

Mitochondrial Physiology MiP2005



Mitochondrial Physiology Network **10.9B**: B1-B16 (2005)

MiP2005 4th Conference on **Mitochondrial Physiology** 16-20 Sept. 2005 Schröcken, Vorarlberg, Austria

Programme

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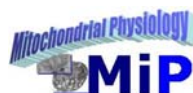
Steven Hand (Baton Rouge, US)

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Daily structure

Friday, 16. Sept.

18:30	Welcome and Opening MiP Lectures (Gemeindesaal Schröcken).
20:15	Dinner buffet and opening of the poster presentations (Gemeindesaal Schröcken).

Saturday, 17. Sept. – Monday, 19. Sept.

	Sessions 1-12: Gemeindesaal Schröcken (Lecture Hall)
07:30-08:30	Breakfast
08:45-10:05	Session 1 / 5 / 9
10:05-10:45	Coffee break – Posters
10:45-12:05	Session 2 / 6 / 10
12:05-16:00	Break: Lunch; posters; alpine walks and talks.
16:00-17:20	Session 3 / 7 / 11
17:20-18:00	Coffee break – Posters
18:00-19:20	Session 4 / 8 / 12
19:20	Posters
20:30	Dinner

Monday, 19. Sept.

12:05-16:00	<i>(in case of favourable weather conditions):</i> Cheese and wine reception at the <i>Alpmuseum uf m Tannberg</i> ; Welcome by Landesrat Dr. Hans-Peter Bischof (Government Vorarlberg).
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Tuesday, 20. Sept. Departure early in the morning

Friday, 16. Sept.
Opening MiP Lectures
Mitochondrial Physiology: The Many Faces and Functions of an Organelle

18:30 Chair: **Cecilia Giulivi** (Davis US)
Eiji Takahashi (Yamagata JP)

- 0-1. 18:35-18:45 **Erich Gnaiger (Innsbruck AT)** The many faces of mitochondrial physiology - Welcome to MiP2005.
- 0-2. 18:45-19:20 **Guy Brown (Cambridge UK)** The future of mitochondrial physiology.
- 0-3. 19:25-20:00 **Vladimir Skulachev (Moscow RU)** Role of intramitochondrial ROS in long-distance transmission of the apoptotic signal.

Saturday, 17. Sept.
Session 1: Integrated Cardiovascular and Mitochondrial Physiology.
I. Skeletal Muscle, Exercise, and Endurance

08:45 Chair: **Robert Boushel** (Montreal CA)
Kent Sahlin (Stockholm SE)

08:50-10:05 Oral presentations 10+5 min

- 1-01. 08:50-09:00 **Kent Sahlin (Stockholm SE)** Repeated static contractions to fatigue increases mitochondrial vulnerability towards oxidative stress.
- 1-02. 09:05-09:15 **Nathalie Béraud (Grenoble FR)** Mitochondrial regular arrangement in muscle cells: a "crystal-like" pattern. [YIP]
- 1-03. 09:20-09:30 **Erich Gnaiger (Innsbruck AT)** High-resolution respirometry in small biopsies of human muscle: Correlations with body mass index and age.
- 1-04. 09:35-09:45 **Robert Boushel (Montreal CA)** Local adaptations in mitochondrial substrate-specific O₂ flux capacity with prolonged, low intensity, whole-body endurance training.
- 1-05. 09:50-10:00 **Martin J Kushmerick** (Seattle US) Mitochondrial studies *in situ* reveal a novel mechanism of dysfunction: uncoupling in aged muscle.

Foyer staircase

- 1-06. Poster A1 **Bartomeu Colom (Palma de Mallorca ES)** Role of gender and caloric restriction in mitochondrial respiration-phosphorylation capacities and biogenesis in rat skeletal muscle. [YIP]
- 1-07. Poster A2 **Martin Mogensen (Odense DK)** Cycling efficiency is positively correlated to type I fibre content and negatively correlated to UCP3 protein but not to mitochondrial efficiency determined *in vitro*. [YIP]
- 1-08. Poster A3 **Yun Chang (Beijing CN)** Polymorphisms in the mtDNA hypervariable region related to individual difference in endurance performance.
- 1-09. Poster A4 **Yong Zhang (Tianjin CN)** A feedback molecular regulation of uncoupling on ROS generation in muscle mitochondria during the prolonged exercise.
- 1-10. Poster A5 **Li Wen (Tianjin CN)** Effect of coenzyme Q₁₀ supplementation on heart and liver mitochondrial function during exercise.

