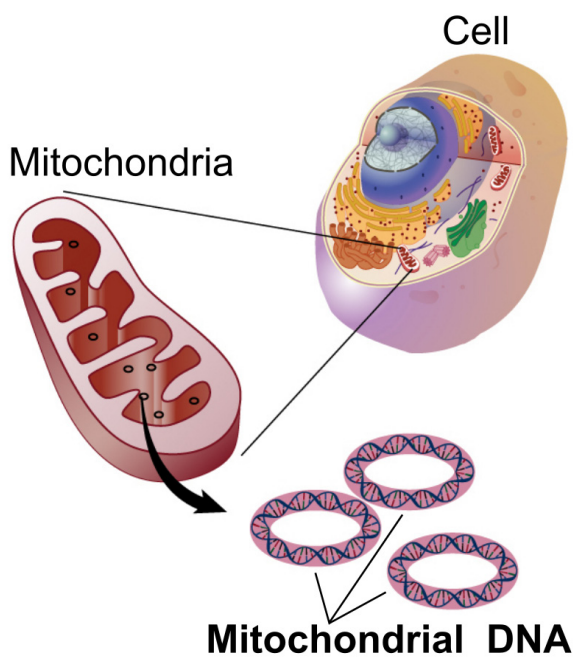


# Whole Mitochondrial DNA Genome Sequencing

*A new method for sequencing the mitochondrial genome using Next Generation Sequencing platforms.*



**M**itochondria, the powerhouse of the cell, are the cellular organelles within eukaryotic cells that convert sugars into adenosine triphosphate (ATP), a chemical substrate that cells can use as energy source. Mitochondrial DNA (mtDNA or mDNA) is the DNA located inside these mitochondria which only accounts for a small fraction of the whole DNA found in a eukaryotic cell since most of the DNA coming from the cell's nucleus. In addition, among plants and algae, plastids such as chloroplasts also are contributing for the total DNA.

The mitochondrial genome has its own genomic system within the eukaryotic cells that is separate from the nuclear genomic system. Moreover, its genetic inheritance in most animals is uniparental without any recombination from the other parent's mitochondrial genes. While most researchers tend to overlook it due to its small size, the mitochondrial genome contains genes that are essential for cellular energetics and survival.

Whole genome sequencing (WGS) has been the dominant sequencing approach to identify genetic variants in recent decades, but most studies only focus on the variants of the nuclear genome. Whole genome sequencing is also costly and time consuming. Meanwhile, sequencing specifically targeted toward mtDNA is generally used for diagnostics and it is relatively cheaper.

# OUR SERVICES



Genetika Science Indonesia is offering Whole Mitochondrial DNA Genome Sequencing using Next Generation Sequencing technologies. The platforms we offer are MGI, Illumina, or Oxford Nanopore Technologies which can cover the entire requirement for sequencing the entire mitochondrial genomes.

## APPLICATION

Mitochondrial DNA sequencing is suitable for:



Species Genetic Identification



Evolutionary Biology Studies



Wildlife Species Identification and Forensics

## SAMPLE REQUIREMENT

Researchers can submit raw samples (term and condition apply) or gDNA samples.

For gDNA samples, the sample requirement:

- Minimum concentration is 50ng/uL
- Minimum volume is 30 uL
- Intact gDNA with minimal degradation



SCAN HERE



**PT. Genetika Science Indonesia**

Green Lake City, Rukan Great Wall Blok C No. 19-21,  
Kel. Petir, Kec. Cipondoh, Kota Tangerang,  
Banten 15147, Indonesia.



[www.ptgenetika.com](http://www.ptgenetika.com)

[info@ptgenetika.com](mailto:info@ptgenetika.com)

[@genetikascience](https://www.instagram.com/genetikascience)



(021)5433 2034