

# Sunday, March 5

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**BREAKFAST**

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*Mesquite Dining Room*

**07:00** Breakfast buffet available from 07:00 to 08:00.

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**SYMPOSIUM 6****PROSTAGLANDIN E<sub>2</sub> AS A FEVER MEDIATOR****TRIBUTE TO JOHN VANE**

*Saguaro Ballroom I, II, III*

Chairs: Blomqvist A; *University of Linköping, Linköping, Sweden*  
Simmons DL; *Brigham Young University, Provo, Utah, USA*

**08:00** Pharmacology of cyclooxygenases  
Simmons DL; *Brigham Young University, Provo, Utah, USA*

**08:30** Microsomal prostaglandin E synthase-1 in fever  
Blomqvist A; *University of Linköping, Linköping, Sweden*

**09:00** The role of EP receptors in fever regulation  
Saper CB; *Harvard Medical School, Boston, Massachusetts, USA*

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**COFFEE BREAK**

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*Outside Saguaro Ballroom I, II, III*

**09:30** Refreshments provided.

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**SYMPOSIUM 7: PART 1****DISTINGUISHED LECTURES**

*Saguaro Ballroom I, II, III*

Chairs: Blessing WW; *Flinders University, Bedford Park, Australia*  
Horowitz M; *The Hebrew University, Jerusalem, Israel*  
Romanovsky AA; *St. Joseph's Hospital, Phoenix, Arizona, USA*

**10:00** Biophysics Distinguished Lecture  
Effect of temperature on cellular phase transitions  
Pollack GH; *University of Washington, Seattle, Washington, USA*

**10:30** Pharmacology Distinguished Lecture  
MDMA (ecstasy): mitochondrial uncoupling and body temperature  
Sprague JE; *Virginia Tech, Blacksburg, Virginia, USA*

**11:00** Comparative Physiology Distinguished Lecture  
Transcriptome and proteome of hibernation  
Martin SL; *University of Colorado, Aurora, Colorado, USA*

# Sunday, March 5

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## BREAK

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**11:30** Short break; no refreshments.

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## SYMPOSIUM 7: PART 2 DISTINGUISHED LECTURES

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*Saguaro Ballroom I, II, III*

Chairs: Dinarello CA; *University of Colorado, Denver, Colorado, USA*  
van der Meer JWM; *Radboud University, Nijmegen, The Netherlands*

**11:45** Biochemistry Distinguished Lecture  
The regulation of IL-1 $\beta$  secretion: relevance to fever and inflammation  
Rubartelli A; *National Cancer Research Institute, Genova, Italy*

**12:15** Rheumatology Distinguished Lecture  
Periodic fever syndromes: Pathogenesis and treatment options  
Simon A; *Radboud University, Nijmegen, The Netherlands*

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## LUNCH

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*Mesquite Dining Room*

**13:00** Lunch buffet available from 13:00 to 14:00.

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## SYMPOSIUM 8 HEATSTROKE

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*Saguaro Ballroom I, II, III*

Chairs: Leon LR; *USARIEM, Natick, Massachusetts, USA*  
Lin MT; *Chi-Mei Medical Center, Yung-Kang, Taiwan (ROC)*

**14:15** Roles of cytokines in heatstroke  
Leon LR; *USARIEM, Natick, Massachusetts, USA*

**14:45** Cerebral cardiovascular dysfunction is an attractive target for  
therapy in heat stroke  
Lin M-T; *Chi-Mei Medical Center, Yung-Kang, Taiwan (ROC)*

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## COFFEE BREAK

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*Outside Saguaro Ballroom I, II, III*

**15:15** Refreshments provided.

Sunday, March 5

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**SYMPOSIUM 9**

**EXERCISE IN THE HEAT:  
PERFORMANCE LIMITATIONS**

*Saguaro Ballroom I, II, III*

Chairs: Maughan R; *Loughborough University, Loughborough, UK*  
Nybo L; *University of Copenhagen, Copenhagen, Denmark*

- 15:30** Skeletal muscle and cardiovascular limitations  
Gonzalez-Alonso J; *Brunel University, Uxbridge, UK*
- 16:00** Fluid-balance and nutritional limitations  
Maughan R; *Loughborough University, Loughborough, UK*
- 16:30** Influence of central fatigue  
Nybo L; *University of Copenhagen, Copenhagen, Denmark*

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**BREAK**

**17:00** Poster setup; free time.

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**DINNER**

*Mesquite Dining Room*

**18:00** Dinner buffet available from 18:00 to 19:00.

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**POSTER SESSION... EXHIBITION...**