Saturday, 17. Sept.

Session 2:

Integrated Cardiovascular and Mitochondrial Physiology.

II. Oxygen Delivery, Hypoxia, and Altitude

10:45 Chair: **Steven Hand** (Baton Rouge US)
Heimo Mairbäurl (Heidelberg DE)

10:50-12:05 Oral presentations 10+5 min

- 2-01. 10:50-11:00 **Graham J Kemp (Liverpool UK)** Measuring and modelling the effects of altered oxygen delivery on muscle metabolism.
- 2-02. 11:05-11:15 **Hans van Beek (Amsterdam NL)** Spatial profiles of mitochondrial oxygen consumption in myocardium *in situ* during ischemia.
- 2-03. 11:20-11:30 **Heimo Mairbäurl (Heidelberg DE)** Oxygen- and flux-dependence of ROS-formation of lung alveolar epithelial cells.
- 2-04. 11:35-11:45 **Susanne Arnold (Berlin DE)** The effect of hypoxia upon the expression pattern of isoforms and the kinetics of cytochrome c oxidase in astrocytes and neurons.
- 2-05. 11:50-12:00 **Max Gassmann (Zurich CH)** How Epo-overexpressing mice adapt to chronic erythrocytosis.

Foyer staircase

- 2-06. Poster A6 **Cindy Wright-Paradis (Montreal CA)** Mitochondrial respiratory function in human skeletal muscle fibers studied at high altitude. [YIP]
- 2-07. Poster A7 **Tatiana Serebrovskaya (Kiev UA)** Different regimen of intermittent hypoxia training (IHT) as modulators of heart mitochondrial membrane permeability transition.
- 2-08. Poster A8 **Irina Mankovskaya (Kiev UA)** Structure and function of muscle mitochondria at endurance training connected with intermittent hypoxia.
- 2-09. Poster A9 **Liying Huang (Guangzhou CN)** Effects on gene regulation by reactive oxygen species during intermittent hypoxic training. [YIP]
- 2-10. Poster A10 **Katherine Lyabakh (Kiev UA)** Effect of muscle mitochondria heterogeneity on oxygen transport in muscle fibers at rest and work.

Saturday, 17. Sept.

Session 3:

**Signalling To and From the Mitochondria.
I. Nitric Oxide and Calcium**

16:00 Chair: **Guy Brown** (Cambridge UK)
Susana Cadenas (Madrid ES)

16:05-17:20 Oral presentations 10+5 min

- 3-01. 16:05-16:15 **Chris Cooper (Essex UK)** Interactions of nitric oxide with mitochondrial cytochrome oxidase: a complete kinetic model requires binding to both haem and copper.
- 3-02. 16:20-16:30 **Susana Cadenas (Madrid ES)** Differential sensitivity of cytochrome c oxidase and guanylate cyclase to endogenous nitric oxide at physiological oxygen concentration.
- 3-03. 16:35-16:45 **Cecilia Giulivi (Davis US)** Crosstalk between mitochondria and ER: nitric oxide and calcium.
- 3-04. 16:50-17:00 **Roland Malli (Graz AT)** Agonist induced mitochondrial ATP production critically depends on the trans-mitochondrial Ca^{2+} flow rate.
- 3-05. 17:05-17:15 **Mariusz R Wieckowski (Warsaw PL)** Molecular structure of the contact sites formed between mitochondria and ER.

