# PROGRAM

## Monday, October 11, 2004

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<td>08:30-08:45</td>
<td>OPENING SESSION</td>
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<td>Chair: Y. Shapiro, Israel</td>
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<td>Greetings:</td>
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<td>Prof. Y. Shapiro, Symposium President</td>
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<td>Prof. K. Kanosue, Chair of Section on Thermal Physiology, IUPS</td>
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<td>Prof. A. Romanovsky, President, Second PPTR Symposium 2006</td>
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<td>08:45-11:05</td>
<td>SESSION MON/S-01: NEURONAL MECHANISM OF TEMPERATURE REGULATION AND THERMORECEPTION</td>
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<td>TRACING BRAIN THERMOREGULATORY PATHWAYS FROM RATS (Keynote)</td>
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<td></td>
<td>R. McAllen(^1), M. Farrell(^1), L. Carabott(^1), McKinley(^1), G. Egan(^1), G. Jackson(^1), D. Denton(^1), J. Johnson(^1)</td>
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<tr>
<td></td>
<td>1Howard Florey Institute, University of Melbourne, Australia</td>
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<td>2University of Texas, USA</td>
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<td>CENTRAL THERMOSENSITIVITY AND THE INTEGRATIVE RESPONSES OF ANTERIOR HYPOTHALAMIC NEURONS</td>
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<td>J. D. Griffin</td>
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<td>College of William and Mary, USA</td>
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<td>HYPOTHALAMIC AND BRAINSTEM PATHWAYS CONTROLLING THERMOGENESIS IN BROWN ADIPOSE TISSUE (BAT)</td>
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<td>S. F. Morrison, W. H. Cao, C. J. Madden</td>
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<td>Neurological, Sciences Institute, Oregon Health &amp; Science University, USA</td>
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<td>COLD-INDUCED THERMOGENESIS MEDIATED BY GABA IN THE PREOPTIC AREA</td>
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<td>T. Osaka</td>
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<td>National Institute of Health and Nutrition, Japan</td>
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<td>FEVER-INDUCING SYMPATHETIC NEURAL PATHWAYS</td>
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<td>K. Nakamura</td>
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<td>Graduate School of Medicine, Kyoto University, Japan</td>
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<td>11:05-11:30</td>
<td>COFFEE BREAK</td>
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THERMAL STRESS AND NEURAL FUNCTION: ADAPTIVE MECHANISMS IN INSECT MODEL SYSTEMS
R. M. Robertson
Queen’s University, Canada

LOCAL ALTERNATED TEMPERATURE GRADIENTS AS FOOTPRINTS OF CORTICAL FUNCTIONAL ACTIVATION
A. M. Gorbach
Bioengineering and Physical Science, National Institutes of Health, USA

PURINERGIC SIGNALING IN HYPOTHALMIC MECHANISMS OF BODY TEMPERATURE REGULATION
V. N. Gourine1, E. V. Melenchuk1, D. M. Poputnikov1, A. V. Gourine1,2, K. M. Spyer2
1Institute of Physiology, National Academy of Sciences of Belarus, Belarus
2Royal Free and University College London Medical School, UK

IDENTIFICATION OF TEMPERATURE-SENSITIVE NEURAL CIRCUITS IN MICE USING C-FOS EXPRESSION MAPPING
A. E. Ryabinin, N. O. Tsivkovskaya, R. K. Bachtell
Oregon Health & Science University, USA

PLATEAU POTENTIALS IN MOTONEURONES CONTRIBUTE TO TEMPERATURE REGULATION IN THE RAT
E. B. Rein1, T. Eken1,2, T. Lømo1
1Institute of Basic Medical Sciences, University of Oslo, Norway
2Aker University Hospital, Norway

SEROTONIN CELLS OF THE VENTRAL MEDULLA ARE NOT REQUIRED FOR SYMPATHETIC ACTIVATION OF BROWN ADIPOSE TISSUE
C. J. Madden, S. F. Morrison
Neurological Sciences Institute, Oregon Health & Science University, USA
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<td>11:30-13:00</td>
<td><strong>SESSION MON/O-03: THERMAL RESPONSES TO COLD EXPOSURE</strong></td>
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<td>Chair: H. Rintamäki, Finland</td>
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**EFFECT OF LONG TERM ADAPTATION TO COLD ON THE IMMUNE RESPONSE**

T. V. Kozyreva, L. S. Eliseeva  
Institute of Physiology, Academy of Medical Sciences, Russia

**THE EFFECT OF TROPISETRON VERSUS PLACEBO! ON COLD INDUCED OXYGEN CONSUMPTION AND SHIVERING IN MALE VOLUNTEERS**

K. P. Ittner, L. Faerber, K. Taeger  
University of Regensburg, Germany

**WIND INDUCED THERMAL RESPONSES DURING REST AND EXERCISE IN COLD**

T. T. Mäkinen, H. Rintamäki  
Oulu Regional Institute of Occupational Health, Finland

**BLOOD PRESSURE AND THERMAL RESPONSES TO WHOLE BODY COLD EXPOSURE IN MILDLY HYPERTENSIVE SUBJECTS: EFFECT OF HYDROCHLOROTHIAZIDE**

S. Komulainen¹, T. Oja¹, H. Rintamäki², H. Virokannas¹, S. Keinänen-Kiukaanniemi¹  
¹University of Oulu, Finland  
²Oulu Regional Institute of Occupational Health, Finland

**EFFECTS OF LEG EXERCISE ON METABOLIC AND THERMAL RESPONSES DURING COLD WATER IMMERSION UNDER SEVERE ENVIRONMENTAL CONDITIONS**

H. Færevik¹, R. Reinertsen¹, G. Giesbrecht²  
¹SINTEF Health Research, Norway  
²Health Leisure and Human Performance Research Institute, University of Manitoba, Canada

**EFFECT OF BODY HEAT CONTENT ON FACIAL TEMPERATURES AND TISSUE THERMAL RESISTANCE DURING EXPOSURE TO COLD WIND**

M. B. Ducharme, D. Brajkovic  
Human Protection and Performance Group, Defence Research and Development, Canada
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<td>V. Davidovic</td>
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<td>Y. Takashige, K. Yoshida,</td>
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<td>K. Nakamura, K. Matsumura,</td>
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<td>K. Kobayashi, K. Nagashima,</td>
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<td>K. Kanosue</td>
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<td>A. Kobayashi, T. Osaka,</td>
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<td>OF GABA INTO THE PREOPTIC AREA IN RATS</td>
<td>K. Kanosue</td>
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<td>A. Romanovsky, A. Steiner,</td>
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<td>L. Branco, L. Jansky, V. N.</td>
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<td>Faculty of Pharmaceutical Science, University of Sao Paulo, Brazil</td>
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<td>Laboratory of Pharmacology, FCFRP-USP, Brazil</td>
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<td>EPM-UNIFESP, Brazil</td>
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11. CHARACTERIZATION OF PYROGENIC PROPERTIES OF POLY I:
POLY C IN GUINEA PIGS
T. Voss, C. Rummel, R. Gerstberger, T. Hübschle, J. Roth
Veterinary-Physiology, Justus-Liebig-University, Germany

12. PYROGEN-INDUCED NUCLEAR STAT3 TRANSLOCATION IN
ENDOTHELIUM OF RAT AND GUINEA PIG BRAIN
C. Rummel¹, T. Voss¹, J. Muetze¹, J. Roth¹, R. Gerstberger¹, S. Kobayashi²,
K. Matsumura¹, T. Hübschle¹
¹Veterinary-Physiology, Justus-Liebig-University, Germany
²Kyoto University, Japan

13. IDENTIFICATION AND DISTRIBUTION OF THE PROCALCITONIN-
LIKE IMMUNOREACTIVITY IN THE RAT BRAIN FOLLOWING LIPOPOLYSACCHARIDE
ADMINISTRATION
F. J. Minano¹,², E. Tavares³, M. L. Ojeda¹, J. Ambrosiani¹, R. Maldonado³
¹Labs for Clinical and Experimental Pharmacology, Valme University Hospital, Spain
²Faculty of Medicine, University of Seville, Spain

14. NEUTRALIZATION OF MACROPHAGE INFLAMMATORY PROTEIN
2 BLOCKS THE FEBRILE RESPONSE INDUCED BY LIPOPOLYSACCHARIDE
IN RATS
E. Tavares³, F. J. Minano¹,²
¹Labs for Clinical and Experimental Pharmacology, Valme University Hospital, Spain
²Faculty of Medicine, University of Seville, Spain

15. THE ROLE OF PURINERGIC SIGNALING IN FEBRILE AND CYTOKINE
RESPONSES DURING SYSTEMIC INFLAMMATION
V. Gourine¹,², D. M. Poputnikov², N. A. Zhermossek², E. V. Melenchuk², V. N. Gourine²,
K. M. Spyer¹
¹Royal Free and University College London Medical School, UK
²Institute of Physiology, National Academy of Sciences of Belarus, Belarus

16. ROLE OF PROTEASE INHIBITORS IN FEVER
V. Gourine¹, V. N. Gourine¹, M. J. Kluger²
²Medical College of Georgia, USA

17. A SUBSIDIARY FEVER CENTRE IN THE MEDULLARY RAPHÉ?
M. Tanaka, R. McAllen
Howard Florey Institute, University of Melbourne, Australia

18. IS PROSTAGLANDIN (E₂) IMPORTANT TO FEVER INDUCED BY
MIP-1α IN RATS?
Laboratory of Pharmacology, FCFRP-USP, Brazil

19. SYSTEMIC VERSUS LOCALIZED INFLAMMATION: A ROLE FOR
PROSTAGLANDINS AT DISTANT POINTS OF THE FEVER-INDUCTION PATHWAYS?
C. Rummel¹, S. Barth², R. Gerstberger¹, T. Hübschle¹, J. Roth¹
¹Veterinary-Physiology, Justus-Liebig-University, Germany
²Nutritional Physiology, Federal Research Center for Nutrition, Germany

