

WORLD MITOCHONDRIA SOCIETY

How to Evaluate Mitochondria Function ?

Workshop on October 11, 2023

**From Initiation to
Improvement ...**



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How to Evaluate Mitochondria Function?

From Initiation to Improvement...

October 11, 2023

In collaboration with the World Mitochondria Society (WMS), we are pleased to announce the organization of the workshop dedicated to **the Evaluation of Mitochondria Function, Dysfunction and Activities**, which will be held on October 11, 2023, one day before the [Targeting Mitochondria 2023 Congress](#).

Context of the workshop

Mitochondrial function is involved in various pathologies: cardiological, neurological, nephrological, infections, and others. The central role of mitochondria in human metabolism is therefore strategic in the discovery of solutions to treat these pathologies.

Therefore, the evaluation of mitochondria is crucial to be able to detect and treat mitochondrial diseases.

Objectives

- Present the technological tools to study and analyze mitochondria
- Present the mitochondrial markers to be evaluated in the context of medical studies
- Present the different methods for analyzing mitochondria and their functions: bioenergetics, biogenesis, dynamics and mitophagy
- Present the different biochemical diagnostic strategies for mitochondrial diseases
- Discuss some practical cases

This workshop is intended for anyone who wish to improve their skills and knowledge in the field of mitochondria, metabolism and bioenergetics, their key roles within the body, analysis tools and the latest therapeutic innovations.

Looking forward to meeting you very soon, please don't hesitate to contact us for any further information.

Best regards,



Dr. Naig Gueguen, PhD

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Program

13h20 Welcome introduction

13h30 **Session 1: How to evaluate and analyze mitochondria function in 2023**

- *In vitro studies*
- *In vivo studies*
- *Ex vivo studies*
- *What are the technological tools to study and analyze the mitochondria?*
- *What are the mitochondrial markers to be evaluated in the context of medical studies?*
- *Meaning & functionality of the citrate synthase enzyme*
- *How to analyze the mitochondrial respiratory chains?*
- *How to study mitophagy?*

14h30 **Session 2: Methods for analyzing mitochondrial function: Bioenergetics**

15h30 Break

15h45 **Session 3: Methods for analyzing mitochondria: Biogenesis, dynamics and mitophagy**

16h45 **Session 4: Biochemical strategies for the diagnosis of mitochondrial disorders**

17h45 Presentation of Practical Cases

18h15 Presentation of the Workshop report & Interactive Discussion

- *Analysis of respiratory chain complex activities, tissues and cells: detailed protocols, from buffers and reagents preparation to enzymatic measurement*
- *Analysis of complexes assembly by Blue Native-PAGE*
- *Oxygraphic analysis on permeabilized fibers or cells*

18h30 Conclusion and end of the day

Registration

Two registration options are available:

1. Register to the workshop alone
2. Combine the workshop's registration with the 14th World Congress of the World Mitochondria Society on Targeting Mitochondria.

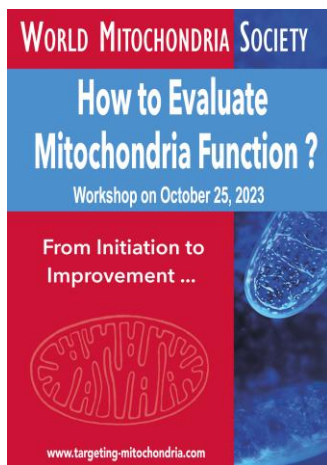
Who Should Attend?

Are you a general practitioner, biologist, geneticist, researcher in oncology, neuroscience and pediatrics, or metabolic diseases? Research director, R&D director, engineer, research assistant, or business leader? You want to learn more about mitochondria, their key roles in the cellular metabolism, last analytical tools and methods.

Teaching Resources

- Presentation support given to participants
- Presentation proposed by the speaker via Power Points
- Q&A session with all participants

Workshop Report & Replay



All attendees will receive a report detailing each session and will obtain summaries and / or Power Point presentations of the various interventions.

If you cannot attend the workshop, you can order the report in PDF format.

Annex and Protocols:

- *Analysis of respiratory chain complex activities, tissues and cells: detailed protocols, from buffers and reagents preparation to enzymatic measurement*
- *Analysis of complexes assembly by Blue Native-PAGE*
- *Oxygraphic analysis on permeabilized fibers or cells*



Access to workshop recordings will also be available to the attendees. Those who couldn't attend can also request access to recordings.

Contact us