



# LUCA Science Inc.

*Science mitochondria*

## Our Purpose

We aim at the development of innovative treatments for mitochondrial and related diseases via science of mitochondria.

Luka Science Inc. is a bio-venture company founded from 7 SEAS PROJECT which is managed by KOINOBORI Associate Inc.

## Origin of the name

LUCA, Last Universal Common Ancestor (the oldest common ancestor of living beings), was on the surface of the ocean where ultraviolet rays were exposed 4 billion years ago. Bacteria and archaea were born from LUCA, and eukaryotic cells branched from archaea fused with bacteria, acquired mitochondria, and evolved into humanity.

In LUCA, "16 genes that produce energy by respiration" are found. Therefore, it also can be said that it is the oldest ancestor of mitochondria.

## Contact



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## Science

We consider that the pathological condition of mitochondrial diseases is mainly due to immune abnormalities based on metabolic abnormalities resulting from decreased ATP production due to mitochondrial dysfunction and increased reactive oxygen species.

LUCA Science are conducting research to improve and stabilize the pathological condition by controlling mitochondrial activity.

## Focus

- **Mitochondrial transplantation therapy**

High quality isolated mitochondria for mitochondrial transplantation.

- **Mitochondrial activation therapy**

Mitochondrial activation by the mitochondrial delivery system.

## Strategy

Based on the research of 2 universities in Japan, we will build platform technology, and promote research and development on candidate diseases in a joint research system with multiple pharmaceutical companies.

## History

- Apr. 2009 Rare disease drug development support project "KOINOBORI" started
- Jan. 2013 "KOINOBORI" became a nonprofit general incorporated association
- Apr. 2016 Patient-centered drug project "7 SEAS PROJECT" started
- Apr. 2018 Concluded joint research agreement with 8 universities and a pharmaceutical company
- Nov. 2018 Apply for 3 provisional patents from US Patent Office
- Dec. 2018 Established LUCA Science Inc.