20. ENDogenous OPIOIDS PARTICIPATE ON PROSTAGLANDIN-F₂α-
CORTICOTROPIN-RELEASING FACTOR-, AND ENDOTHELIN-1-INDUCED FEVER
D. Fraga¹, G. E. P. de Souza², A. R. Zampronio¹
¹Federal University of Parana, Brazil
²Faculty of Pharmaceutical Sciences, University of Sao Paulo, Brazil
21. SUPPRESSION OF INFLAMMATION IN NEAR-TERM PREGNANT RATS: A POSSIBLE CAUSE OF PREGNANCY-ASSOCIATED ANTIPYRISIS
K. Imai-Matsumura\textsuperscript{1}, G. Jho\textsuperscript{1}, K. Matsumura\textsuperscript{2}, S. Kobayashi\textsuperscript{2}, T. Ibuki\textsuperscript{3}, Y. Yamasaki\textsuperscript{3}
\textsuperscript{1}Hyogo University of Teacher Education, Japan
\textsuperscript{2}Graduate School of Informatics, Kyoto University, Japan
\textsuperscript{3}Kyoto Prefectural University of Medicine, Japan

22. IS THERE A ROLE FOR CYCLOOXYGENASE-2 IN ENDOTHELIN-1-INDUCED FEVER?
S. C. Fabricio, F. H. Veiga-Souza, R. Cristofoletti, G. E. P. Souza
Laboratory of Pharmacology, FCFRP-USP, Brazil

23. NITRIC OXIDE (NO) ACTIVATES INTRACELLULAR SIGNALING PATHWAYS OF RAT MNPO CELLS IN PRIMARY CULTURE
M. Kuth\textsuperscript{1}, D. Hild\textsuperscript{1}, S. Korte\textsuperscript{1}, M. Horowitz\textsuperscript{2}, R. Gerstberger\textsuperscript{1}
\textsuperscript{1}Veterinary Faculty, Justus-Liebig-University, Germany
\textsuperscript{2}Hadassah Medical School, The Hebrew University, Israel

24. THE EFFECT OF PERFUSION OF PHENOXYBENZAMINE INTO THE PREOPTIC AREA ON THERMOREGULATION IN COLD ACCLIMATED OR NON-COLD ACCLIMATED RATS
T. Saitou\textsuperscript{1}, T. Ishiwata\textsuperscript{1}, H. Hasegawa\textsuperscript{1,3}, S. Nomoto\textsuperscript{4}, Y. Aihara\textsuperscript{1}
\textsuperscript{1}Graduate School of Science, Tokyo Metropolitan University, Japan
\textsuperscript{2}Faculty of Integrated Arts and Science, Hiroshima University, Japan
\textsuperscript{3}Vrije University, Belgium
\textsuperscript{4}Tokyo Metropolitan Institute of Geontology, Japan

25. THE THERMOREGULATORY RESPONSE OF SHORT DAY ACCLIMATED SOCIAL VÖLES MICROTUS SOCIALIS TO LIGHT INTERFERENCE
A. Alsalam Zubidat, A. Haim
University of Haifa, Israel
University of Haifa – Oranim, Israel
**SESSION MON/S-04: INTEGRATION OF OSMOTIC AND THERMAL SIGNALS AT THE LEVEL OF THE PREOPTIC ANTERIOR HYPOTHALAMUS: A MULTIDISCIPLINARY APPROACH**

Chair: R. Gerstberger, Germany

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| 14:30-16:40  | NONLINEAR INTERACTIONS BETWEEN THERMAL, OSMOTIC AND IMMUNE SIGNALS IN HYPOTHALAMIC NEURONS RECORDED IN RAT BRAIN SLICES | H. A. Braun¹, M. Dewald¹, M. Huber², B. Wollweber¹, H. Schneider¹, K. Voigt¹  
¹Institute of Physiology, University of Marburg, Germany  
²Department of Psychiatry, University of Marburg, Germany |
|             | EFFERENT MULTISYNAPTIC PATHWAYS FROM PREOPTIC AREA TO EFFECTOR ORGANS OF THERMO-AND/OR OSMOREGULATORY IMPORTANCE AS REVEALED BY THE VIRAL TRACING TECHNIQUE | T. Hübschle¹, K. Yoshida¹, B. Oldfield², M. McKinley², M. Mathai², R. Gerstburger¹  
¹Veterinary-Physiology, Justus-Liebig University, Germany  
²Howard Florey Institute of Experimental Physiology and Medicine, Australia |
|             | WARM AND COLD RECEPTORS ARE THERMOSTATS                                                        | S. Kobayashi, M. Okazawa  
Graduate School of Informatics, Kyoto University, Japan |
|             | THERMOREGULATORY RESPONSES IN RATS DURING SYSTEMIC SALT LOADING                                | M. Konishi¹, K. Nagashima¹, K. Asano¹, K. Kanosue²  
¹Graduate School of Medicine, Osaka University, Japan  
²School of Sport Sciences, Waseda University, Japan |
|             | THE MEDIAN PREOPTIC NUCLEUS (MNPO) OF THE LAMINA TERMINALIS AS HOMEOSTATIC RELAY STATION: THE ROLE OF NITRIC OXIDE | R. Gerstberger¹, D. Hild¹, K. Hudl¹, S. Korte¹, M. Kuth¹, H. Schwimmer², T. Hübschle¹  
¹Veterinary Faculty, Justus-Liebig-University, Germany  
²Hadassah Medical School, The Hebrew University, Israel |
|             | GENOMIC AND PROTEOMIC APPROACHES IN THE STUDY OF THE HYPOTHALAMUS FOLLOWING HEAT-ACCLIMATION AND SUPERIMPOSED HYPOHYDRATION | H. Schwimmer, L. Eli-Berchoer, M. Horowitz  
Faculty of Dental Medicine, The Hebrew University, Israel |
14:30-16:40 SESSION MON/S-05: MODELING IN THERMAL PHYSIOLOGY (Hall B)

Chairs: D. Moran, Israel and R. Gonzalez, USA

SCENARIO REVISITED: COMPARISONS OF OPERATIONAL AND RATIONAL MODELS IN PREDICTING HUMAN RESPONSES TO THE ENVIRONMENT (Keynote)
R. R. Gonzalez
Bio-Tor, Inc., USA

"IMPUTED I_m" WITH COMPLETELY IMPERMEABLE ENCAPSULATING PROTECTIVE CLOTHING
R. F. Goldman
Comfort Technology Inc., USA

SKIN AND CORE TEMPERATURE RESPONSE TO UNIFORM, NON-UNIFORM, AND TRANSIENT THERMAL ENVIRONMENTS
C. Huizenga, H. Zhang, E. Arens, D. Wang
Center for Environmental Design Research, University of California at Berkeley, USA

METHODS AND MODELS FOR NON-INVASIVE ESTIMATION OF THERMAL PHYSIOLOGICAL STATUS: SWEAT RATE, CORE TEMPERATURE, AND METABOLIC RATE
D. S. Moran
Heller Institute of Medical Research, IDF Institute of Military Physiology, Sheba Medical Center, Israel

16:40-17:00 COFFEE BREAK (Imperial Foyer)
INDIVIDUAL CHARACTERISTICS AND MATHEMATICAL MODELING
HUMAN THERMOREGULATION
W. van Marken Lichtenbelt¹, F. E. M. Janssen², A. M. J. van Ooijen¹, A. J. H. Frijns²
¹Maastricht University, Netherlands
²University of Technology Eindhoven, Netherlands

AN INTEGRATED MODEL FOR SIMULATING INTERACTIVE THERMAL PROCESSES IN HUMAN-CLOTHING SYSTEM
Y. Li¹, F. Z. Li¹,², Y. X. Liu², Z. X. Luo²
¹Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, China
²Dalian University of Technology, China

PREDICTING RECTAL TEMPERATURE DURING HEAT STRESS AND EXERCISE USING FIELD-MEASURABLE PHYSIOLOGICAL PARAMETERS
J. W. Kaufman¹, S. A. Hastings²
¹Naval Air Systems Command, USA
²ARINC Inc, USA

AN ANALYTICAL MODEL OF A TEMPERATURE DISTRIBUTION IN THE BRAIN
A. L. Sukstanskii, D. A. Yablonskiy
Mallinckrodt Institute of Radiology, Washington University, USA

EVALUATION OF THE COLD STRAIN INDEX (CSI) FOR PERIPHERAL COLD ENVIRONMENTAL STRESS
D. Moran
Heller Institute of Medical Research, Sheba Medical Center, Israel

NONINVASIVE MEASUREMENT OF HUMAN BRAIN TEMPERATURE USING ¹H-NMR SPECTROSCOPY AT 3 T
Y. Yoshioka¹, Y. Kanbara¹, H. Oikawa², T. Inoue³, A. Ogawa³, S. Ehara³
¹High Field Magnetic Resonance Imagine Research Institute, Iwate Medical University, Japan
²Iwate Prefectural Fukuoka Hospital, Japan
³School of Medicine, Iwate Medical University, Japan
17:00-18:30 SESSION MON/O-07: CIRCADIAN AND SEASONAL RHYTHMS IN TEMPERATURE REGULATION (Hall A)

Chair: A. Arieli, Israel

ADULT AND CHILD SLEEP PATTERNS OVER THE ARCTIC WINTER TOTAL DARKNESS PERIOD
G. R. Leon, M. M. Atlis
University of Minnesota, USA

SEASONAL CHANGES OF THERMOGENESIS IN MONGOLIAN GERBILS (MERIONES UNGUICULATUS)
D. H. Wang, Z. W. Wang, Y. S. Wang
Institute of Zoology, The Chinese Academy of Sciences, China