1st floor rear

- 3-06. Poster B1 **Laura Contreras (Madrid ES)** Calcium activation of the malate-aspartate shuttle in tissues expressing distinct isoforms of the mitochondrial aspartate-glutamate carrier. [YIP]
- 3-07. Poster B2 **Maud Frieden (Geneva CH)** Subplasmalemmal mitochondria modulate the activity of plasma membrane Ca^{2+} extrusion machinery.
- 3-08. Poster B3 **Hideki Igarashi (Yamagata JP)** Mitochondrial ATP regulation at fertilization.
- 3-09. Poster B4 **Zsombor Lacza (Winston-Salem US)** Mitochondrial nitrogen radical synthesis by a NOS-independent mechanism.
- 3-10. Poster B5 **Roland Mansson (Lund SE)** Minocycline does not inhibit calcium-induced mitochondrial permeability transition. [YIP]
- 3-11. Poster B6 **Michael Trenker (Graz AT)** The ER Ca^{2+} pumps and the mitochondrial $\text{Na}^+/\text{Ca}^{2+}$ exchange function in a close relationship of interdependency. [YIP]
- 3-12. Poster B7 **Kathrin Schulz (Frankfurt DE)** Mitochondrial abnormalities in a PC12 cell model of Alzheimer's disease. [YIP]
- 3-13. Poster B8 **Joanna Szczepanowska (Warsaw PL)** Selenium modifies calcium homeostasis in cells undergoing metabolic and genetic mitochondrial stress.

Saturday, 17. Sept.

Session 4: Signalling To and From the Mitochondria – II.

18:00 Chair: **Keith Garlid** (Oregon US)
Lech Wojtczak (Warszawa PL)

18:05-19:20 Oral presentations 10+5 min

- 4-01. 18:05-18:15 **Keith D Garlid (Portland US)** Reconstitution of kinase signaling in mitochondria - how mitoK_{ATP} opening inhibits permeability transition opening.
- 4-02. 18:20-18:30 **Marco Vendelin (Paris FR)** Modulation of energy transfer between mitochondria and myofibrils by changes of cardiac work.
- 4-03. 18:35-18:45 **Lech Wojtczak (Warszawa PL)** Comparison of the effects of nonesterified fatty acids and of their amides (N-acyl-ethanolamines) on isolated mitochondria and on mitochondria within intact cells, including triggering of apoptosis.
- 4-04. 18:50-19:00 **Uwe Schlattner (Zurich CH)** Mitochondrial GTP metabolism - a main function of NDP-kinase D?
- 4-05. 19:05-19:15 **Keshav Singh (Buffalo US)** Inter-genomic cross talk between the mitochondria and nucleus in aging and cancer.

1st floor rear

- 4-06. Poster B9 **Boris F Krasnikov (New York US)** A toxic halogenated cysteine S-conjugate has deleterious effects on mitochondrial physiology.
- 4-07. Poster B10 **Jakob Troppmair (Innsbruck AT)** v-Raf antagonizes impairment of mitochondrial respiratory function following growth factor removal.
- 4-08. Poster B11 **Dieter Morandell (Innsbruck AT)** Modulation of mitochondrial respiratory parameters by the human papillomavirus type 16 E7 oncoprotein. [YIP]
- 4-09. Poster B12 **Rudi Wiesner (Köln DE)** Keratinocyte-specific knockout of the Tfam protein allows to elucidate the role of the mitochondrial respiratory chain for cell proliferation *in vivo*.
- 4-10. Poster B13 **Andras Perl (Syracuse US)** Mitochondrial hyperpolarization: a checkpoint of T-cell life, death and autoimmunity.

**Sunday, 18. Sept.
Session 5:**
Organization of the Mitochondrial Respiratory Chain and Control of Oxidative Phosphorylation

08:45 Chair: **Vladimir Skulachev** (Moscow RU)
Bernhard Kadenbach (Marburg DE)

08:50-10:05 Oral presentations 10+5 min

- 5-01. 08:50-09:00 **Maik Hüttemann (Detroit US)** cAMP-dependent phosphorylation of catalytic subunit I of cytochrome *c* oxidase switches off enzyme activity.
- 5-02. 09:05-09:15 **Ashley Naimi (Innsbruck AT)** Limitation of aerobic metabolism by the phosphorylation system and mitochondrial respiratory capacity of fibroblasts *in vivo*. The coupled reference state and reinterpretation of the uncoupling control ratio. [YIP]
- 5-03. 09:20-09:30 **Giovanni Benard (Bordeaux FR)** Role of mitochondrial network organization in the regulation of energy production in living human cells: a multi-approach study. [YIP]
- 5-04. 09:35-09:45 **Steven Hand (Baton Rouge US)** Depression of oxidative phosphorylation under normoxia during invertebrate diapause and strategies for mitochondrial stabilization.
- 5-05. 09:50-10:00 **Pierre Blier (Rimouski CA)** Functional significance of mtDNA evolution.

