

Pioneering Energy-Based Drug Discovery for Neuro-Muscular Diseases

StaGen Co., Ltd. is a biotech venture company pioneering "Energy-Based Drug Discovery" (Chairman: Naoyuki Kamatani, MD, PhD, President: Junichi Kaku)

Naoyuki Kamatani: Achieved the world's first success in gene-based drug discovery (personalized therapy for MTAP-deficient cancers). Former Professor at Tokyo Women's Medical University, former Director at RIKEN Genome Center, former Visiting Professor at the University of Michigan, currently Visiting Professor at Fujita Health University.

SGD-01 is a fixed-dose combination of two existing drugs, febuxostat and inosine, designed to enhance cellular ATP and fundamentally improve neuro-muscular diseases.

Based on the hypothesis that ATP (the cell's energy currency) deficiency is a root cause of several major diseases.

Target indications: Parkinson's disease (PD), Alzheimer's disease (AD), muscular dystrophy, mitochondrial diseases (MD), sarcopenia.

Just as steroids work across multiple diseases by targeting inflammation and immunity, SGD-01 is expected to act across a broad range of conditions via the more fundamental mechanism of "energy"

Clinical evidence: Confirmed safety and efficacy in a total of 65 individuals (18 healthy volunteers, 47 patients: PD, MD, AD, ALS, and impaired glucose tolerance).

In a clinical study of 26 PD patients, 2-month treatment led to statistically significant improvement in motor function scores (MDS-UPDRS Part III, P=0.0146); results published.

In 2 MD patients, biomarkers improved markedly: BNP decreased by 31% in cardiomyopathy, insulin index increased 3.1-fold in MD-related diabetes; results published.

A physician-led clinical trial in 24 PD patients is ongoing at Fujita Health University with funding by the Japanese Government, aiming for proof-of-concept (POC) in 2026.

Patents of SGD-01: Granted in 13 countries including Japan, the US, China, and the EU (Japanese Patent No. 6153281).

Patents for therapeutic use (granted or applied): PD, neurodegenerative diseases (including AD), sarcopenia, MD-related muscle disorders, disuse muscle atrophy, cachexia-related muscle loss, obesity, exercise mimetics, and muscular dystrophy.

Notable points:

US AI-based research identified febuxostat as the most effective FDA-approved drug for AD. Real-world big data analyses in Taiwan, Germany, the US, and Korea have supported its efficacy.

SGD-01 demonstrates overwhelming competitiveness in mechanism, and safety compared to current investigational drugs.

Future plans: NDA submission to the US FDA for PD in 2028, with expansion into such diseases as muscular disorders.

Currently raising funds for a Phase II clinical trial of SGD-01 in muscular diseases.

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