*Opera House*

**19:30** Session starts.  
Free wine bar: 19:30-20:30  
Cash wine bar: 20:30-21:30

**POSTER SYMPOSIUM 1: THERMOMETRY 2006. METHODOLOGY**

- No. 01** Estimation of mean-body temperature from mean-skin and core temperature  
Lenhardt R, Sessler DI
- No. 02** Validity of tympanic temperature measured by infrared thermometry  
during exercise in the heat  
Mora-Rodriguez R, Del Coso J, Aguado-Jimenez R
- No. 03** Comparison of five methods for the assessment of dehydration  
Golja P, Blatnik J, Mekjavic IB

## Sunday, March 5

- No. 04** Radiotelemetric thermometry  
Gordon CJ
- No. 05** Non-invasive monitoring of body internal temperature using a passive microwave radiometer  
Vesnina SG, Gorbach AM
- No. 06** Noninvasive temperature monitoring using microwave technology  
Meaney PM, Paulsen KD
- No. 07** Noninvasive temperature estimation using pulse-echo ultrasound  
Ebbini ES
- No. 08** MRI-based temperature monitoring  
McDannold N
- No. 09** Infrared thermography – a reliable non-invasive method for monitoring blood circulation in free flap surgery  
Mercer JB, de Weerd L, Setså LB
- No. 10** Optical thermometry  
Merla A
- No. 11** Estimating gastric transit time for a core body temperature capsule  
Heil DP, Ruby BC

### **POSTER SYMPOSIUM 6: INFLAMMATION AND BODY TEMPERATURE**

- No. 12** Effects of COX-1 selective inhibitors on LPS-induced hypothermia and serum cryogenic cytokine levels in rats  
Akarsu ES, Mamuk S
- No. 13** Cold-seeking behavior as a thermoregulatory strategy in systemic inflammation  
Almeida MC, Steiner AA, Branco LGS, Romanovsky AA
- No. 14** Involvement of hypothalamic structures in cold- and warmth-seeking behaviors in rats  
Almeida MC, Steiner AA, Branco LGS, Romanovsky AA
- No. 15** Bacterial lipopolysaccharide fever is initiated *via* Toll-like receptor 4 on hematopoietic cells  
Steiner AA, Chakravarty S, Rudaya AY, Herkenham M, Romanovsky AA
- No. 16** Cellular and molecular bases of the initiation of fever  
Steiner AA, Ivanov AI, Serrats J, Hosokawa H, Phayre AN, Robbins JR, Roberts JL, Kobayashi S, Matsumura K, Sawchenko PE, Romanovsky AA
- No. 17** Thermoregulatory responses of conscious rabbits to i.v. and i.c.v administration of enisoprost and misoprostal  
Milton AS

## Sunday, March 5

- No. 18** Febrile responses of unrestrained and restrained guinea pigs to lipopolysaccharide: comparison of two methods  
Perlik V, Feleder C, Tague LL, Blatteis CM
- No. 19** Preoptic (POA) norepinephrine (NE) mediates the febrile response of guinea pigs to lipopolysaccharide (LPS)  
Feleder C, Perlik V, Blatteis CM
- No. 20** Preoptic (POA) nitric oxide (NO) attenuates endotoxic fever by inhibiting the poa release of norepinephrine  
Feleder C, Perlik V, Blatteis CM
- No. 21** Acetaminophen (AC) reduces lipopolysaccharide (LPS) fever by a hypothermic rather than an antipyretic action  
Li S, Dou W, Tang Y, Goorha S, Ballou LR, Blatteis CM
- No. 22** LPS- and FLS-1-induced calcium signaling in primary cultures of rat sensory circumventricular organs  
Rafalzik S, Hild D, Roth J, Hübschle T, Gerstberger R
- No. 23** STAT3 and COX-2 activation in the guinea pig brain during fever induced by the toll-like receptor-3 agonist polyinosinic:polycytidylic acid  
Voss T, Barth SW, Rummel C, Gerstberger R, Hübschle T, Roth J
- No. 24** Fever and circulating tumor necrosis factor in response to repeated injections of fibroblast-stimulating lipopeptide-1 in guinea pigs  
Greis A, Hübschle T, Rafalzik S, Gerstberger R, Roth J
- No. 25** Brain-controlled sickness responses during localized inflammation induced by injections of the TLR2/6 agonists MALP-2 and FSL-1 in rats  
Knorr C, Roth J, Rafalzik S, Mühlradt PF, Gerstberger R, Hübschle T
- No. 26** Pyrexia, anorexia, adipsia and depressed motor activity in rats during systemic inflammation induced by the TLR2/6 agonists MALP-2 and FSL-1  
Hübschle T, Mütze J, Mühlradt PF, Korte S, Gerstberger R, Roth J
- No. 27** Brain mechanisms induced by interleukin-6 (IL-6) in fever  
Rummel C, Sachot C, Luheshi G
- No. 28** Ceramide mediates the rapid phase of interleukin-1beta-fever  
Sanchez-Alavez M, Tabarean I, Behrens MM, Bartfai T
- No. 29** Interleukin-1 induces membrane hyperpolarization and modulates synaptic inhibition in preoptic and anterior hypothalamic neurons  
Tabarean I, Gaidarova S, Korn H, Bartfai T

