

MEL-OsakaMito2025 Spring

International Workshop on Mitochondrial Sciences

Dates: Wednesday, March 5 – Thursday, March 6

Place: 2F Seminar Room | BioSystems Building | Graduate School of Frontier Biosciences | Osaka University

Invited Speakers

Organizers: **Diana Stojanovski** (U Melbourne, Australia) & **Koji Okamoto** (Osaka U, Japan)



Akira Ohtake

Saitama Medical University

My career with mitochondrial diseases: from BN-PAGE to 5-ALA



Diana Stojanovski

University of Melbourne

Dysregulation of protein biogenesis in mitochondrial disease



Koji Yamano

Institute of Science Tokyo

Degradation of damaged mitochondria via two different positive-feedback loops



Kei Murayama

Juntendo University

Advances in clinical practice of mitochondrial disease in Japan



Emi Ogasawara

Osaka University

The role of mitochondrial dynamics in mtDNA heteroplasmy



Kai Qi Yek

University of Melbourne

Legionella pneumophila targets host mitochondria



David Stroud

University of Melbourne

Untargeted proteomics enables ultra-rapid variant prioritization in mitochondrial and other rare diseases



Yasunori Shintani

National Cerebral and Cardiovascular Center

OXPPOS-related dysfunction and therapeutic activation of cytochrome c oxidase



Phoebe Leeming

University of Melbourne

Characterising the function of mitochondrial J-domain proteins at the human TIM23 complex



Takuya Shiota

Miyazaki University

Four key systems for the biogenesis of beta-barrel membrane proteins shared by bacteria and mitochondria



Ann Frazier

University of Melbourne

Human ATAD3 cell models for functional analysis and disease modelling



Takaya Ishihara

Shimane University

Roles of ATAD3 in regulating the dynamics of mitochondrial DNA nucleoids



Liana Semcesen

University of Melbourne

Quantitative proteomics in the diagnosis and characterisation of rare mitochondrial diseases



Masafumi Noguchi

Wakayama Medical University

Decoding respiratory pathophysiology via mitochondrial inner membrane factors



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Program

Organizers: **Diana Stojanovski** (U Melbourne, Australia) & **Koji Okamoto** (Osaka U, Japan)

Wednesday, March 5

14:00-14:10 Opening Remarks by **Koji Okamoto** (Osaka U, Japan)

Plenary talk Discussion Leader: **Diana Stojanovski** (U Melbourne, Australia)

14:10-15:00 **Akira Ohtake** (Saitama Medical U, Japan)
My career with mitochondrial diseases: from BN-PAGE to 5-ALA

15:00-15:30 Afternoon Break and Group Photo

Session I Discussion Leader: **Emi Ogasawara** (Osaka U, Japan)

15:30-16:00 **Diana Stojanovski** (U Melbourne, Australia)
Dysregulation of protein biogenesis in mitochondrial disease

16:00-16:30 **Koji Yamano** (Inst Science Tokyo, Japan)
Degradation of damaged mitochondria via two different positive-feedback loops

16:30-17:00 **Kei Murayama** (Juntendo U, Japan)
Advances in clinical practice of mitochondrial disease in Japan

Thursday, March 6

Session II Discussion Leader: **Koji Yamano** (Inst Science Tokyo, Japan)

10:00-10:30 **Emi Ogasawara** (Osaka U, Japan)
The role of mitochondrial dynamics in mtDNA heteroplasmy

10:30-11:00 **Kai Qi Yek** (U Melbourne, Australia)
Legionella pneumophila targets host mitochondria

11:00-11:20 Morning Break

Session III Discussion Leader: **Masafumi Noguchi** (Wakayama Medical U, Wakayama, Japan)

11:20-11:50 **David Stroud** (U Melbourne, Australia)
Untargeted proteomics enables ultra-rapid variant prioritization in mitochondrial and other rare diseases

11:50-12:20 **Yasunori Shintani** (Nat Cerebral and Cardiovascular Ctr, Japan)
OXPHOS-related dysfunction and therapeutic activation of cytochrome c oxidase

12:20-13:40 Lunch



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Thursday, March 6

Session IV Discussion Leader: **Yasunori Shintani** (Nat Cerebral and Cardiovascular Ctr Hospital, Japan)

13:40-14:10 Phoebe Leeming (U Melbourne, Australia)

Characterising the function of mitochondrial J-domain proteins at the human TIM23 complex

14:10-14:40 Takuya Shiota (Miyazaki U, Japan)

Four key systems for the biogenesis of beta-barrel membrane proteins shared by bacteria and mitochondria

14:40-15:00 Afternoon Break

Session V Discussion Leader: **Keisuke Takeda** (Osaka U, Japan)

15:00-15:30 Ann Frazier (U Melbourne, Australia)

Human ATAD3 cell models for functional analysis and disease modelling

15:30-16:00 Takaya Ishihara (Shimane U, Japan)

Roles of ATAD3 in regulating the dynamics of mitochondrial DNA nucleoids

16:00-16:30 Evening Break

Session VI Discussion Leader: **Naotada Ishihara** (Osaka U, Japan)

16:30-17:00 Liana Semcesen (U Melbourne, Australia)

Quantitative proteomics in the diagnosis and characterisation of rare mitochondrial diseases

17:00-17:30 Masafumi Noguchi (Wakayama Medical U, Wakayama, Japan)

Decoding respiratory pathophysiology via mitochondrial inner membrane factors

17:30-17:40 Closing Remarks by **Koji Okamoto** (Osaka U, Japan)



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