MECHANISMS OF BODY WEIGHT REGULATION AND THERMOGENESIS IN SEASONAL ACCLIMATIZED BRANDT'S VOLES (MICROTUS BRANDTI)
X. S. Li, D. H. Wang
Institute of Zoology, The Chinese Academy of Sciences, China

CIRCADIAN BODY TEMPERATURE RHYTHM IN THE WILD BLACK-LIPPED PIKAS (OCHOTONA CURZONIAE) IN THEIR NATURAL HABITAT IN QINGHAI, CHINA
1Aichi Medical University School of Medicine, Japan
2Institute on aging and Adaptation, Shinshu University Graduate School of Medicine, Japan
3Central Institute for Experimental Animals, Japan
4High Altitude Medical Science Institution of Qinghai, China

EFFECTS OF HOME APPLICABLE PERIPHERAL THERMAL STIMULATION ON SLEEP ONSET LATENCY
R. JEM Raymann1,2, D. F. Swaab1,2, E. J. W. van Someren1,2,3
1Netherlands Institute for Brain Research, Netherlands
2Graduate School Neurosciences Amsterdam, Netherlands
3VU University Medical Center, Netherlands

DAILY RHYTHMS OF OXYGEN CONSUMPTION AND 6-SULPHATOXYMELATONIN IN THE NORWEGIAN LEMMING LEMMUS LEMMUS
A. Haim1, E. Hohtola2, S. Saarela2
1University of Haifa–Oranim, Israel
2University of Oulu, Finland
Tuesday, October 12, 2004

09:00-11:10 SESSION TUE/S-01: MOLECULAR AND CELLULAR RESPONSES TO HEAT STRESS (Hall A)

Chair: L. Sonna, USA

INTRODUCTION FOR THE SYMPOSIUM ON MOLECULAR AND CELLULAR RESPONSES TO HEAT STRESS
L. A. Sonna
U.S. Army, USA

IMMUNOLOGIC AUGMENTATION BY FEBRILE-RANGE HYPERTHERMIA: A DUAL EDGED SWORD
J. D. Hasday, I. S. Singh
The Mucosal Biology Research Center, University of Maryland School of Medicine, USA

GENES AND MOLECULES SHAPE THE HEAT ACCLIMATED PHENOTYPE: GENOPHYSIOLOGICAL LINKAGE
M. Horowitz
Faculty of Dental Medicine, The Hebrew University, Israel

PHYSIOLOGICAL THERMOTOLERANCE – THE ROLE OF HEAT SHOCK PROTEINS
P. L. Moseley
University of New Mexico, USA

IN VITRO MODELS OF THERMAL INJURY AND CYTOPROTECTION: ASSESSMENT OF THERMAL AND PHARMACOLOGIC PRECONDITIONING WITH CDNA ARRAYS
S. T. Schuschereba¹, P. D. Bowman²
¹Medical Research Detachment, U.S. Army, USA
²US Army Institute of Surgical Research, USA

HUMAN GENE EXPRESSION RESPONSES TO THERMAL STRESS AND EXERTIONAL HEAT INJURY
L. A. Sonna
US Army Research Institute of Environmental Medicine, USA

11:10-11:35 COFFEE BREAK (Imperial Foyer)
PHYSIOLOGICAL MECHANISMS OF MENOPAUSAL HOT FLASHES
R. R. Freedman
School of Medicine, Wayne State University, USA

GSH CONTENT, INDUCTION OF APOPTOSIS, IBAT HYPERPLASIA AND MASS REGRESSION IN THE RATS EXPOSED TO DIFFERENT AMBIENT TEMPERATURE
B. Buzadzic¹, A. Korac², V. Petrovic¹, B. Korac¹
¹Institute for Biological Research, Serbia and Montenegro
²Institute of Zoology, Faculty of Biology, University of Belgrade, Serbia and Montenegro

COMPARISON OF THERMOREGULATORY RESPONSES TO EXERCISE IN DRY HEAT AMONG PRE-PUBERTAL BOYS, YOUNG ADULTS, AND OLDER MALES
O. Inbar¹, N. Morris², Y. Epstein³, G. Gass²
¹Zinman College, Wingate Institute, Israel
²Griffith University, Australia
³Heller Institute of Medical Research, Sheba Medical Center, Israel
⁴Sackler School of Medicine, Tel Aviv University, Israel

NUCLEAR STAT3 EXPRESSION IS REDUCED IN PREGNANT RATS AT NEAR TERM
E. Harré, A. Mouihate, S. Ellis, Q. J. Pittman
Neuroscience Research Group, Health Sciences Center, Canada
NON-INVASIVE THIGH MUSCLE TEMPERATURE MEASUREMENT USING ZERO-HEAT-FLOW METHOD
D. Brajkovic, M. B. Ducharme
Human Protection and Performance Group, Defence Research and Development, Canada

ON TRAINING BACTERIA OR CONVERTING THEM INTO NANO-MACHINES TO ACHIEVE TEMPERATURE REGULATION
A. Tillu, E. Irani, S. B. Khadkikar, A. Kesarkar
Pune University, India

BODY TEMPERATURE MEASUREMENTS IN THE CLINIC: EVALUATION OF PRACTICE IN A NORWEGIAN HOSPITAL
M. Sandsund, I. H. Geving, R. E. Reinertsen, P. Aadahl
1SINTEF Unimed, Norway
2St. Olavs Hospital, Norway

SAFE COOLING LIMITS DURING HYPERTHERMIA TREATMENT AND INDICES OF CORE TEMPERATURE
M. B. Ducharme, C. Proulx, G. P. Kenny
1Human Protection and Performance Group, Defence Research and Development, Canada
2Faculty of Health Sciences, University of Ottawa, Canada

EFFECTS OF CO₂ BATH IMMERSION (100 ppm) ON THERMOREGULATORY RESPONSES IN HUMANS
1Aichi Medical University School of Medicine, Japan
2Kao Corporation, Tokyo Laboratories, Japan

VALIDATION OF A NEW TELEMETRIC CORE TEMPERATURE MONITOR
J. M. McKenzie, D. S. Osgood
Mini Mitter Co., Inc., USA
13:05-14:30 SESSION POSL-02: GUIDED POSTER SESSION AND LUNCH

Chairs: Z. Arad, Israel and M. Dascomb, UK

1. CARRY-OVER EFFECT OF SUMMER THERMAL STRESS ON CHARACTERISTICS OF THE PREOVULATORY FOLLICLE OF LACTATING COWS
   Z. Roth, A. Bor, R. Braw-Tal, D. Wolfenson
   1Faculty of Agricultural, Food and Environmental Quality Sciences, The Hebrew University of Jerusalem, Israel
   2Agricultural Research Organization, Institute of Animal Science, Israel

2. INDIVIDUAL TYPOLOGICAL PROFILES FOR HUMAN HEART RATE UNDER LOCAL COLD AND HYPOXIC EXPOSURES
   L. Maximov, N. N. Maximova
   International Scientific Center “Arktika” FEB RAS, Russia

3. BLOOD CHEMISTRY AND IMMUNE CELL CHANGES DURING ONE-WEEK OF INTENSIVE FIREFIGHTING TRAINING
   D. L. Smith, K. Dyer, S. J. Petruzzello
   1Skidmore College, USA
   2Carle Medical Center, USA
   3University of Illinois, USA

4. EXPERIMENTAL STUDY ON DYNAMIC CHANGE IN SWEATING AND EVAPORATION THROUGH CLOTHING DURING HOT EXPOSURE
   N. Kakituba
   Ashikaga Institute of Technology, Japan

5. THE ROLE OF WARD TEMPERATURE IN THE MANAGEMENT OF SCHIZOPHRENIA INPATIENTS
   R. Shiloh, A. Weizman, R. Isseroff, H. Hermesh, H. Munitz
   Geha Mental Health Center, Israel

6. EFFECTS OF HYPERBARIC OXYGENATION ON RAT HEATSTROKE
   K. C. Niu, S. M. Tsai, Y. W. Chen, M. T. Lin
   Chi-Mei Foundation Medical Center, Taiwan

7. GENOMIC APPROACH TO EVALUATE DIFFERENCES DUE TO HEAT ACCLIMATION IN BRAIN, HEART AND SKELETAL MUSCLE
   E. Kodesh, H. Schwimmer, L. Ali-Berchoyer, M. Horowitz
   Division of Physiology, The Hebrew University of Jerusalem, Israel

8. THE CHANGE IN PERIPHERAL SWEATING MECHANISMS OF THE TROPICAL MALAYSIAN WHO STAYS IN JAPAN
   J. B. Lee, J. S. Bae, T. Matsumoto, H. M. Yang, Y. K. Min
   1College of Medicine, Soonchunhyang University, Korea
   2Aichi Medical University, Japan

9. CHANGES IN VASCULAR COMPLIANCE IN HUMANS ACCLIMATED TO HEAT GIVEN DAILY AT A FIXED TIME
   M. Maruyama, T. Harai, M. Hashimoto, M. Koga, O. Shido
   1School of Medicine, Shimane University, Japan
   2School of Nursing, Shimane University, Japan
10. EFFECT OF ALTERNATIVELY REPEATED EXPOSURE TO COLD AND WARM ENVIRONMENTS ON MANUAL AND MENTAL PERFORMANCE
S. I. Sawada¹, S. Araki¹, K. Yokoyama², H. Sato³
¹National Institute of Industrial Health, Japan
²School of Medicine, Mie University, Japan
³Graduate School of Medicine, University of Tokyo, Japan

11. MUS MUSCULUS - A NEW MODEL FOR STUDYING THE DYNAMICS OF HEAT ACCLIMATION AND CROSS-TOLERANCE BETWEEN HEAT ACCLIMATION AND OXYGEN DEPRIVATION
Z. Bromberg, M. Horowitz
Faculty of Medicine, The Hebrew University of Jerusalem, Israel

