StaGen Co., Ltd

https://www. stagen.co.jp/

Energy deficiency destroys the brain and muscles.

**But there is a solution.**

Naoyuki Kamatani, the Chairman of a venture company StaGen
New drugs, SGD-01 and SGD-4

# Only groundbreaking ideas lead to innovative drug discovery

Naoyuki Kamatani MD, PhD

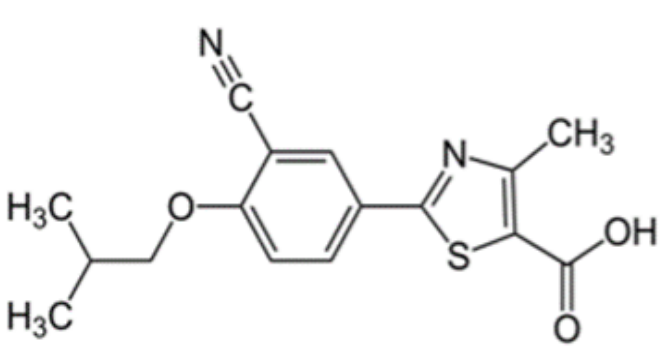
- NK was the first in the world to discover a tumor suppressor gene (*MTAP*), and also the first in the world to discover a personalized anti-cancer therapy. “45 years ago”

- Now, using the same approach, we aim to accomplish the world’s first “energy/entropy–based drug discovery.”

SGD-01 is not just a combination of febuxostat and inosine.

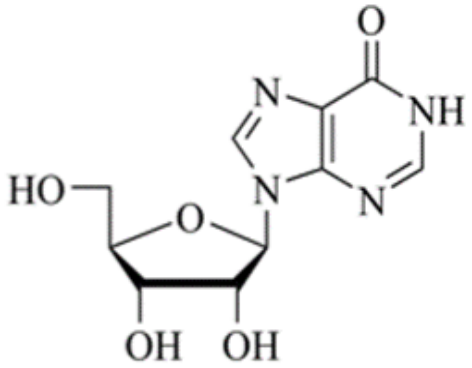
It is a strategic intervention to enhance cellular ATP levels.