1st floor side

- 5-06. Poster C1 **Michael I Verkhovsky (Helsinki FI)** Importance of primary reactions in cytochrome *c* oxidase for mitochondrial physiology.
- 5-07. Poster C2 **Pietro Luca Martino (Bari IT)** pH dependence of the various phases of the proton pump of cytochrome *c* oxidase. [YIP]
- 5-08. Poster C3 **Sebastian Vogt (Marburg DE)** Regulation of cytochrome *c* oxidase kinetics *in vivo* by phosphorylation of subunits via different signal cascades in bovine heart and isolated rat cardiomyocytes.
- 5-09. Poster C4 **Christophe Rocher (Bordeaux FR)** The early stage of Complex I assembly is linked with Complex III and IV supercomplex. [YIP]
- 5-10. Poster C5 **Barbara Lassnig (Innsbruck AT)** Functional role of excess capacity of cytochrome *c* oxidase in isolated mitochondria and tissue preparations: heart and liver.
- 5-11. Poster C6 **Andrew M James (Cambridge UK)** Interactions of mitochondria-targeted and untargeted ubiquinones with the mitochondrial respiratory chain and reactive oxygen species: implications for the use of exogenous ubiquinones as therapies and experimental tools.
- 5-12. Poster C7 **Hélène Lemieux (Rimouski CA)** In quest for the origin of thermal sensitivity of electron transport in heart mitochondria. [YIP]
- 5-13. Poster C8 **Joseph Clark (Cincinnati US)** Assessment of mitochondrial function and respiratory complex function using mitochondria containing blood cells following membrane permeabilization.

Sunday, 18. Sept.

Session 6:

Respiration, Coupling, Permeability Transition, and UCPs

10:45 Chair: **Francis Sluse** (Liège BE)
Richard Porter (Dublin IE)

10:50-12:05 Oral presentations 10+5 min

- 6-01. 10:50-11:00 **Joris Hoeks (Maastricht NL)** The effect of high-fat feeding on intramuscular lipid and lipid peroxidation levels in UCP3-ablated mice. [YIP]
- 6-02. 11:05-11:15 **Wieslawa Jarmuszkiewicz (Poznan PL)** Inhibition of *Acanthamoeba castellanii* uncoupling protein activity by GTP depends on the redox state of quinone.
- 6-03. 11:20-11:30 **Richard K Porter (Dublin IE)** Elucidation of the mechanism of mitochondrial uncoupling protein function using a synthetic glycolipid (glucose-*O*- ω -palmitate).
- 6-04. 11:35-11:45 **Francis Sluse (Liège BE)** Functional and proteomic impacts of variations of the expression of uncoupling proteins in living cells.
- 6-05. 11:50-12:00 **Nils-Erik Saris (Helsinki FI)** The permeabilisation of mitochondria and bilayer phospholipid membranes by palmitic acid and Ca^{2+} .

1st floor side

- 6-06. Poster C9 **Valgardur Egilsson (Reykjavik IS)** Mitochondria are sensitive to carcinogenic chemicals.
- 6-07. Poster C10 **Petr Ježek (Prague CZ)** Low abundance of UCP2 (UCP3, UCP4, UCP5) is sufficient for attenuation of mitochondrial ROS production.
- 6-08. Poster C11 **Irina Shabalina (Stockholm SE)** No evidence for superoxide or 4-hydroxy-nonenal activation of uncoupling protein 1 (UCP1) as elucidated from studies of SOD2-overexpressing or UCP1-ablated mice.
- 6-09. Poster C12 **Jaap Keijer (Wageningen NL)** The metabolic phenotype of HT-29 human colon cancer cells is normalized by low intracellular folate levels.
- 6-10. Poster C13 **Michael Menze (Baton Rouge US)** Mitochondrial permeability transition in an invertebrate: Absence of a calcium-regulated pore in the face of profound Ca^{2+} storage.
- 6-11. Poster C14 **Evgeny Pavlov (Calgary CA)** Single channel properties of the mitochondrial poly-3-hydroxybutyrate/ Ca^{2+} /polyphosphate complex.
- 6-12. Poster C15 **Steven A Weinman (Galveston US)** Hepatitis C virus core protein binds to mitochondria and induces Ca^{2+} uptake, ROS production, complex I inhibition, and permeability transition.
- 6-13. Poster C16 **Assegid Garedew (Innsbruck AT)** Respiratory coupling control ratio and respiratory capacity in cultured fibroblasts and myeloid progenitor cells. Effects of experimental cell density.
- 6-14. Poster C17 **Magnus Hansson (Lund SE)** Brain mitochondrial production of reactive oxygen species is increased by calcium-induced permeability transition. [YIP]

Sunday, 18. Sept.