12. THE ROLE OF SOLAR AND UV RADIATION IN ENVIRONMENTAL STRESS ASSESSMENT
D. S. Moran¹, K. B. Pandolf², A. Vitalis³, Y. Heled¹, R. Parker⁴, R. R. Gonzalez²
¹Heller Institute of Medical Research, Sheba Medical Center, Israel
²U.S Army Research Institute of Environmental Medicine, USA
³Massey University, New Zealand
⁴Center for Human Factors and Ergonomics, Forest Research Institute, New Zealand

13. EVALUATION OF THE ENVIRONMENTAL STRESS INDEX (ESI) FOR THE SOUTHERN HEMISPHERE
D. S. Moran¹, K. B. Pandolf², A. Vitalis³, Y. Heled¹, R. Parker⁴, R. R. Gonzalez²
¹Heller Institute of Medical Research, Sheba Medical Center, Israel
²U.S Army Research Institute of Environmental Medicine, USA
³Massey University, New Zealand
⁴Center for Human Factors and Ergonomics, Forest Research Institute, New Zealand

14. THERMOREGULATORY EFFECTS OF A SURGICAL DRAPE IMPERVIOUS TO MOISTURE
R. Lenhardt, P. E. Maglinger, D. I. Sessler
Outcomes Research™ Institute, University of Louisville, USA

15. PHYSIOLOGICAL RESPONSES OF BOS TAURUS AND BOS INDICUS CATTLE TO PROLONGED HEAT AND HUMIDITY
D. Beatty¹, A. Barnes¹, E. Taylor¹, D. Pethick¹, R. Taplin¹, M. McCarthy³, S. K. Maloney⁴
¹Division of Veterinary and Biomedical Sciences, Murdoch University, Australia
²Division of Science and Engineering, Murdoch University, Australia
³Professional Agricultural Services, Australia
⁴School of Biomedical and Chemical Sciences, University of WA, Australia

16. HEAT ACCLIMATION INDUCES PROTECTION AGAINST CNS OXYGEN TOXICITY IN THE RAT: HSP72 MAY BE INVOLVED
Y. Arieli¹, M. Eynan¹, H. Gancz², R. Arieli¹, Y. Kashi²
¹Israel Naval Medical Institute, IDF Medical Corps, Israel
²The Faculty of Food Engineering and Biotechnology, The Technion, Israel

17. OXYGEN CONSUMPTION PREDICTION USING A NOVEL ACTIGRAPHY METHOD
D. S. Moran¹, Y. Heled¹, A. Laor¹, R. R. Gonzalez²
¹Heller Institute of Medical Research, Sheba Medical Center, Israel
²Bio-Tor, Inc., USA

18. HUMAN PHYSIOLOGICAL AND PSYCHOLOGICAL RESPONSES WHEN WEARING TWO DIFFERENT KINDS OF PROTECTIVE FACEMASKS
Y. P. Guo, Y. Li, H. Tokura, A. S. W. Wong
Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, China
19. INDIVIDUAL VARIATION IN COLD INDUCED THERMOGENESIS
A. M. J. van Ooijen¹, W. D. van Marken Lichtenbelt¹, A. A. van Steenhoven²,
K. R. Westerterp¹
¹Maastricht University, Netherlands
²University of Technology, Netherlands

20. INHIBITION OF NEURONS IN ROSTRAL MEDULLARY RAPHE WITH MUSICMOL AND 5-HT1A AGONIST INHIBITS COLD-INDUCED CUTANEOUS BLOOD FLOW CHANGES IN CONSCIOUS AND ANESTHETIZED RABBITS
Y. Ootsuka, W. W. Blessing
Center for Neuroscience, Flinders University, Australia

T. V. Kozyreva, L. S. Eliseeva, E. V. Gonsales
Institute of Physiology, Academy of Medical Sciences, Russia

22. IS NITRIC OXIDE INVOLVED IN THE BEHAVIORAL THERMOREGULATION OF AMPHIBIANS
K. C. Bicego¹, A. S. Abe¹, L. G. S. Branco²
¹Instituto de Biociencias, Universidade Estadual Paulista, Brazil
²Facultade de Odontologia de Ribeirao Preto, Universidade de Sao Paolo, Brazil

23. EFFECT OF THE SUBSTANCE P IONTOPHORESIS TO SKIN ON THE THERMOREGULATORY PARAMETERS AT COOLING
E. Ya. Tkachenko, V. P. Kozaruk, T. V. Kozyreva
Institute of Physiology, Academy of Medical Sciences, Russia
14:30-16:00 SESSION TUE/O-04: NON-SHIVERING THERMOGENESIS (Hall A)

Chair: B. Cannon, Sweden

CORRELATION OF TORPOR FREQUENCY AND NORADRENALINE-INDUCED THERMOGENESIS IN THE SIBERIAN HAMSTERS
M. Jefimow¹, M. Wojciechowski¹, A. Masuda², T. Oishi²
¹Institute of General and Molecular Biology, Copernicus University, Poland
²Faculty of Science, Nara Women’s University, Japan

HYPERINDUCED THERMOGENESIS IN ELOVL3-ABLATED MICE (ROLE FOR ELOVL3 IN NON-SHIVERING THERMOGENESIS)
R. Westerberg¹, V. Golozoubova¹, P. Tvrdfik¹, K. Retterstøl², A. Jacobsson¹
¹The Wenner-Gren Institute, The Arrhenius Lab. F3, Stockholm University, Sweden
²Institute of Clinical Biochemistry, University of Oslo, Norway

ACUTE EFFECT OF COLD ON THE ANTIOXIDANT ENZYMES ACTIVITIES AND UNCOUPLING PROTEIN-1 CONTENT IN THE BROWN FAT OF 6-HYDROXYDOPAMINE-TREATED RATS
V. Davidovic, N. Petrovic, J. Djordjevic, S. Durasevic, G. Cvijic
Faculty of Biology, University of Belgrade, Serbia and Montenegro

THE β3-ADRENERGIC RECEPTOR IN THERMOGENESIS CONTROL
B. Cannon, J. Nedergaard, T. Bengtsson
The Wenner-Gren Institute, The Arhenius Lab. F3, Stockholm University, Sweden

THE ARCHETYPAL UNCOUPLING PROTEIN, UCP1, AND THERMOGENESIS CONTROL
J. Nedergaard, I. G. Shabalina, N. Petrovic, B. Cannon
The Wenner-Gren Institute, The Arhenius Labs. F3, Stockholm University, Sweden

COMPARATIVE THERMOREGULATORY DAILY RHYTHMS ON THE POPULATION LEVEL AND THEIR RESPONSE TO PHOTOPERIOD MANIPULATIONS
M. Spiegel¹, A. Haim²
¹Lifshiz College, Israel
²University of Haifa - Oranim, Israel
CHANGES IN MAXIMAL CARDIORESPIRATORY CAPACITY AND SUBMAXIMAL STRAIN WHILE EXERCISING IN COLD
J. Oksa\textsuperscript{1}, H. Kaikkonen\textsuperscript{2}, P. Sorvisto\textsuperscript{1}, M. Vaappo\textsuperscript{1}, S. Rissanen\textsuperscript{1}, V. Martikkala\textsuperscript{3}, H. Rintamäki\textsuperscript{1}
\textsuperscript{1}Oulu Regional Institute of Occupational Health, Finland
\textsuperscript{2}Oulu Deaconess Institute, Finland
\textsuperscript{3}Eastern Finland Sports Institute, Finland

ROWING IN THE HEAT, WHAT ARE THE LIMITATIONS FOR THE PERFORMANCE OF AN ELITE OLYMPIC ROWER
J. W. M. Willems\textsuperscript{1}, R. Heus\textsuperscript{1}, E. A. den Hartog\textsuperscript{2}
\textsuperscript{1}TNO Industrial Technology, Netherlands
\textsuperscript{2}TNO Human Factors, Netherlands

THE EFFECT OF HYPERTHERMIA ON REPEATED SPRINT PERFORMANCE
B. Drust\textsuperscript{1}, P. Rasmussen\textsuperscript{2}, M. Mohr\textsuperscript{3}, L. Nybo\textsuperscript{3}, B. Nielsen\textsuperscript{3}
\textsuperscript{1}School for Sport and Exercise Sciences Liverpool, John Moores University, UK
\textsuperscript{2}August Krogh Institute, University of Copenhagen, Denmark

LOCALLY APPLIED WARM WATER AND PULSATING NEGATIVE PRESSURE PREVENTS HYPOTHERMIA DURING LAPAROTOMIA
E. B. Rein\textsuperscript{1}, M. Filtvedt\textsuperscript{2}, L. Walløe\textsuperscript{1}, J. Ræder\textsuperscript{2}
\textsuperscript{1}Institute of Basic Medical Sciences, University of Oslo, Norway
\textsuperscript{2}Ullevål University Hospital, Norway

Peripheral Skin Temperature Effects on Muscle Oxygen Levels
R. Pozos, C. Hom, P. Vasquez
San Diego State University, USA

Effect of Exercise Duration, Intensity and Environment on Rate of Rise of Core Temperature During Repeated Work Cycles
E. Song, T. Yue-Nie
DMERI@DSO, Military Physiology Program, Singapore

16:00-16:30 COFFEE BREAK (Imperial Foyer)
INHIBITORY EFFECTS OF HALOTHANE ON THE THERMOGENIC PATHWAY IN BROWN ADIPOCYTES: LOCALISATION TO ADENYLYL CYCLASE AND MITOCHONDRIAL FATTY ACID OXIDATION
K. B. E. Ohlson$^{1,2}$, N. Mohell$^1$, G. Bronnikov$^1$, I. Shabalina$^1$, K. Lennström$^1$, S. G. E. Lindahl$^{1,3}$, B. Cannon$^1$, J. Nedergaard$^1$
$^1$The Wenner-Gren Institute, The Arrhenius Labs. F3., Stockholm University, Sweden
$^2$Lund University Hospital, Sweden
$^3$Karolinska Hospital, Sweden

