

**INTERNATIONAL CONFERENCE ON THE ROLE OF
POLYAMINES
AND THEIR ANALOGS IN CANCER AND OTHER DISEASES**

Program



[Sunday, September 10, 2006]

Opening Lectures

Chairpersons: E. Agostinelli (Italy), T. Oshima (Japan)

K. Igarashi (Chiba University, Japan):

Polyamine modulon in *Escherichia coli*: genes involved in the stimulation of cell growth by polyamines.

A. E. Pegg (Pennsylvania State University, USA):

Structural and functional studies of spermidine and spermine metabolism.



[Monday, September 11, 2006]

Session 1: BIOCHEMISTRY AND PHYSIOLOGY OF POLYAMINES

Chairpersons: A. E. Pegg (USA), L. Persson (Sweden)

T. Oshima (Kyowa Kako Co., Japan):

Roles of polyamines in extreme thermophiles.

C. Kahana (Weizmann Institute of Science, Israel):

Ubiquitin-dependent and independent protein degradation in the regulation of the polyamine pathway.

J. Y. Wang (University of Maryland Baltimore, USA):

Polyamines regulate mRNA stability by altering HuR cytoplasmic translocation in intestinal epithelial cells.

H. M. Wallace (University of Aberdeen, UK):

Polyamine analogues in cancer chemotherapy and senescence.

S. Matsufuji (Jikei University School of Medicine, Japan):

Interaction of a neurospecific protein, cerebellar degeneration related protein 2 (CDR2), with antizyme 2.

R. Penafiel (University of Murcia, Spain):

Mouse ODC-like acts as an antizyme inhibitor.

A. J. Michael (Institute of Food Research, UK):

Transcriptome analysis reveals that polyamine excess results in growth antagonism and a broad oxidative stress response in *Arabidopsis* cells.

<< Poster Session >>

Chairpersons: G. Arancia (Italy), A. Khomutov (Russia)

Session 2: FUNCTIONS OF POLYAMINES IN CELL GROWTH AND DIFFERENTIATION

Chairpersons: K. Igarashi (Japan), M. Medina (Spain)

R. Madhubala (New Delhi University, India):

Antileishmanial effect of 3-aminooxy-1-aminopropane and its correlation with intracellular ornithine decarboxylase and polyamines.

A. Kaiser (The German University in Cairo, Egypt):

Inhibition of hypusine biosynthesis in plasmodium: a strategy in prevention and therapy of malaria.

M. Caraglia (Naples University, Italy):

Role of BSAO and of the initiation factor eIF-5A in the potentiation of apoptosis and growth inhibition induced by interferon alpha in human epidermoid cancer cells.

S. Valentini (Sao Paulo State University, Brazil):

Is there a role for eIF-5A in translation?

M. H. Park (National Institutes of Health, USA):

Deoxyhypusine hydroxylase is a novel Fe(II)-dependent, HEAT-repeat enzyme.



[Tuesday, September 12, 2006]

Session 3: BIOLOGICAL ACTIONS OF POLYAMINES

Chairpersons: N. Seiler (France), O. Heby (Sweden)

P. Coffino (University of California San Francisco, USA):

Structure and function of the ODC degradation tag.

L. Persson (Lund University, Sweden):

Polyamine biosynthetic enzymes in trypanosomaide.

F. Flamigni (University of Bologna, Italy):

Polyamine biosynthesis as a target to inhibit apoptosis of non-tumoral cells.

J. Satriano (University of California San Diego, USA):

Polyamine dependent kidney growth and its consequences in diabetes mellitus.

U. Bachrach (Hebrew University, Israel):

Antiviral activity of oxidized polyamines.

O. Phanstiel (University of Central Florida, USA):

Polyamine passports: cell targeting via the polyamine transporter.

K. Kashiwagi (Chiba Institute of Science, Japan):

Comparative studies of anthraquinone- and anthracen-tetraamines as blockers of *N*-methyl-D-aspartate receptors.



[Wednesday, September 13, 2006]

Session 4: CLINICAL ASPECTS OF POLYAMINES: THERAPEUTIC STRATEGIES

Chairpersons: L. Alhonen (Finland), J. L. A. Mitchell (USA)

E. W. Gerner (University of Arizona, USA):

Targeting polyamine metabolism for colon cancer chemoprevention.