SGD-01



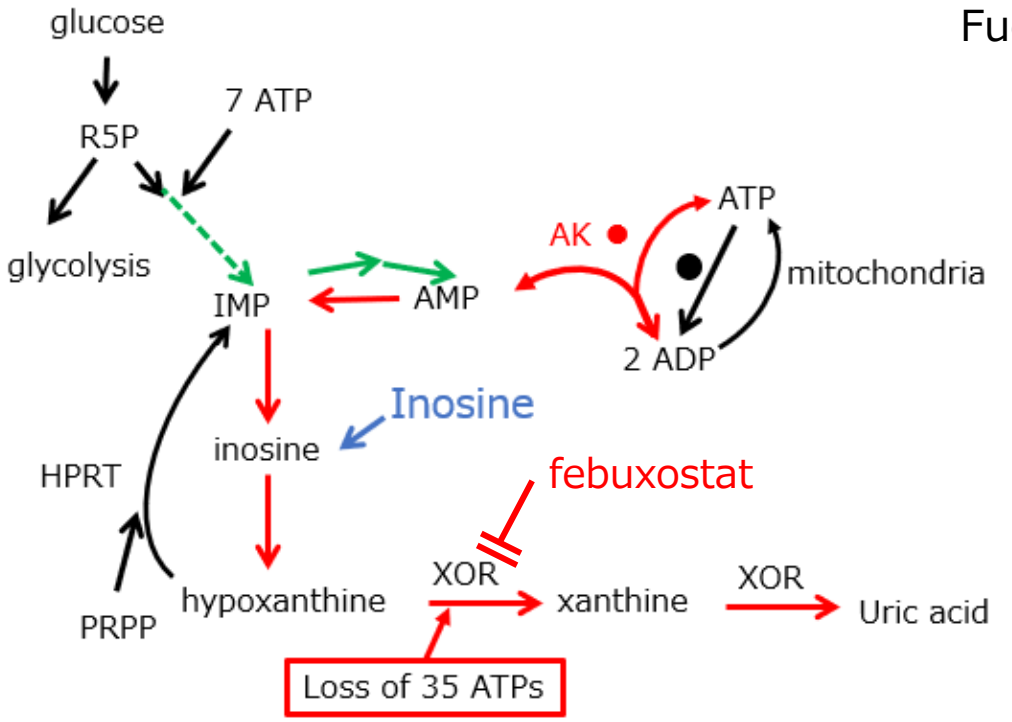

febuxostat

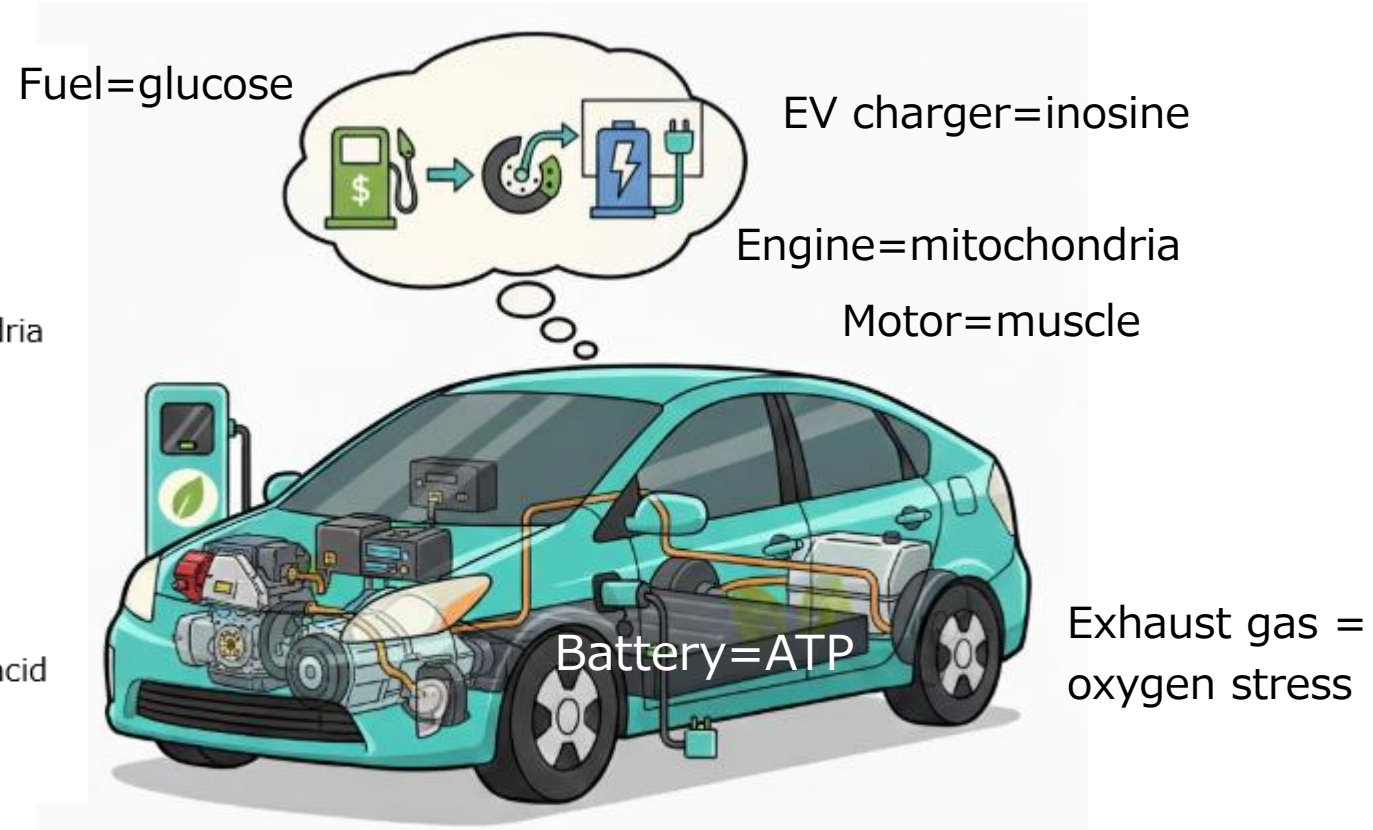
+




inosine

# SGD-01 and plug-in hybrid share the same energy-saving mechanisms




Recycling hypoxanthine with XOR inhibitor
Exogenous supplementation of inosine

→

Recycling braking energy instead of wasting it.
Supplementation of electricity with EV charger

# The 10% Impact: One Solution for Diverse Diseases

About 10% of all human genes are energy-related.
By unlocking ways to enhance energy, we can improve
10% of genetic diseases and 10% of all human illnesses.