CENTRAL INHIBITION OF NITRIC OXIDE INDUCES A DOSE-DEPENDENT HYPERTHERMIA IN CONSCIOUS RATS THAT IS PREVENTED BY INDOMETHACIN
M. L. Mathai$^1$, I. Arnold$^1$, M. A. Febbraio$^2$, M. J. McKinley$^1$
$^1$Howard Florey Institute of Experimental Physiology and Medicine, University of Melbourne, Australia
$^2$School of Medical Sciences, RMIT University, Australia

POLYINOSINIC: POLYCYTIDYLIC ACID INDUCED FEVER IN RATS IS CYTOKINE MEDIATED
S. Kent$^{1,2}$, M. E. Fortier$^1$, S. Poole$^3$, P. Boksa$^1$, G. N. Luhtes$^1$
$^1$Douglas Hospital Research Center, McGill University, Canada
$^2$School of Psychological Science, La Trobe University, Australia
$^3$National Institute for Biological Standards and Control, UK

A NEW FUNCTION OF THE LEPTIN RECEPTOR: MEDIATION OF THE RECOVERY FROM LIPOPOLYSACCHARIDE HYPOTHERMA
A. A. Steiner$^1$, M. D. Dogan$^1$, A. I. Ivanov$^2$, S. Patel$^1$, A. Y. Rudaya$^1$, D. H. Jennings$^3$, M. Orchinik$^2$, T. W. Pace$^4$, K. A. O’Connor$^4$, L. R. Watkins$^4$, A. A. Romanovsky$^1$
$^1$St. Joseph's Hospital, USA
$^2$Emory University, USA
$^3$Arizona State University, USA
$^4$University of Colorado, USA

THE EFFECTS OF MELANOCORTIN AGONISTS AND ANTAGONISTS ON LEPTIN-INDUCED FEVER IN RATS
$^1$Oregon Health Sciences University, USA
$^2$Office of Behavioral and Social Sciences Research, National Institute of Health, USA
$^3$University of California, USA

BRAIN LEPTIN TARGET CELLS IDENTIFIED WITH STAT3 IMMUNOHISTOCHEMISTRY: EVIDENCE OF FUNCTIONAL LEPTIN RECEPTOR EXPRESSION IN BRAIN ENDOTHELIUM
J. Mütze, J. Roth, R. Gerstberger, T. Hübschle
The Veterinary-Physiology, Justus-Liebig-University, Germany
16:30-18:00 SESSION TUE/O-07: ADVERSE CONDITIONS AND INDUCIBLE RESPONSES (Hall B)

Chair: M. Sawka, USA

HUMAN BODY TEMPERATURE REGULATION IN EXTREMELY STRESSFUL ENVIRONMENTS
M. Kosaka¹, M. Yamane¹, R. Ogai¹, T. Kato¹, N. Ohnishi¹, E. Simon²
¹Graduate School of Health and Sport Sciences, Chukyo University, Japan
²W.G.Kerckhoff-Institute, Max-Planck Institute, Germany

HEAT SHOCK PRETREATMENT PROTECTS AGAINST CEREBRAL FREE RADICAL FORMATION AND ENERGY DEPLETION IN RAT HEATSTROKE
J. L. Wang¹, M. T. Lin²
¹National Yang-Ming University, Taiwan
²Chi-Mei Medical Center, Taiwan

PROTECTIVE EFFECTS OF PURIFIED HUMAN UMBILICAL CORD BLOOD ON CIRCULATORY SHOCK AND CEREBRAL ISCHEMIA IN EXPERIMENTAL HEATSTROKE
S. H. Chen¹, M. T. Lin², Y. C. Tsai¹, K. F. Huang¹, C. L. Lin¹, M. T. Lin¹
¹Chi-Mei Medical Center, Taiwan
²National Cheng Kung University Hospital, Taiwan
³College of Medicine, National Cheng Kung University, Taiwan

THE THERMAL PREFERENCE IN HUMANS DURING MODERATE HYPOXIA
P. Golja², A. Kacin³, M. J. Tipton², I. B. Mekjavic¹
¹Jozef Stefan Institute, Slovenia
²Inst of Biomedical and Biomolecular Sciences, University of Portsmouth, UK
³Polytechnic Nova Gorica, Slovenia

THE INFLUENCE OF INTERMITTENT ALTITUDE ACCLIMATIZATION ON EXERCISE TEMPERATURE REGULATION
A. Kacin³, P. Golja², M. J. Tipton², O. Eiken⁴, I. B. Mekjavic¹
¹Institute Jozef Stefan, Slovenia
²Inst of Biomedical and Biomolecular Sciences, University of Portsmouth, UK
³College of Health Studies, University of Ljubljana, Slovenia
⁴Swedish Defence Research Agency, Karolinska Institute, Sweden
⁵Nova Gorica Polytechnic, Slovenia
Wednesday, October 13, 2004

08:45-10:55 SESSION WED/S-01: HEAT-RELATED ILLNESSES (Hall A)
Chair: N. Taylor, Australia

EXTREMES OF HUMAN HEAT TOLERANCE: LIFE AT THE PRECIPICE OF THERMOREGULATORY FAILURE (Keynote)
W. L. Kenney, D. DeGroot, L. Holowatz
Noll Phsiological Research Center, Penn State University, USA

HOST FACTORS AFFECTING THE INDIVIDUAL'S SUSCEPTABILITY TO HEAT
Y. Epstein1,2, E. Hadad1,2, Y. Shapiro3
1Heller Institute of Medical Research, Sheba Medical Center, Israel
2The Sackler Faculty of Medicine, Tel Aviv University, Israel
3School of Health Sciences, Judea and Samaria College - Ariel, and Assuta Medical Centers, Israel

THE NEUROPHARMACOLOGICAL BASIS OF HEAT INTOLERANCE AND ITS TREATMENT
M. T. Lin, C. P. Chang
Chi-Mei Medical Center, Taiwan

HYDRATION EFFECTS ON THERMOREGULATION AND EXERCISE-HEAT TOLERANCE
M. N. Sawka, S. N. Cheuvront, R. Carter III, S. J. Montain
US Army Research Institute of Environmental Medicine, USA

08:45-10:55 SESSION WED/S-02: SLEEP, CIRCADIAN RHYTHMS AND THERMOREGULATION (Hall B)
Chair: E. van Someren, Netherlands

SLEEP, CIRCADIAN RHYTHMS AND THERMOREGULATION (Keynote)
E. J. W. Van Someren1,2, R. JEM Raymann1, D. F. Swaab1
1Netherlands Institute for Brain Research, Netherlands
2VU University Medical Center, Netherlands

TEMPERATURE EFFECTS ON CIRCADIAN CLOCKS
P. Ruoff1, L. Rensing2
1School of Science and Technology, Stavanger University College, Norway
2University of Bremen, Germany

SLEEP INERTIA AND THE CIRCADIAN MODULATION OF SLEEPINESS, BUT NOT SLEEP HOMEOSTASIS, IS ASSOCIATED WITH DISTAL VASODILATATION
K. Kräuchi
Center for Chronobiology, Psychiatric University Clinic Bazel, Switzerland

CIRCADIAN CLOCK AS A THERMOREGULATORY MECHANISM
K. Nagashima
School of Human Sciences, Waseda University, Japan

PERIPHERAL THERMAL CHALLENGE: A TEST OF HEAT LOSS CAPACITY IN SLEEP ONSET INSOMNIACS
C. J. van den Heuvel, S. A. Ferguson, D. Dawson
Center for Sleep Research, University of South Australia, Australia
The Queen Elizabeth Hospital, Australia

10:55-11:20 COFFEE BREAK (Imperial Foyer)
11:20-12:50 SESSION WED/C-03: STUDENT COMPETITION 1 (Hall A)

Chairs: D. Mitchel, South Africa and B. Wollweber, Germany

ALCOHOL EFFECTS ON TEMPERATURE-SENSITIVE HYPOTHALMIC NEURONS IN RAT BRAIN SLICES
B. T. Wollweber, H. Schneider, K. Voigt, H. A. Braun
Institute fur Normale and Pathologische Physiologie, Philipps-University, Germany

HEAT SHOCK PROTEIN 70 GENE OVEREXPRESSING PROTECTS AGAINST HEATSTROKE INDUCED ARTERIAL HYPOTENSION AND CEREBRAL ISCHEMIA
C. P. Chang, M. T. Lin
Chi-Mei Medical Center, Taiwan

EFFECT OF HYPERVOLEMIC HEMODILUTION ON CEREBRAL GLUTAMATE, GLYCEROL, LACTATE AND FREE RADICALS IN HEATSTROKE RATS
C. K. Chang¹, C. P. Chang², M. T. Lin²
¹Division of Neurosurgery, Mackay Memorial Hospital, Taiwan
²Chi-Mei Medical Center, Taiwan

TORPOR - LIKE AND LEPTIN RESPONSES AS ADAPTATIONS OF THE GOLDEN SPINY MOUSE (ACOMYS RUSSATUS) TO VARIATIONS IN FOOD AVAILABILITY
R. Gutman, I. Choshniak, N. Kronfeld-Schor
Tel Aviv University, Israel

POSTURAL SWAY DURING REPEATED COLD EXPOSURES
T. M. Mäkinen¹, T. Pääkkönen², H. Rintamäki³, J. T. Korpelainen², V. Kampman³,
L. A. Palinkas⁴, J. Leppäläuto⁵, J. Hassi¹
¹Center for Arctic Medicine, University of Oulu, Finland
²University of Oulu, Finland
³Oulu Regional Institute of Occupational Health, Finland
⁴University of California, USA

