

## iMediSync | CEO's Message

### Our Mission

To contribute to an individual's optimal brain health and to make an interconnected spiritual society with our innovative technology and service.

### iMediSync Inc.

Will continuously develop early detection EEG biomarkers and digital therapeutics for precise mental care as well as for successful CNS drug clinical trials.

Seungwan Kang MD, Ph.D.  
Founder & CEO



## Why AI Brain mapping with EEG (brainwave)?

Brainwave is the voice of our brain, and has the unique rhythm and beat made by orchestration of many neurons according to different condition of mood, cognition or mental problem. Electrical brainwave measurement or EEG is well-established, easily tolerated, non-invasive and even wearable technology with vast untapped potential, and works better to evaluate brain's functional problem than structural neuroimaging such as MRI or CT can do. Recent computational neuroscience and AI technology make it possible to uncover EEG's hidden valuable information much more and expand its clinical adoption from just seizure disorder to mood problem, developmental or neurodegenerative disorders, traumatic brain injury, PTSD, etc.

Although EEG has vast untapped potential, unfortunately it had had several hassles to make it as "main player" in mental care or brain mapping area.

1<sup>st</sup>, brainwave is very weak, sensitive bio signal subject to several extracranial noise, so careful preprocessing to remove the noise is critical to expand its usability and get reliable analytic results. Furthermore, most physicians and EEG technicians lack the experience and expertise for proper signal processing as well as clinical interpretation of EEG analytic results.

2<sup>nd</sup>, brainwave has normal individual variance and shows the dynamic changing pattern according to development and ageing. To calibrate individual variability and quantitatively measure the relative power of each EEG features' electrical activity, well curated standard reference EEG DB is necessary.

3<sup>rd</sup>, the conventional EEG needs so bothering preparation process like putting the electrode on their scalp with sky gel. It's time-consuming, bad user-experience and non-wearable. This issues limit expansion of EEG in many situation.

iMediSync, has developed iSyncBrain®, the AI-empowered quantitative EEG brain mapping cloud platform with sex-age differentiated EEG normative DB. It's most advanced and user-friendly EEG analytic solution for early detection, subtype classification, prediction of progression and monitoring for various neuropsychiatric disorders such as Alzheimer's dementia, Parkinson's disease, ADHD, depression, TBI, PTSD, etc. iMedisync recently launched AI algorithm of EEG for early detection of Alzheimer's dementia (iSyncBrain MCI classifier) which showed overall 90% discrimination accuracy and registered as class II medical device at Korea FDA. iMedisync also has been developing EEG diagnostic biomarkers for Parkinsonism, depression, stroke, coma, etc. And by launching their novel EEG helmet with NIR-LED photobiomodulators, their solution pipeline expands from diagnostic to digital therapeutics, and remote tele-mental care.

Our solution will enhance quality of mental care services, possibility of successful CNS drug development, and save the cost of insurance companies or government agencies by preventing progression of mental disorders.