Session 7:

Oxidative Stress and Mitochondrial Function

16:00 Chair: **Susanne Arnold** (Berlin DE)

Andrey Kozlov (Vienna AT)

16:05-17:20 Oral presentations 10+5 min

- 7-01. 16:05-16:15 **Zdenek Drahota (Prague CZ)** Pathophysiological role of mitochondrial glycerophos-phate dehydrogenase.
- 7-02. 16:20-16:30 **Wolfram Kunz (Bonn DE)** ROS generation by the mitochondrial respiratory chain - implication for neurodegenerative diseases.
- 7-03. 16:35-16:45 **Anibal Vercesi (Campinas BR)** Mitochondrial oxidative stress in genetically dyslipidemic mice.
- 7-04. 16:50-17:00 **Andrey Kozlov (Vienna AT)** Do mitochondrial ROS contribute to endotoxin mediated organ failure?
- 7-05. 17:05-17:15 **Katrin Staniek (Vienna AT)** Protection of oxidatively damaged mitochondria by novel chromanol-type antioxidants.

School entrance

- 7-06. Poster D1 **Hans Nohl (Vienna AT)** Lysosomal ROS formation.
- 7-07. Poster D2 **Susanne Haindl (Vienna AT)** The preparation procedure does not influence significantly the function and morphology of liver mitochondria from control and endotoxic rats.
- 7-08. Poster D3 **Liu Shusen (Beijing CN)** Superoxide generating and cycling mechanism and its significance in energy partitioning of proton motive force in mitochondria.
- 7-09. Poster D4 **Sjoerd Verkaart (Nijmegen NL)** Mitochondrial superoxide production is inversely proportional to complex I activity in human complex I deficiency. [YIP]
- 7-10. Poster D5 **Christina Piskernik (Vienna AT)** Relation between free iron and mitochondrial superoxide radicals during endotoxic shock.
- 7-11. Poster D6 **Marie Kalbacova (Dresden DE)** Influence of oxidative stress on osteoblasts cultured on either titanium or polystyrene.
- 7-12. Poster D7 **Meredith F Ross (Cambridge UK)** MitoSOD: a novel mitochondria-targeted superoxide dismutase mimetic.
- 7-13. Poster D8 **Pavla Křiváková (Hradec Kralove CZ)** Selective inhibitory effect of tBHP on respiratory chain enzymes in isolated rat hepatocytes and protective effect of SAME. [YIP]
- 7-14. Poster D9 **Bruno Fink (Denzlingen DE)** Evidence for increased superoxide production in atrial fibrillation detected by ESR and HPLC based assay.

Sunday, 18. Sept.

Session 8:

**Mitochondria in Ischemia-Reperfusion and
Cardiomyopathy**

18:00 Chair: **Vilma Borutaite** (Cambridge UK)

Anibal Vercesi (Campinas BR)

18:05-19:20 Oral presentations 10+5 min

- 8-01. 18:05-18:15 **Galina Mironova (Moscow RU)** The metabolic activators of mitochondrial ATP-dependent potassium channel and its role in cardioprotection.
- 8-02. 18:20-18:30 **Vilma Borutaite (Cambridge UK)** Effects of NO and estrogens on ischaemia-induced permeability transition in heart mitochondria.
- 8-03. 18:35-18:45 **Odile Gateau-Roesch (Lyon FR)** Role of matrix calcium accumulation in mitochondrial permeability transition in postconditioned versus preconditioned myocardium.
- 8-04. 18:50-19:00 **Paul Brookes (Rochester US)** Mitochondrial function in cardiac ischemia-reperfusion injury and ischemic preconditioning.
- 8-05. 19:05-19:15 **Anne-Laure Bulteau (Paris FR)** Reversible redox dependent modulation of mitochondrial aconitase and proteolytic activity status during cardiac ischemia reperfusion. [YIP]

School entrance

- 8-06. Poster D9 **Charles L Hoppel (Cleveland US)** Inhibition of electron transport during ischemia prevents mitochondrial ischemic damage and protects the heart.
- 8-07. Poster D10 **António Ascensão (Porto PT)** Does endurance training limit rat heart mitochondrial dysfunction induced by in vitro anoxia-reoxygenation?
- 8-08. Poster D11 **Lingjia Qian (Tianjin CN)** Mitochondrial mechanism of stress-induced cardiomyocyte injury.