THE ROLE OF HEAT SHOCK PROTEIN 90 IN CELL RESPONSE TO HYPERTHERMIA
V. Yavelsky, O. Vais, B. Piura, M. Wolfson, A. Rabinovich, V. Fraifeld
Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel
Soroka Medical Center, Israel
11:20-12:50 SESSION WED/C-04:  STUDENT COMPETITION 2 
(Hall B)

Chairs: L. Kenney, USA and C. Haley, Australia

EFFECT OF CALCIUM ON THE COLD DEFENSE RESPONSE IN HYPERTENSIVE AND NORMOTENSIVE RATS
S. V. Lomakina, E. Ya. Tkachenko, T. V. Kozyreva
Institute of Physiology, Academy of Medical Science, Russia

AN OPEN-LOOP MODEL FOR INVESTIGATING MAMMALIAN THERMOSENSITIVITY
C. J. Gordon¹, C. D. Haley¹, P. L. McLennan¹, M. J. Tipton², I. B. Mekjavic³, N. A. S. Taylor¹
¹University of Wollongong, Australia
²University of Portsmouth, UK
³Institute Jozef Stefan, Slovenia

NOVEL, HIGH-AMPLITUDE BLOOD-FLOW OSCILLATIONS IN VASODILATING HUMAN SKIN
C. D. Haley, A. Zeyl, N. A. S. Taylor, A. B. Jenkins
University of Wollongong, Australia

HEAT INDUCED SLOWING OF EEG ACTIVITY IS NOT RELATED TO REDUCED CEREBRAL PERFUSION DURING PROLONGED EXERCISE
P. Rasmussen, H. Stie, L. Nybo, B. Nielsen
Institute of Exercise and Sports Sciences, University of Copenhagen, Denmark

INVESTIGATING HIGH-AMPLITUDE OSCILLATIONS IN RAT TAIL SKIN BLOOD FLOW DURING CORE HEATING AND COOLING
University of Wollongong, Australia

ALPHA-1-ADRENERGIC INDUCED CONTRACTION OF HEAT ACCLIMATED RAT AORTAE IS ENHANCED VIA MULTIPLE PATHWAYS
E. A. Nir¹, M. Horowitz²
¹The Hebrew University of Jerusalem, Israel
²Hadassah Schools of Medicine and Dental Medicine, Israel
Thursday, October 14, 2004

09:00–11:10  SESSION THU/S-01: FEVER - PART 1       (Hall A)
Chair: C. Blatteis, USA

ELEVATED LEVELS OF CIRCULATING CYTOKINES AND ENDOTOXIN
ARE NOT NECESSARY FOR THE ACTIVATION OF THE SICKNESS OR
CORTICOSTERONE RESPONSES PRODUCED BY PERIPHERAL E.COLI
CHALLENGE
M. Fleshner, M. K. Hansen, K. A. O'Connor, J. C. Biedenkapp, L. R. Watkins, S. F. Maier,
J. Campisi
University of Colorado, USA

FEBRIGENIC ROLE OF MEDIATORS CARRIED IN THE BLOOD BY THEIR
TRANSPORTERS: OF THE HORSEMAN AND THEIR HORSES
A. A. Romanovsky
St. Joseph's Hospital, USA

COMPLEMENT IS REQUIRED FOR THE INDUCTION OF ENDOTOXIC
FEVER IN GUINEA PIGS AND MICE
C. M. Blatteis, S. Li, Z. Li, V. Perlik, C. Feleder
College of Medicine, University of Tennessee Health Science Center, USA

A ROLE FOR A CYCLOPENTANE PROSTAGLANDIN AS A NOVEL
ANTIPYRETIC IN RAT BRAIN
Q. J. Pittman, L. Boissé, A. Mouihate
Neuroscience Research Group, Faculty of Medicine, University of Calgary, Canada

EPOXYEICOSATRIENOIC ACIDS AS MEDIATORS OF ANTIPYRESIS:
HOW DO THEY FIT?
W. Kozak¹, V. Fraifeld², A. Kozak³
¹Institute of General and Molecular Biology, University Nicolaus Copernicus, Poland
²Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel
³University of Georgia, USA

11:10–11:35  COFFEE BREAK                 (Imperial Foyer)
11:35-13:05 SESSION THU/O-02: BRAIN COOLING; VASCULAR RESPONSES TO HEAT EXPOSURE (Hall A)

Chair: M. Cabanac, Canada

THE HOT AND HARD WORKING BRAIN
L. Nybo, B. Nielsen
August Krogh Institute, University of Copenhagen, Denmark

ABSENCE OF SELECTIVE BRAIN COOLING IN FREE-LIVING HORSES
N. Rump¹, D. Mitchell¹, S. K. Maloney¹,², G. Mitchell¹, A. Fuller¹
¹School of Physiology, University of Witwatersrand, Australia
²SA and School of Biomedical and Chemical Sciences, University of Western Australia, Australia

IN-VITRO HEAT EXCHANGE BEHAVIOUR OF THE RETE OF THE BOER GOAT UNDER SPECIFIED LABORATORY CONDITIONS
J. M. Kamau, S. J. Nsoso
Botswana College of Agriculture, Botswana

SELECTIVE BRAIN COOLING: A MULTIPLE REGULATORY MECHANISM
M. Caputa
Institute of General and Molecular Biology, Nicolaus Copernicus University, Poland

BRAIN TEMPERATURE REGULATION IN ANESTHETIZED RATS
M. Zhu, D. Nehra, J. J. H. Ackerman, D. A. Yablonskiy
Washington University, USA

HISTAMINE RECEPTORS IN THE DIGITAL ARTERY OF THE WARM ACCLIMATIZED FALLOW DEER (DAMA DAMA)
A. Milton, W. Kallagher, H. Warrington, B. Callingham
University of Cambridge, UK
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<th>Time</th>
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<td>11:35-13:05</td>
<td>SESSION THU/O-03: ENVIRONMENTAL STRESS AND BODY</td>
<td>Hall B</td>
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<td>TEMPERATURE RESPONSE</td>
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**Chair:** M. Ducharme, Canada

**Physiologically-Based Approaches to Enhance Finger Comfort in Open Space and Other Extreme Cold Conditions**

V. S. Koscheev, G. R. Leon, A. Coca

*University of Minnesota, USA*

**Effect of Bilateral Carotid Cooling on Thermal Responses During Cycling and Arm Cranking Works Due to Identical Oxygen Consumption**

M. Torii¹, Z. Szygara², M. Iwashita¹

¹Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Japan
²Institute of Human Physiology, University School of Physical Education, Poland

**Relationships Between Thermophysiological Responses and Psychological Thermal Perception During Exercise Wearing Aerobic Wear**

A. S. W. Wong, Y. Li

*Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, China*

**Heat Strain and Gross Efficiency After Pre-Cooling in the Heat**

H. A. M. Daanen¹,², E. van Es², J. de Graaf²

¹TNO Human Factors, Netherlands
²Faculty of Human Movement Sciences, Vrije Universiteit, Netherlands

**Finger Temperatures During Military Field Training at 0°C to −29°C**

H. Rintamäki¹, S. Rissanen¹, T. Mäkinen¹, A. Peitso²

¹Oulu Regional Institute of Occupational Health, Finland
²Northern Command Headquarters Oulu, Finland
1. HYPOHYDRATION MEASUREMENTS BY RADIO FREQUENCY ABSORPTIOMETRY
R. Yanovitch¹, D. S. Moran¹, Y. Heled¹, E. Hadad¹, A. Laor¹, M. Margaliot², Y. Shapiro¹
¹Heller Institute of Medical Research, IDF Institute of Military Physiology, Sheba Medical Center, Israel
²MBD Ltd, Israel

2. CORE TEMPERATURE MEASUREMENT BY MICROWAVE RADIOMETRY
U. Eliyahu¹, D. S. Moran¹, Y. Heled¹, E. Hadad¹, M. Margaliot²
¹Heller Institute of Medical Research, IDF Institute of Military Physiology, Sheba Medical Center, Israel
²Soreq Nuclear Research Center, Israel

3. CHANGING THE PARADIGM IN THE THERMOREGULATION THEORY
K. P. Ivanov
I.P Pavlov Institute of Physiology, Russian Academy of Sciences, Russia

4. MATHEMATICAL MODELING OF THERMAL PHYSIOLOGICAL RESPONSES OF CLOTHED INFANTS
B. A. Ying¹, Y. L. Kwok¹, Y. Li¹, C. Y. Yeung², F. Z. Li³
¹Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, China
²The University of Hong Kong, China
³Aichi Mizuho College, Japan

5. THE PATHOPHYSIOLOGY OF HEAT STROKE – AN INTEGRATIVE VIEW
Y. Epstein
Heller Institute of Medical Research, Sheba Medical Center and the Sackler Faculty of Medicine, Tel Aviv University, Israel

6. INTRAMUSCULAR TEMPERATURES DURING EXERCISE IN THE HEAT FOLLOWING PRE-COOLING AND PRE-HEATING
University of Wollongong, Australia

7. PERIPHERAL FINGER TEMPERATURE ASSOCIATED WITH SEQUENTIAL FINGER EXERCISE
M. Camarena, P. Osborne, A. Rochet-Canabal, R. S. Pozos
San Diego State University, USA

8. ADAPTIVE CHANGE IN MUSCULAR PERFORMANCE AND CIRCULATION BY STRENGTH TRAINING WITH REGULAR POST-EXERCISE COLD APPLICATION
N. Ohnishi¹, M. Yamane³, N. Ushiyama¹, S. Shirasawa¹, M. Kosaka², A. Shiono³, T. Okada²
¹Aichi Mizuho College, Japan
²School of Health and Sport Sciences, Chukyo University, Japan
³Aichi Medical University, Japan