## Sunday, March 5

- No. 30** Direct projection of prostaglandin EP3 receptor-expressing preoptic neurons to the dorsomedial hypothalamus mediates febrile responses  
Nakamura Y, Nakamura K, Matsumura K, Kobayashi S,  
Kaneko T, Morrison SF  
AWARD-WINNING STUDY (YOUNG SCIENTISTS COMPETITION)  
ORAL PRESENTATION ON MONDAY MORNING
- No. 31** Lipopolysaccharide-induced thermogenesis mediated by GABA in the preoptic area  
Osaka T
- No. 32** Role of natriuretic peptides in the modulation of fever induced in rats by systemic administration of LPS  
Watanabe T, Miyoshi M
- No. 33** A NMDA-receptor dependent hydroxyl radical pathway in the rabbit hypothalamus may mediate lipopolysaccharide fever  
Huang W-T, Lin M-T
- No. 34** The lipopolysaccharide induced fever can be suppressed by hyperbaric oxygen therapy  
Niu K-C, Lin M-T
- No. 35** Neonatal programming of the neuroimmune response: stimulus specific changes elicited by bacterial and viral mimetics  
Ellis S, Mouihate A, Pittman QJ  
AWARD-WINNING STUDY (YOUNG SCIENTISTS COMPETITION)  
ORAL PRESENTATION ON MONDAY MORNING
- No. 36** The effect of central administration of interleukin-1beta on body temperature and sickness behaviour in rats  
Harden LM, du Plessis I, Laburn HP
- No. 37** Effects of repeated poly I:C and LPS injection on body temperature and physical activity in rats  
Laburn HP, Fajandar S, du Plessis I
- No. 38** Modulation of the cytokine release by humoral substances  
Janský L, Stará A, Matějovská T, Reymanová P

### POSTER SYMPOSIUM 7: ENVIRONMENTAL PHYSIOLOGY

- No. 39** Platonin, a cyanine photosensitizing dye, causes attenuation of circulatory shock, hypercoagulable state, and tissue ischemia during heat stroke  
Chang C-K, Lee J-J, Lin M-T
- No. 40** Heat shock protein 72 overexpressing protects against hyperthermia, circulatory shock and cerebral ischemia during heatstroke  
Chang C-P, Lin M-T

## Sunday, March 5

- No. 41** Resuscitation from experimental heatstroke by human umbilical cord blood cells or estrogen  
Chen S-H, Lin M-T  
AWARD-WINNING STUDY (YOUNG SCIENTISTS COMPETITION)  
ORAL PRESENTATION ON MONDAY MORNING
- No. 42** Brain cooling may attenuate circulatory shock and cerebral ischemia during heatstroke by reducing oxidative stress in the brain  
Hsu S-F, Niu K-C, Lin C-L, Lin M-T
- No. 43** Hyper-hydroxyethyl starch (hyper-haes) ameliorates circulatory shock and cerebral ischemia during heat stroke  
Liu C-C, Lin M-T
- No. 44** Heat intolerance: what genes tell us  
Horowitz M, Helled Y, Eli-Berchoer L, Mendel L, Moran DS
- No. 45** Effects of heat rectal temperature on oxidative DNA damage (urinary 8-OHdG excretion) in humans  
Saito Y, Harakawa S, Nagashima K, Suda K, Kanosue K, Tanaka H
- No. 46** Cold-adaptation: neuropeptide Y versus thermal signals in the development of hyperphagia  
Pétermvári E, Balaskó M, Koncsecskó-Gáspár M, Székely M
- No. 47** Memory of long-term cold acclimation in the deacclimated Wistar rats  
Hori K, Ishigaki T, Koyama K, Otani H, Kanoh N, Tsujimura T, Terada N, Hori S
- No. 48** Effect of cold acclimation and deacclimation on glycogen metabolism in the liver of obese and lean Zucker rats  
Hori K, Ishigaki T, Kaya M, Tsujita J, Terada N, Oku Y, Hori S
- No. 49** Weight-reducing and hormonal effects of cold acclimation and deacclimation in lean and obese Zucker rats  
Hori S, Hori K, Kaya M, Ishigaki T, Koyama K, Otani H, Tsujita J, Oku Y
- No. 50** Intersystem mechanisms in developing negative cold responses at adaptation of humans to the extreme North  
Maximov AL
- No. 51** Core and peripheral temperature regulation in chronically cold-stressed and transiently goitrogenic goats  
Al-Tamimi HJ
- No. 52** RNAi inhibition of mitogenic oxidase (p65-MOX) improves cold-induced cardiovascular dysfunction  
Sun Z, Wang X

