

# Conference Programm

**February, 20, 2020**

**Medical research and education center of Moscow State University,  
conference hall of the educational building (room 309)**

9:00–9.45

Registration (Educational building of Medical research and education center of Moscow State University).

**Alexei Bogdanov**  
*(Russia)*

9:45–9.55

Opening remarks.

## Section 1

**Non-phosphorylation respiration. Chairperson Barbara Cannon**

**Dmitry Zorov**  
*(Russia)*

10:00–10:30

Non-phosphorylating respiration: production of heat and superoxide. ROS-induced-ROS-release as a chain reaction.

**Jan Nedergaard**  
*(Sweden)*

10:30–11:00

Nonshivering thermogenesis – through UCP1 or also through other means?

## Section 2

**Bacterial and mitochondrial electricity. Chairperson D. Zorov**

**Vasiliy Ptushenko**  
*(Russia)*

11:00–11:30

Mitochondrial and bacterial electricity.



11:30–12:00

Coffee break.

**Chairperson Mikhail Vyssokikh**

**Yannis Kalaidzidis**  
*(Germany)*

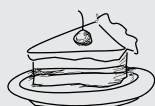
12:00–12:30

Polarity order in the liver tissue.

**Sergei Bibikov**  
*(USA)*

12:30–13:00

Counting nuclear encoded mitochondrial mRNA in human cells, progress and challenges.



13:00–14:15

Lunch.

# Section 3

## Proton vs sodium energetics. Chairperson E. Plotnikov

- Armen Mulkidjanian** 14:15–14:45 Bioinformatics and Expansion of the “Sodium World”.  
*(Germany)*
- Maria Muntyan** 14:45–15:15 New horizons of sodium energetics.  
*(Russia)*
- Vasily Popov** 15:15–15:30 mtDNA damage detection as marker of oxidative stress and mitochondrial inhibitors genotoxicity.  
*(Russia)*
- Thomas Hildebrandt** 15:30–16:00 The mysteries of wildlife reproduction.  
*(Germany)*
- Michael Sherman** 16:00–16:30 Hsp70 on the crossroad between stress and cancer.  
*(Israel)*



16:30–17:00 Coffee break.

## Chairperson Boris Chernyak

- Andrei Vinogradov** 17:00–17:30 Internal and external electron transfer catalyzed by the mitochondrial respiratory complex I  
*(Russia)*
- Yuri Antonenko** 17:30–18:00 New uncouplers of oxidative phosphorylation: BAM15, pyrrolomycin and usnic acid.  
*(Russia)*



18:00–18:10 HELICON presentation.

18:10–19:30 **Poster session**

# February, 21, 2020

Medical research and education center of Moscow State University,  
conference hall of the educational building (room 309)

## Section 4

**Aging programs vs anti-aging programs. Chairperson Jan Nedergaard**

**Boris Chernyak** 10:00–10:30 Mitochondria-targeted antioxidants against inflammation.  
(Russia)

**Vladimir Marshansky** 10:30–11:00 Structural model of  $\alpha$ 2-subunit V-ATPase and its inter-  
(USA) action with Arf-GEF cytohesin 2: Drug development for treatment of amyotrophic lateral sclerosis (ALS) and to control the calorie restriction (CR) pathway.

**Leonid Gavrilov** 11:00–11:30 Matters of life and death: What can we learn about aging  
(USA) from mortality and longevity studies?



11:30–12:00 Coffee break.

**Chairperson Andrei Vinogradov**

**Evgeniy Galimov** 12:00–12:30 Shorter life can increase colony fitness in virtual *C. elegans*.  
(England)

**Giacinto Libertini** 12:30–13:00 TERRA sequences: the core of the core of aging  
(Italy) mechanisms.

**Josh Mitteldorf** 13:00–13:30 A clinical trial using methylation age to evaluate current  
(USA) anti-aging practices.

**Vadim Gladyshev** 13:30–14:00 From mechanisms of lifespan control to longevity  
(USA) interventions.



14:00–15:00 Lunch.

**Chairperson Vadim Gladyshev**

**Leonid Margolis** 15:00–15:30 Extracellular vesicles: a new language of cell-cell  
(USA) communication.

**Susanne Holze** 15:30–16:00 Naked mole rats - myths, reality and beyond.  
(Germany)



16:00–16:30 Coffee break.

# Assembly Hall of the Fundamental Library of Moscow State University

## Section 5

**A pathway to *Homo sapiens liberatus*. Chairperson A. Mulkidjanian**

- Vladimir Skulachev** 17:15–18:15 Mild depolarization of the inner mitochondrial membrane is a critical component of an anti-aging program: how this was shown?  
*(Russia)*
- Mikhail Vyssokikh** 18:15–18:45 Mild depolarization of the inner mitochondrial membrane is a crucial component of an anti-aging program: human and SkQ1 aspects.  
*(Russia)*
- Maxim Skulachev** 18:45–19:15 Clinical trials of mitochondria-targeted antioxidants. A milestone on the pathway to *Homo sapiens liberatus*?  
*(Russia)*