Monday, 19. Sept.

Session 9:

Mitochondria and Degenerative Diseases.

I. Animal Models

08:45 Chair: **Josef Houstek** (Prague CZ)
Thierry Letellier (Bordeaux FR)

08:50-10:05 Oral presentations 10+5 min

- 9-01. 08:50-09:05 **Katrina Baden (Eugene US)** Knockdown of COX5a in zebrafish phenocopies aspects of human COX deficiency. [YIP]
- 9-02. 09:05-09:20 **Susanne Hauptmann (Frankfurt DE)** APP transgenic mice exhibit mitochondrial dysfunction. [YIP]
- 9-03. 09:20-09:35 **Douglas R Moellering (Birmingham US)** Proteomic and biochemical analyses of diabetic human and obese rodent skeletal muscle mitochondria reveals altered concentration, oxidation, and activity of respiratory chain proteins.
- 9-04. 09:35-09:50 **Helena CF Oliveira (Campinas BR)** Hypertriglyceridemia in transgenic mice is associated with higher mitochondrial resting respiration and increased whole body CO₂ production and body temperature.
- 9-05. 09:50-10:05 **Peter Schönfeld (Magdeburg DE)** A study of cytotoxicity of phytanic acid in mitochondria and astrocytes isolated from rat brain - possible mechanism in Refsum disease.

School entrance

- 9-06. Poster E1 **Maria P Alcolea (Palma de Mallorca ES)** Mitochondrial biogenesis in rat embryo during placentation process. [YIP]
- 9-07. Poster E2 **Sajida Malik (Oxford UK)** The placental phenotype of a model of mitochondrial dysfunction in mice. [YIP]

Monday, 19. Sept.

**Session 10: Mitochondria and Degenerative Diseases.
II. Patients and Human Cell Lines**

10:45 Chair: **Sergio Papa (Bari IT)**
Patrick Schrauwen (Maastricht NL)

10:50-12:05 Oral presentations 10+5 min

- 10-01. 10:50-11:00 **Patrick Schrauwen (Maastricht NL)** Oxidative capacity, lipotoxicity and mitochondrial function in type 2 diabetes mellitus.
- 10-02. 11:05-11:15 **Rolf Berge (Bergen NO)** Dissipating excess energy in the liver is a potential treatment strategy for the metabolic syndrome.
- 10-03. 11:20-11:30 **Wolfgang F Graier (Graz AT)** Endothelial mitochondria exhibit an initial target of hyperglycemia.
- 10-04. 11:35-11:45 **Sergio Papa (Bari IT)** Complex I and physiopathology of mitochondrial oxygen metabolism.
- 10-05. 11:50-12:50 **Josef Houštěk (Prague CZ)** Two components in pathogenic mechanism of mitochondrial ATPase deficiency: Energy deprivation and ROS production.

School entrance

- 10-06. Poster E3 **Werner JH Koopman (Nijmegen NL)** Trolox restores aberrant mitochondrial morphology and improves the assembly and activity of complex I in patients with an isolated deficiency.
- 10-07. Poster E4 **Petr Pecina (Prague CZ)** Cytochrome c oxidase assembly defects. [YIP]
- 10-08. Poster E5 **Karl Johan Tronstad (Bergen NO)** Mitochondrial alterations during apoptosis induced by a thia fatty acid in leukemia cells.
- 10-09. Poster E6 **Roberto Scatena (Rome IT)** Mitochondrial derangement induced by PPAR-ligands in HEP-G2 cell lines. Pathophysiological and pharmacotoxicological implications.
- 10-10. Poster E7 **Hong Kyu Lee (Seoul KR)** Cancer cell growth can be affected by different mitochondrial DNAs from subjects without cancer.
- 10-11. Poster E8 **Denis Pierron (Bordeaux FR)** Importance of the mitochondrial genetic background in the mtDNA mutations expression: Implication in mitochondrial diseases. [YIP]
- 10-12. Poster E9 **Cenk Aral (Istanbul TR)** A novel approach for rapid screening of mitochondrial D310 polymorphism. [YIP]
- 10-13. Poster E10 **Flemming Dela (Copenhagen DK)** Reduced skeletal muscle mitochondrial O₂ flux capacity in type 2 diabetes.