M. Kawakita (Kogakuin University, Japan):

N1, N12-diacetylspermine in the urine of cancer patients.

E. Agostinelli (Rome University "La Sapienza", Italy):

Sensitization of human tumor cells to spermine enzymatic oxidation products by a lysosomotropic compound (MDL 72527): a new approach in anticancer therapy.

T. J. Thomas (University of New Jersey, USA):

Polyamine analogs in nanoparticle fabrication for gene therapy.

R. A. Casero (Johns Hopkins University School of Medicine, USA):

Regulation of the polyamine catabolic pathway by a common mediator of inflammation, tumor necrosis alpha (TNF alpha)-implications in antineoplastic therapy and chemoprevention.

V. A. Levin (University of Texas, MD Anderson Cancer Center, USA):

Relationship between tumor ornithine decarboxylase levels and progression-free survival in patients treated with DFMO-PCV chemotherapy.

J. Cleveland (St. Jude Children's Res. Hospital, USA):

Targeting the polyamine pathway for cancer prevention and therapeutics.

<< Poster Session >>

Chairpersons: K. Kashiwagi (Japan), A. Toninello (Italy)

Session 5: PATHOPHYSIOLOGICAL FUNCTIONS: CANCER

Chairpersons: R. A. Casero (USA), S. Matsufuji (Japan)

L. Shantz (Pennsylvania State College of Medicine, USA):

Ornithine decarboxylase (ODC) synthesis is regulated by multiple mechanisms in Ras-transformed epithelial cells.

B. Cipolla (University of Rennes 1, France):

Phase I study of a novel polyamine free formula as nutrition therapy of metastatic hormone-refractory prostate cancer (HRPC) patients.

F. Sanchez Jimenez (University of Malaga, Spain):

Development of biocomputational and functional genomics tools for studies on amine metabolism and physiopathology.

L. Alhonen (University of Kuopio, Finland):

Role of activated polyamine catabolism in acute pancreatitis.

S. Bettuzzi (University of Parma, Italy):

Determination of the level of expression of ODC, AdoMetDC, OAZ and SSAT for molecular classification of green tea catechins-sensitive and -resistant prostate cancer in the TRAMP mice model by QPCR gene profiling.



[Thursday, September 14, 2006]

Session 6: POLYAMINES AND TRANSGLUTAMINASES

Chairpersons: A. Abbruzzese (Italy), M. H. Park (USA)

M. Griffin (Aston University, UK):

Tissue transglutaminase- nature's biological glue or superglue?.

R. Ientile (University of Messina, Italy):

Transglutaminase expression and NF-kappaB activation in NGF-induced differentiation of neuroblastoma cells.

D. Serafini-Fracassini (University of Bologna, Italy):

Developmental cell death of *Nicotiana Tabacum corolla* and polyamine conjugation by transglutaminase in different cell compartments.

Session 7: POLYAMINES AND DIET

Chairpersons: T. Oka (Japan), A. J. Michael (UK)

A. Shirahata (Josai University, Japan):

Enhancement of intestinal absorption of macromolecules by spermine in rats.

J. P. Moulinoux (University of Rennes 1, France):

Polyamine deficient diet, a potent and non invasive nutrition therapy against pain.

H. D. Grimmecke (Laves-Arzneimittel GmbH, Switzerland):

Growth physiology and biosynthesis of biogenic amines and gamma-aminobutyric acid by human, commensal probiotic strains of *Escherichia coli*.

M. Tusa (University of Kuopio, Finland):

Spermidine/spermine N1-acetyltransferase Knockout (SSATKO) mice are susceptible to high-fat diet induced insulin tolerance.

Session 8: POLYAMINES AND THEIR ANALOGS IN THERAPEUTIC APPLICATIONS

Chairpersons: E. W. Gerner (USA), H. M. Wallace (UK)

J. L. A. Mitchell (Northern Illinois University, USA):

Antizyme inhibitor expression may affect the chemotherapeutic potential of certain polyamine analogues.

I. S. Blagbrough (University of Bath, UK):

Design, synthesis and biological evaluation of novel lipospermines as self-assembly DNA nanoparticle, non-toxic non-viral gene delivery vectors.