Genetic diseases

- Mitochondrial diseases → Two patients successfully treated
- Hereditary spastic paralysis → Clinical trial planned
- ADSS1 myopathy → Clinical trial planned (SGD-04, another combination)
- Duchenne muscular dystrophy → Clinical trial planned

Common diseases

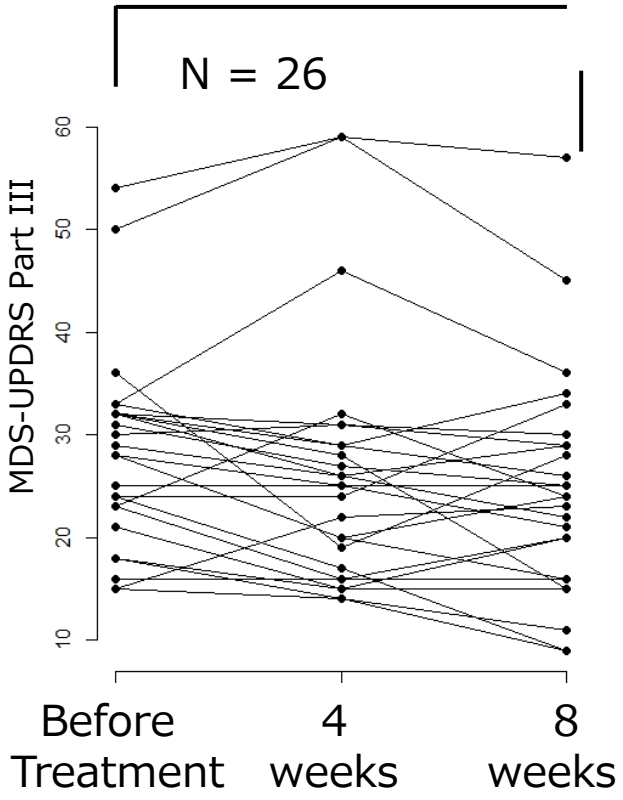
- Parkinson's disease → 26 patients treated showed a significant motor function improvement, Another clinical trial with 24 patients successfully finishes soon.
- Alzheimer's disease → Clinical trial planned
- Sarcopenia → Clinical trial planned

# Clinical results of SGD-01 (febuxostat and inosine)

**Parkinson's disease** ←

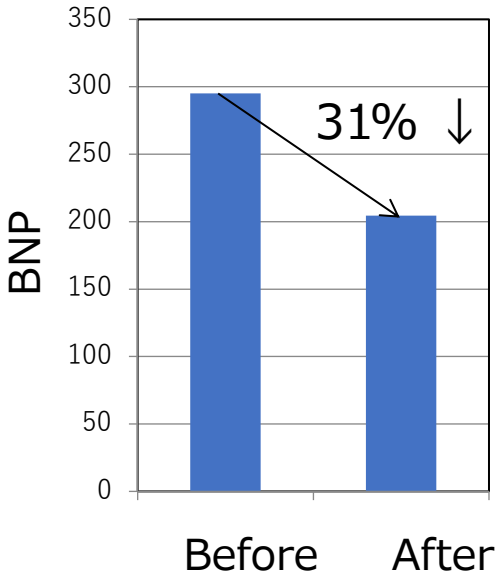
Another clinical trial with 24 patients successfully finishes soon.