Monday, 19. Sept.

Session 11: Mitochondria and Aging

16:00 Chair: **Pidder Jansen-Dürr** (Innsbruck AT)

Heinz Osiewacz (Frankfurt DE)

16:05-17:20 Oral presentations 10+5 min

- 11-01. 16:05-16:15 **Heinz Osiewacz (Frankfurt DE)** Molecular networks affecting mitochondrial functions and lifespan in the fungal aging model *Podospora anserina*.
- 11-02. 16:20-16:30 **Michael Breitenbach (Salzburg AT)** Mitochondrial functions in yeast aging and apoptosis.
- 11-03. 16:50-17:00 **Helena M Cochemé (Cambridge UK)** Yeast as a model for investigating mitochondrial oxidative damage. [YIP]
- 11-04. 16:35-16:45 **Eveline Hütter (Innsbruck AT)** Mitochondrial respiratory control and oxygen dependence of ROS production in aging endothelial cells.
- 11-05. 17:05-17:15 **Bertrand Friguet (Paris FR)** Mitochondrial protein modification and degradation by the Lon protease in rat liver and heart.

Foyer

- 11-06. Poster F1 **Josie ML McConnell (Aberdeen UK)** The mitochondrial DNA content of preimplantation embryos can be altered by environmental stress.
- 11-07. Poster F2 **Mirella Trinei (Milano IT)** Mitochondrial DNA replication and mitochondrial activity in mammals.
- 11-08. Poster F3 **Reham M Abdel-Kader (Frankfurt DE)** Mitochondrial protection using Ginkgo biloba extract (EGb 761) *in vitro* and *in vivo* using several animal models. [YIP]
- 11-09. Poster F4 **Piran Shelley (London UK)** Maternal diet 'programs' late onset mitochondrial dysfunction in renal tissue of male offspring.
- 11-10. Poster F5 **Hermann Unterluggauer (Innsbruck AT)** Modulation of mitochondrial function by the IGF signalling pathway in human cells. [YIP]
- 11-11. Poster F6 **Jaromír Horecký (Bratislava SK)** Mitochondrial dysfunction in brain neurodegenerative disorders: ageing and chronic cerebral hypoperfusion.
- 11-12. Poster F7 **Peter Schroeder (Düsseldorf DE)** A role for mitochondria in infrared A radiation-induced intracellular signalling.

Monday, 19. Sept.

Session 12:

Mitochondrial Physiology – an Integration

- **Presentation of Poster Awards,**
- **Reflections on MiP2005,**
- **MiP2007 and Future Perspectives**

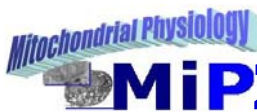
18:00 Chair: Guy Brown (Cambridge UK)
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Steven Hand (Baton Rouge US)
Rodrigue Rossignol (Bordeaux FR)
Eveline Hütter (Innsbruck AT)
Erich Gnaiger (Innsbruck AT)

18:00-19:00 **6 Young investigator poster presentations (5+5 min) – awards for best presentations**

19:00-19:20 **Summary and conclusions on MiP2005** – general discussion

19:20-19:30 **MiP2007** - Presentation by Guy Brown (Cambridge UK)

19:30-20:00 **The MiP Society and future perspectives** – general discussion



5th Conference on Mitochondrial Physiology – MiP2007

Provisionally arranged for

14 to 18 September 2007

Ambleside, Lake District, England, UK

Organized as a Harden conference funded by the British Biochemical Society

Local organizers: Guy C Brown, Mike P Murphy

Arrival: Friday, 14th September

Departure: Tuesday, 18th September

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MiP2005 Notes

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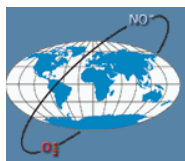
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- **KMT** – Competence Centre Medicine Tyrol
www.kmt.at



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