Wednesday 9th May 2018

11:30-12:50  Registration with Lunch
Wellcome Genome Campus Conference Centre

12:50-13:00  Welcome and Introductions
Francis Crick Auditorium
Patrick Chinnery
University of Cambridge, UK

13:00-14:30  Session 1: Precision diagnostics and new clinical biomarkers
Chair: Patrick Chinnery, University of Cambridge, UK

13:00  Defining mitochondrial protein function through systems biochemistry
David Pagliarini
University of Wisconsin-Madison, USA

13:30  Integrated ‘omics
Holger Prokisch
Institute of Human Genetics, Germany

14:00  Selected talk

14:15  Selected talk

14:30-14:45  Session Discussion

14:45 15:00  Afternoon Tea
15:00-16:30  **Session 2: What determines the phenotype of mitochondrial diseases?**  
*Chair: Jan Smeitink, Radboud UMC, The Netherlands*

15:00  Mitochondrial diseases - pathophysiology beyond the organelle  
*Anu Suomalainen*  
*University of Helsinki, Finland*

15:30  Post-transcriptional regulation of mitochondrial metabolism during stress  
*Elena Rugarli*  
*University of Cologne, Germany*

16:00  Selected talk

16:15  Selected talk

16:30-16:45  **Session Discussion**

16:45 – 17:30  **Lightening Talks (1 minute per poster – odd number only)**

17:30-18:45  **Poster Session I (odd numbers) with drinks reception**

19:00 prompt  **Dinner**  
*Hinxton Hall Restaurant*

19:00-23:00  **Cash Bar**  
*Welcome Genome Campus Conference Centre*

**Thursday 10th May 2018**

07:30-09:00  **Breakfast**  
*Hinxton Hall Restaurant*

09:00-10:30  **Session 3: Autophagy-mitophagy: is it important for mitochondrial disease?**  
*Chair: Massimo Zeviani, MRC Mitochondrial Biology Unit, UK*

09:00  Using small molecule modulators for protein import to regulate mitophagy  
*Carla Koehler*  
*UCLA, USA*

09.30  Resolving the pervasive nature of mammalian mitophagy  
*Ian Ganley*  
*University of Dundee, UK*

10:00  Selected talk
10:15  Selected talk

10:30 – 10:45  **Session Discussion**

10:45-11.15  **Morning Coffee**

11:15-12:45  **Session 4: Fission/fusion defects in mitochondrial disease: cause or effect?**  
*Chair: Marni Falk, The Children’s Hospital of Philadelphia, USA*

  11:15  Linking mitochondrial cell biology to mitochondrial diseases  
  **Julian Prudent**  
  MRC Mitochondrial Biology Unit, UK

  11:45  Mitochondrial dynamics  
  **Orian Shirihai**  
  Boston University, USA

12:15  Selected talk

12:30  Selected talk

12:45-13:00  **Session Discussion**

13:00-14:30  **Lunch**  
*Hinxton Hall Restaurant*

14:30-16:00  **Session 5: Mitochondrial biogenesis: the key to therapy?**  
*Chair: Anu Suomalainen, University of Helsinki, Finland*

  14:30  Analysis of the mitochondrial proteome provides a basis for development of biomarkers and novel treatments of mitochondrial dysfunction  
  **Nils-Goran Larsson**  
  Karolinska Institutet, Sweden

  15:00  NAD(H) sensitive mechanisms in mitochondrial dysfunction  
  **Rong Tian**  
  University of Washington, USA

15:30  Selected talk

15:45  Selected talk

16:00-16:15  **Session Discussion**

16:15-16:45  **Afternoon Tea**

16:45 – 17:30  **Lightening Talks** (1 minute per poster – even number only)

17:30-18:45  **Poster Session 2 (even numbers) with drinks reception**
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| 19:00 prompt | **Conference Dinner**  
*Hinxton Hall Restaurant* |
| 19:00-23:00  | **Cash Bar**  
*Hinxton Hall Bar and Wellcome Genome Campus Conference Centre* |

**Friday 11 May 2018**

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| 07:30-09:00  | **Breakfast**  
*Hinxton Hall Restaurant* |
| 09:00-10:30  | **Session 6: Gene editing to treat mitochondrial diseases**  
*Chair: Vasmi Mootha, Harvard Medical School, USA*  
09:00 Title tbc  
*Micchio Hirano*  
*Columbia University, USA*  
09:30 Protein replacement therapy for mitochondrial genetic diseases  
*Haya Louberboum-Galski*  
*Hebrew University, Israel*  
10:00 Selected talk  
10:15 Selected talk  
10:30-10:45  | **Session Discussion** |
| 10:45-11:15  | **Morning Coffee** |
| 11:15-12:15  | **Session 7: Trial design in rare disease:**  
*Chair: Patrick Chinnery, University of Cambridge, UK*  
11:15 Trial design in rare disease  
*Shamima Rahman*  
*University College London, UK*  
11:45 Trial design in rare disease  
*Patrick Yu Wai Man*  
*University of Cambridge, UK*  
12:15-12:45  | **Session Discussion** |
| 12:45-13:30  | **Session 8: Clinical intervention studies - latest updates**  
*Chair: Vasmi Mootha, Harvard Medical School, USA*  
Oral presentations selected from submitted abstracts |
13:30  Conference Summary
13:45  Conference Closure with Grab Bag lunch
14:00  Complimentary shuttle to Cambridge train station, Cambridge City Centre, London Stansted Airport and London Heathrow Airport