*P* = 0.0146 by paired t test



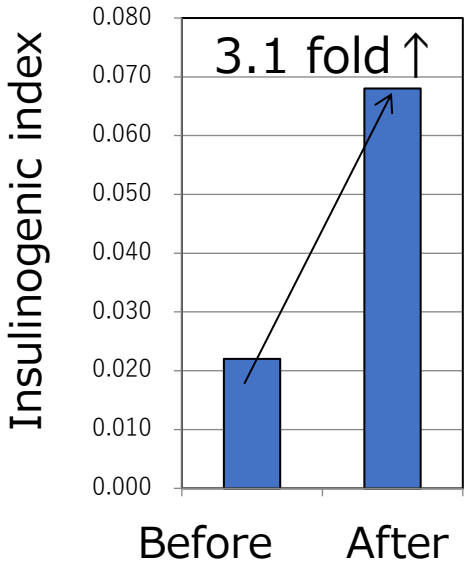

**Mitochondrial cardiomyopathy**

*MTTH*, 12192G-A



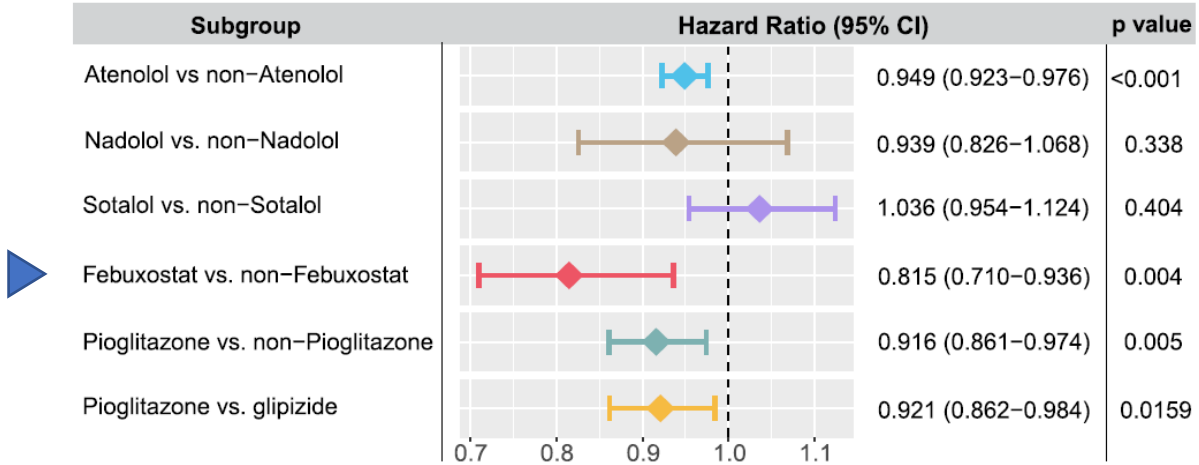

**Mitochondrial diabetes**

*MTTL1*, 3243A-G



# Efficacy of SGD-01 has been supported by reports of others

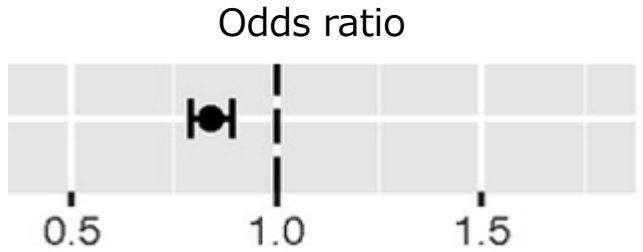
AI-based study by 5 U.S. universities revealed that among FDA-approved existing drugs, febuxostat is the most effective for Alzheimer's disease




Fang J et al. Alzheimers Res Ther. 2022 Jan 10;14:7.

Even a genetic neurological disease was dramatically improved by an XOR inhibitor.

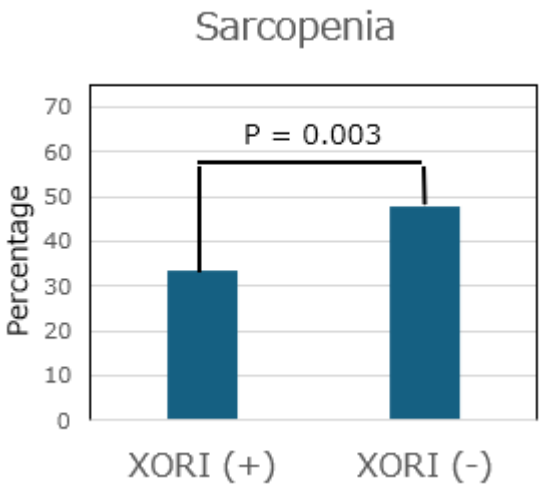
Allopurinol (an XOR inhibitor) suppresses Parkinson's disease.




Song Y,et al. PLoS One. 2023;18:e0285011.

Febuxostat and allopurinol users had lower incidence of sarcopenia

Kurajoh M et al. Front Med 2022



# Intellectual Property and Future Plans

- Formulation patent: The SGD-01 patent has been granted in 13 countries. Use patents were either granted or submitted.

Future plans: NDA submission to the U.S. FDA for Parkinson's disease (2029), and expansion of indications to such diseases as muscular disorders.

Received the FBRI Award at the Third Kyoto University Life Science Showcase in San Diego in 2022

Currently raising funds for phase II trials for two rare diseases and for Parkinson's disease

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