9. HUMAN ACE I/D POLYMORPHISM IS ASSOCIATED WITH INDIVIDUAL DIFFERENCES IN EXERCISE HEAT TOLERANCE
Y. Heled¹, D. S. Moran¹, L. Mendel¹, A. Laor¹, E. Pras², Y. Shapiro¹
¹The Military Physiology Unit, IDF, Heller Institute of Medical Research., Israel
²The Danek Gartner Institute of Human Genetics, Tel Aviv University, Sheba Medical Center, Israel
10. EXPRESSION OF EXERCISE-INDUCED HSP70 IN LONG-DISTANCE
RUNNER'S LEUKOCYTES
Y. O. Shin, J. K. Oh, H. S. Sohn, J. B. Lee, J. S. Bae, H. M. Yang, Y. K. Min, T. Matsumoto
1Korea National Sport University, Korea
2College of Medicine, Soonchunhyang University, Korea
3Aichi Medical University, Japan

11. PROGRESSIVE STRENOUS EXERCISE INDUCE THE EXPRESSION
OF HSP70 IN RAT SKELETAL MUSCLE AND MYOCARDIUM
Y. O. Shin, J. K. Oh, J. B. Lee, J. S. Bae, H. M. Yang, Y. K. Min, T. Matsumoto
1Korea National Sport University, Korea
2College of Medicine, Soonchunhyang University, Korea
3Aichi Medical University, Japan

12. EFFECT OF BLOOD VOLUME ON PLASMA VOLUME SHIFT DURING
EXERCISE
T. Kawabata, T. Suzuki, T. Miyagawa
School of Medicine, Osaka City University, Japan

13. GLUCOSE-6-PHOSPHATASE ACTIVITY, GLUCOSE-6-PHOSPHATE
AND GLYCOGEN CONTENT IN LIVER OF RATS DURING ACUTE AND
CHRONIC EXPOSURE TO HIGH ENVIRONMENTAL TEMPERATURE
B. Miova, S. Dinevska-Kovkarovska, S. Mitev
Faculty of Natural Sciences and Mathematics, Gazi baba, Macedonia

14. THE EFFECT OF FASTING ON GLYCOGEN PHOSPHORYLASE ACTIVITY,
GLUCOSE-1-PHOSPHATE AND GLYCOGEN CONTENT IN THE LIVER OF
HEAT-ACCLIMATED RATS
S. Dinevska-Kovkarovska, S. Mitev, B. Miova
Faculty of Natural Sciences and Mathematics, Gazi baba, Macedonia

15. INFUSION OF TTX INTO THE PO/AH MODIFIES INCREASE IN CORE
TEMPERATURE OF EXERCISING RATS
H. Hasegawa, T. Ishiwata, T. Saito, T. Yazawa, Y. Aihara, R. Meeusen
1Faculty of Intergrated Arts and Science, Hiroshima University, Japan
2Graduate School of Science, Tokyo Metropolitan University, Japan
3Vrije Universiteit, Belgium

16. EFFECTS OF PHOTOPERIOD AND TEMPERATURE ON BODY
WEIGHTS, SERUM LEPTIN LEVELS AND UNCOUPLING PROTEIN 1
CONTENTS IN BRANDT'S VOLES (MICROTUS BRANDTI) AND MONGOLIAN
GERBILS (MERIONES UNGUICULATUS)
X. S. Li, D. H. Wang
Institute of Zoology, The Chinese Academy of Sciences, China

17. CHRONIC COLD ACCLIMATION IN NAKED MOLE-RATS: EFFECTS
ON THE THERMOREGULATION AND ENERGY BALANCE
R. Woodley, R. Buffenstein
1Medical School, University of Witwatersrand, South Africa
2City College of City University of New York, USA

18. EFFECTS OF ALCOHOL ON THERMOREGULATION IN HUMANS
T. Yoda, L. I. Crawshaw, K. Saito, M. Nakamura, A. Konishi, K. Nagashima,
S. Uchida, K. Kanosue
1Institute of Physical Education, Keio University, Japan
2Portland State University, USA
3School of Sport Science, Waseda University, Japan
4School of Allied Health Sciences, Faculty of Medicine, Osaka University, Japan
19. CIRCADIAN BODY TEMPERATURE AND HEAT TOLERANCE IN TRPV1 KNOCKOUT MICE
Z. Szélenyi¹, Z. Hummel¹, J. Szolcsányi¹, J. B. Davis²
¹Medical Faculty, University of Pécs, Hungary
²GlaxoSmithKline, UK

20. VOLUME PARTITIONS OF THE RETIE OF TSWANA GOAT, BOER GOAT AND THE SPRINGBOK
J. M. Kamau
Botswana College of Agriculture, Botswana

21. MAGNESIUM DOES NOT REDUCE THE THRESHOLD OR GAIN OF SHIVERING
N. Wadhwa, R. Lenhardt, P. Sengupta, J. Durrani, G. Chernyak, D. Sessler
University of Louisville, USA

22. EFFECT OF THE SUPRACHIASMATIC NUCLEUS LESION ON NYCTHEMERAL VARIATIONS IN CORE TEMPERATURE OF HEAT-ACCLIMATED RATS
M. Maruyama, T. Hara, M. Hashimoto, O. Shido
School of Medicine, Shimane University, Japan

23. PREVENTION AND REPAIR OF CIRCULATORY SHOCK AND CEREBRAL ISCHEMIA INJURY BY CHINESE HERBAL MEDICINE, SHENGMAI SAN, IN RAT HEATSTROKE
N. L. Wang¹, C. K. Chang¹, M. T. Lin²
¹MacKay Memorial Hospital, Taiwan
²Chi-Mei Medical Center, Taiwan

24. BODY TEMPERATURE, BEHAVIOR AND PLASMA CORTISOL CHANGES INDUCED BY CHRONIC INFUSION OF STAPHYLOCOCCUS AUREUS IN GOATS
N. R. Mphahlele¹, A. Fuller¹, J. Roth², P. R. Kamerman¹
¹University of the Witwatersrand, South Africa
²Veterinary-Physiology, Justus-Liebig-University Giessen, Germany

25. HMG-C₀A REDUCTASE INHIBITOR, ATORVASTATIN, IS NOT ANTIPYRETIC IN RATS
P. R. Kamerman, B. M. E. Modisa, N. R. Mphahlele
School of Physiology, University of the Witwatersrand, South Africa

26. STRESS: THE CAUSE OF HYPERTHERMIA IN CHEMICALLY CAPTURED IMPALA
L. Meyer¹, A. Mathee², L. Fick¹, P. Kamerman¹, D. Mitchell¹, A. Fuller¹
¹University of the Witwatersrand, South Africa
²National Zoological Gardens Game Breeding Centre, South Africa

27. QUERCETIN IN COMBINATION WITH INDOMETHACIN AND/OR GELDANAMYCIN SHARPLY ENHANCES CYTOTOXICITY OF HEAT STRESS
A. Kabakov, K. Budagova
Medical Radiology Research Center, Russia
14:30-16:00 SESSION THU/O-04: COMPARATIVE ASPECTS IN THERMAL BIOLOGY - PART 1 (Hall B)

Chairs: R. Paul, Germany and M. Vera, Chile

THERMAL PROFILES OF ZOOPLANKTON: A KEY TO GLOBAL MARINE ECOLOGICAL CHANGE
W. Greve
German Centre for Marine Biodiversity Research, Forschungsinstitut Senckenberg, Germany

GLYCEROL PRODUCTION BY RAINBOW SMELT PROVIDES FREEZE RESISTANCE TO ALLOW WINTER FORAGING
W. Driedzic, K. A. Clow, C. E. Short
Ocean Sciences Center, Memorial University of Newfoundland, Canada

DOES THE BEHAVIORAL FEVER OCCUR IN SNAILS PARASITISED WITH TREATAODE Larvae?
E. Zbikowska
Institute of General and Molecular Biology, Nicholas Copernicus University in Torun, Poland

INTEGRATIVE MECHANISMS OF THERMAL ACCLIMATION IN THE MICROCRUSTACEAN DAPHNIA
R. J. Paul, T. Lamkemeyer, J. Maurer, O. Pinkhaus, M. Seidl, B. Zeis
Institute of Physiology, Westfälische Wilhelms-Universität Münster, Germany

SEASONAL WATER TEMPERATURES AFFECT NUCLEOLAR FUNCTION IN AN EURITHERMAL FISH
M. Alvarez¹,², C. Quezada¹,², C. Navarro¹,², R. Pinto¹,², M. Reyes¹,², I. Delgado¹,², A. Molina¹,², P. Bouvet³, M. Krauskopf¹,², M. I. Vera¹,²
¹MIFAB, Chile
²Lab. de Biologia Celular y Molecular, Universidad de Andres Bello, Chile
³Ecole Normale Supérieure de Lyon, France

BEHAVIORAL MECHANISMS OF OVERWINTERING IN THE HELIX POMATIA
A. Nowakowska, M. Caputa, J. Rogalska, K. Wentowska
Institute of General and Molecular Biology, Nicholas Copernicus University in Torun, Poland
14:30-16:00  SESSION THU/O-05: PHARMACOLOGY OF THERMOREGULATION  (Hall A)

Chair: H. Labrun, South Africa

ROLE OF NITRIC OXIDE ON THE THERMOREGULATION DURING SEPTIC SHOCK: INVOLVEMENT OF VASOPRESSIN
E. C. Carnio
Escola de Enfermagem de Ribeirao Preto, Universidade de Sao Paulo, Brazil

