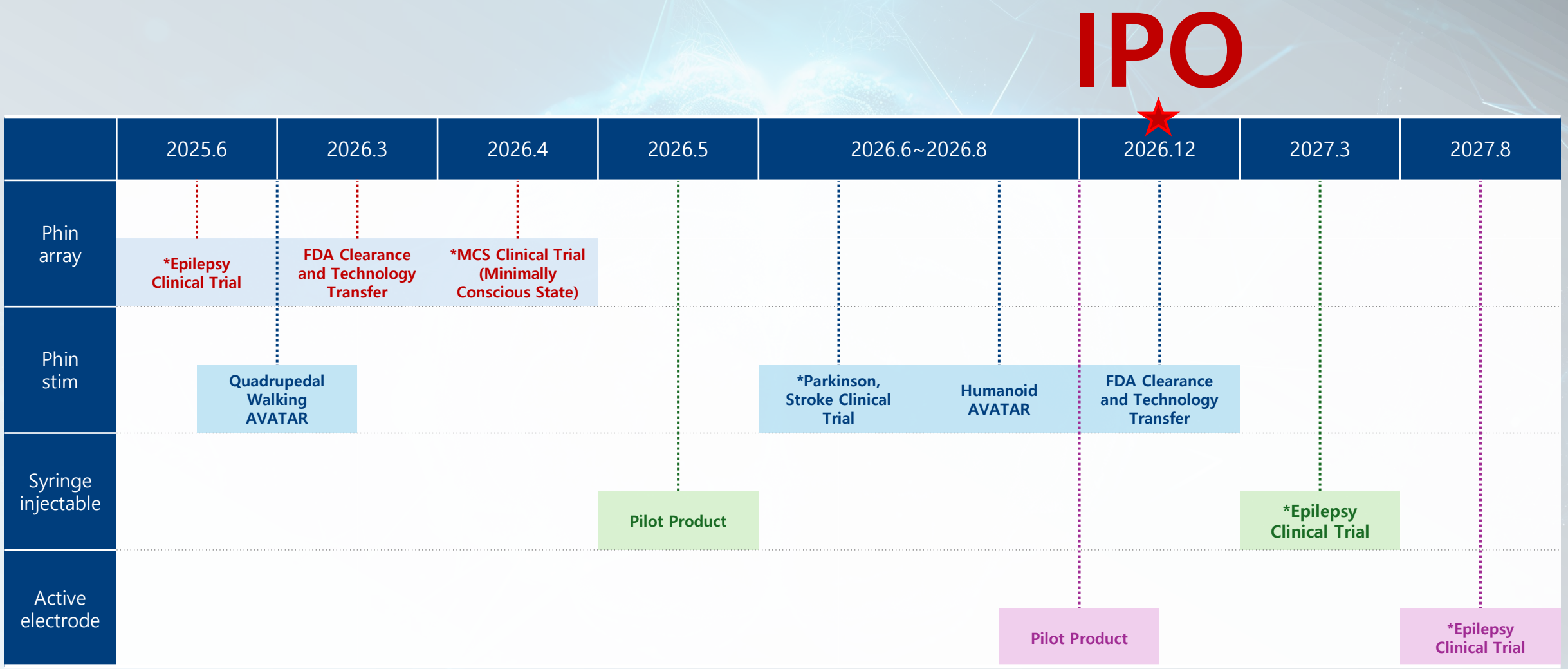
2 Seoul Dongjak Office (Research Center 2)

Suite 201, 2nd Floor, 190 Noryangjin-ro, Dongjak-gu, Seoul, Republic of Korea
(Goryeo Education Tower Urbaniel Hangang, 333 Noryangjin-dong)

3 Incheon Namdong Manufacturing Site (Manufacturing Facility)

Room 901, NIC Knowledge Industry Center,
52 Eunbong-ro, Namdong-gu, Incheon, Republic of Korea

R&D and Commercialization Roadmap



Total 20 Full-time employees

Sunggu Yang Ph.D

CEO/CO-FOUNDER

- Prof. in Nano-bioengineering dept. in INU
- Expert committee member in K-FDA
- University of Illinois at Urbana Champaign, PhD

Byoungkwan Kim Ph.D

CEO

- Former Director in Celltrion
- Former NIH senior researcher
- Former UCSF researcher
- University of Illinois at Urbana Champaign, PhD

Kyu Il Lee Ph.D

CTO

- Former Samsung Advanced Institute of Technology
- Former University of Illinois at Urbana Champaign senior researcher
- University of Kansas researcher
- SNU, PhD

Sung Q Lee Ph.D

Technical Director

BCI design

- Former ETRI chief manager
- KAIST, PhD

Wan Sik Kim

CQRA

- Former 3M Quality Manager (Healthcare BG)
- Former Philips QA Manager (Health Tech)
- Former Boston Scientific Assistant QA Manager

Technical Advisors

Sungchil Yang

CO-FOUNDER

Development of a Brain-to-X system for brain diseases (tinnitus) and voice communication.

- Prof. neuroscience dept. in CityUHK

Jong-Hyun Ahn

CO-FOUNDER

Development and fabrication of brain-conformal high-density electrodes in the field of graphene materials and devices.

- Prof. electronics dept. in Yonsei U
- President in Graphene society

Clinical Advisors

Chun Kee Chung

Clinical Trial

Clinical research and advisory services in epilepsy and brain-computer interface (BCI).

- SNU medical doctor
- Korean Academy of Science and Technology member

Sun Ha Paek

Clinical Trial

Clinical research and advisory services in Parkinson's disease.

- SNU medical doctor

Eun Jung Lee

Clinical Trial

Clinical research and advisory services in epilepsy, Parkinson's disease, and BCI.

- SNU medical doctor