## Sunday, March 5

- No. 53** Day-night variations in contractility of the aorta and tail artery in heat-acclimated rats  
Maruyama M, Li G-H, Tanabe Y, Enkhjargar B, Shido O
- No. 54** Influence of hyperoxia on skin vascular responses to acetylcholine and sodium nitroprusside  
Yamazaki F, Takahara K, Johnson JM

### POSTER SYMPOSIUM 8: COMPARATIVE PHYSIOLOGY

- No. 55** Body mass is a thermoregulatory adaptation of diurnal rodents to the desert environment  
Haim A, Alma A, Neuman A
- No. 56** Body temperature daily rhythms of the fat jird *Meriones crassus*: effects of alpha & beta adrenergic blockers  
Haim A, Naaman Y, Palgi N
- No. 57** The effect of blocking angularis oculi and facial veins on water consumption of Tswana goats during winter  
Kamau JM, Segwagwe BVE, Tshwenyane SO
- No. 58** The effect of blocking angularis oculi and facial veins on metabolism of Tswana goats within and below the thermoneutral zone  
Kamau JM
- No. 59** Thermogenic properties in three rodent species from Northeastern China in summer  
Liu J-S, Sun R-Y, Wang D-H
- No. 60** Seasonal thermogenesis and body mass regulation in plateau pikas (*Ochotona curzoniae*)  
Wang J-M, Wang D-H, Zhang Y-M
- No. 61** Fever and sickness behaviour in a free-ranging antelope, the greater kudu  
Hetem RS, Mitchell D, Maloney SK, Meyer LCR, Fick LG, Kerley GIH, Fuller A
- No. 62** Changes in endogenous plasma leptin do not alter the fever response to LPS in rams  
Maloney SK, Blackberry M, Hunt K, Blache D
- No. 63** Dehydration increases the magnitude of selective brain cooling independently of core temperature in sheep  
Fuller A, Meyer LCR, Mitchell D, Maloney SK



## Sunday, March 5

- No. 64** Effects of boma-housing and tranquilizers on body temperature and activity of blue wildebeest (*C. taurinus*)  
Fick LG, Matthee A, Mitchell D, Fuller A
- No. 65** Thermoregulatory responses of the bearded dragon, *Pogona vitticeps*, to hypoxia  
Cadena V, Tattersall GJ
- No. 66** Cardiovascular responses to lowered oxygen levels in the bearded dragon (*Pogona vitticeps*)  
Skinner MC, Tattersall GJ
- No. 67** Hypoxia reduces gaping thresholds in bearded dragons  
Gerlach RM, Tattersall GJ
- No. 68** Effects of hypoxia on the central thermosensitivity and thermoregulatory responses of mammals  
Tattersall GJ, van Iersel C, Milsom WK
- No. 69** Uncoupling protein 1 in fish uncovers an ancient evolutionary history of mammalian nonshivering thermogenesis  
Jastroch M, Brand MD, Kloas W, Klingenspor M  
AWARD-WINNING STUDY (YOUNG SCIENTISTS COMPETITION)  
ORAL PRESENTATION ON MONDAY MORNING
- No. 70** A role for octopamine in coordinating thermoprotection of an insect nervous system  
Armstrong GAB, Robertson RM
- No. 71** Characterization of neuronal hypothalamic plasticity in chicken: a comparative analysis  
Sallagundala N, Yakimova K, Tzschentke B

### Nos.

**72-74** Announcements

### EXHIBITION

**Booth 1** Sable Systems International, Inc.

**Booth 2** Data Sciences International

**Booth 3** Prospective Concepts AG

**Booth 4** Mini Mitter, a Respiration company

**22:00** Poster session and exhibition close.