CORNEAL TEMPERATURE IN DRUG-FREE AND NEUROLEPTIC-TREATED SCHIZOPHRENIA PATIENTS COMPARED TO HEALTHY SUBJECTS
R. Shiloh1, A. Weizman1, S. Portuguese1, R. Gross-Isseroff1, M. Sigler1, L. Bodinger1, N. Katz1, R. Stryjer2, H. Hermesh1, H. Munitz1
1Geha Mental Health Center, Felsenstein Medical Research Center, Rabin Medical Center, Beilinson Campus, Sackler Faculty of Medicine, Tel Aviv University, Israel
2Beer-Yaakov Mental Health Center, Israel

ACUTE AND SUBACUTE EFFECTS OF CENTRAL NEUROPEPTIDE Y (NPY) ON ENERGY BALANCE IN RATS
E. Pétervàri, Z. Szélenyi, M. Székély
Faculty of Medicine, University of Pecs, Hungary

CLOZAPINE, AN ATYPICAL ANTIPSYCHOTIC AGENT ACTIVE AT SEROTONIN RECEPTORS, REVERSES COLD-INDUCED CUTANEOUS VASOCONSTRICTION IN RABBITS AND RATS
W. Blessing
Centre for Neuroscience, Flinders University, Australia

DANTROLENE REDUCES THE THRESHOLD AND GAIN FOR SHIVERING
R. Lenhardt1, C. M. Lin1, S. Neeru2, A. G. Doufas1, E. Liem1, Y. M. Shah1, A. Wadhwa1, A. Bjorksten3, D. I. Sessler1, A. Kurz4
1University of Louisville, USA
2Washington University, USA
3Royal Melbourne Hospital, Australia
4University of Bern, Switzerland

16:00-16:30  COFFEE BREAK  (Imperial Foyer)
16:30-18:00 SESSION THU/O-06: COMPATAIVE ASPECTS IN THERMAL BIOLOGY - PART 2 (Hall B)

Chair: B. Tzschentke, Germany

ACTIVATION OF THERMOREGULATORY CONTROL ELEMENTS IN PRECOCIAL BIRDS DURING THE PRENATAL PERIOD
M. Nichelmann
Medical University of Minsk, Belarus

PRENATAL EPIGENETIC TEMPERATURE ADAPTATION: TURKEY IN COMPARISON TO MUSCOVY DUCK
M. Nichelmann
Medical University of Minsk, Belarus

METABOLIC RESPONSES TO REPEATED FOOD DEPRIVATIONS IN BIRDS
M. Laurila, E. Hohtola
University of Oulu, Finland

THERMOREGULATORY USE OF HEAT INCREMENT OF FEEDING IN THE TAWNY OWL (STRIX ALUCO)
C. Bech¹, K. E. Praesteng²
¹Norwegian University of Science and Technology, Norway
²University of Tromø, Norway

FUNDAMENTAL CHARACTERISTICS OF THE EARLY ONTOGENY OF THERMOREGULATION IN BIRDS
B. Tzschentke
Institute of Biology, Humboldt University of Berlin, Germany

THE THRESHOLD FOR EMOTIONAL FEVER IN PHYLOGENY
M. Cabanac³, A. Cabanac²
¹Faculty of Medicine, Université Laval, Canada
²Aquarium Park of Quebec, Societé des Parcs de Sciences Naturelles du Quebec, Canada
16:30-18:00 SESSION THU/O-07: LPS INDUCED FEVER (Hall A)

Chair: A. Milton, UK

BODY TEMPERATURES AND SPONTANEOUS RUNNING ACTIVITY IN RATS AFTER SUBCUTANEOUS ADMINISTRATION OF LIPOPOLYSACCHARIDE
H. P. Laburn¹, D. Mitchell¹, T. Cartmell¹²
¹Brain Function Research Unit, School of Physiology, University of Witwatersrand, South Africa
²National Institute of Biological Standards and Control, UK

EFFECTS OF SELECTIVE CYCLOOXYGENASE ENZYME INHIBITORS ON LPS-INDUCED HYPOTHERMIA AND SERUM TNF--α ELEVATION IN BIOTELEMETERED RATS
E. S. Akarsu
Faculty of Medicine, Ankara University, Turkey

BACTERIAL ENDOTOXIN-INDUCED HYPOTHERMIA IN RATS: PUTATIVE ROLE OF CENTRAL DOPAMINERGIC NEUROTRANSMISSION AND PERIPHERAL INFLAMMATION
M. Diltoer¹, S. Sarre², Y. Michotte², L. Huyghens¹
¹Academisch Ziekenhuis, Vrije Universiteit, Belgium
²Pharmaceutical Chemistry, Vrije Universiteit, Belgium

MICROSOMAL PROSTAGLANDIN E SYNTHASE-1 IS RESPONSIBLE FOR FEVER
K. Matsumura¹, W. Inoue¹, Y. Mizushima¹, H. Hosokawa¹, S. Uematsu², S. Akira², S. Kobayashi³
¹Graduate School of Informatics, Kyoto University, Japan
²Research Institute for Microbial Diseases, Osaka University, Japan

THE EFFECT OF LIPOPOLYSACCHARIDE AND CYTOKINE ANTISERA ON BODY TEMPERATURE AND SPONTANEOUS RUNNING IN RATS
L. S. de Castro, L. Harden, I. du Plessis, H. P. Laburn
Brain Function Research Unit, School of Physiology, University of Witwatersrand, South Africa

THE ROLE OF NON-PROSTAGLANDIN EICOSANOIDS IN THERMOREGULATION
V. Fraifeld¹, L. Paul¹, J. Kaplanski¹, O. Sagi¹, M. Wolfson¹, T. Tchaikovskaya², I. Listowsky³, M. J. Kluger³, W. Kozak³,⁴
¹Faculty of Health Sciences, Ben-Gurion University of the Negev, Israel
²Albert Einstein College of Medicine, USA
³Medical College of Georgia, USA
⁴Institute of General and Molecular Biology, Nicolaus Copernicus University, Poland
Friday, October 15, 2004

08:30-10:40  SESSION FRI/S-01: FEVER - PART 2  (Hall A)
Chair: C. Blatteis, USA

POSSIBLE SEQUENCE OF PYROGENIC AFFERENT PROCESSING IN THE POA
C. M. Blatteis, C. Feleder, V. Perlik
College of Medicine, University of Tennessee Health Science Center, USA

ROLE OF CARBON MONOXIDE IN THE THERMOREGULATION AND FEVER
L. G. S. Branco
Facultade de Odontologia de Ribeirao Preto, Universidade de Sao Paulo, Brazil

IS INTERLEUKIN-6 THE NECESSARY PYROGENIC CYTOKINE?
J. Roth, C. Rummel, E. M. Harre, T. Voss, J. Mütze, R. Gerstburger, T. Hübschle
Veterinary-Physiology, Justus-Liebig-University Giessen, Germany

PRE-FORMED PYROGENIC FACTOR-INDUCED FEVER: ARE PROSTAGLANDINS IMPORTANT?
Laboratory of Pharmacology, FCFRP-USP, Brazil

THE CYTOKINE-PROSTAGLANDIN CASCADE IN FEVER PRODUCTION: FACT OR FANCY? (Keynote)
C. H. Blatteis
College of Medicine, University of Tennessee Health Science Center, USA
08:30-10:40 SESSION FRI/S-02: HYPOTHERMIA IN BRAIN TREATMENT (Hall B)

Chair: R. Greif, Austria

THERAPEUTIC HYPOTHERMIA - INTRODUCTION
R. Greif
donauspital/SMZ-Ost. Vienna, Austria

FROM THE ANIMAL EXPERIMENT TO HUMAN TRAILS IN HYPOTHERMIA TO IMPROVE NEUROOUTCOME
W. Behringer
Vienna General Hospital, Austria

MILDE HYPOTHERMIA AFTER CARDIAC ARREST - HOW DOES IT WORK?
M. Holzer
Medical University Vienna, Austria

THE RESULTS FROM LARGE HUMAN STUDIES ON THERAPEUTIC HYPOTHERMIA IN NEUROSURGERY AND TRAUMATIC BRAIN INJURY
R. Greif
donauspital/SMZ-Ost. Vienna, Austria

SO MANY ANIMAL STUDIES ON HYPOTHERMIA SO POOR RESULTS OF HUMAN SURGICAL TRAILS - THE DILEMMA OF RESEARCH
D. Warner
USA

DISCUSSION OF THE PANEL: WERE DOES HYOPTHERMIA RESEARCH GO NOW?
R. Greif¹, M. Holzer², W. Behringer³, D. Warner⁴
¹Donauspital/SMZ-Ost. Vienna, Austria
²Medical University Vienna, Austria
³Vienna General Hospital, Austria
⁴USA

10:40-11:00 COFFEE BREAK (Imperial Foyer)
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<td>11:00-12:15</td>
<td>SESSION FRI/O-03: FARM ANIMAL AND LARGE MAMMALS IN HOT ENVIRONMENTS</td>
<td>I. Choshniak, Israel</td>
<td>Hall A</td>
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<td>Lymphocyte Functions in Dairy Cows Under Hot Environment</td>
<td>N. Lacetera, U. Bernabucci, D. Scalia, B. Ronchi, G. Kuzminsky, A. Nardone</td>
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<td>Body Temperatures Before, During and After Parturition in Farm-Managed Angora Goats and Their Kids</td>
<td>H. P. Laburn, A. Faurie, D. Mitchell, G. Mitchell, G. Kerley</td>
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<td>Use of Physiological Parameters to Predict Milk Yield and Feed Intake in Heat-Stressed Dairy Cows</td>
<td>D. E. Spiers, J. N. Spain, J. D. Sampson, R. P. Rhoads</td>
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<td>12:15-13:15</td>
<td>SESSION FRI/O-04: CLOSING SESSION: ROUNDTABLE - PERSPECTIVES IN THERMAL PHYSIOLOGY</td>
<td>M. Horowitz, Israel</td>
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<td>Closing Session - Rountable</td>
<td>M. Horowitz, Israel</td>
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<td>Perspectives in Thermal Physiology</td>
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