

2007 GORDON RESEARCH CONFERENCE ON POLYAMINES

Program



[SUNDAY June 17, 2007]

METABOLIC DIVERSITY OF POLYAMINE FUNCTION

Chair: Phil Coffino (UCSF)

Alan Fairlamb (University of Dundee):

Neglected diseases - from metabolome to medicines

Kazuei Igarashi (Chiba University):

A unifying model for the role of polyamines in bacterial cell growth, the
polyamine modulon



[MONDAY June 18, 2007]

BIOSYNTHETIC PATHWAYS AND TRANSPORT

Chair: Patrick Woster and Senya Matsufuji

Miguel Angel Medina(University of Malaga):

Mathematical modeling of polyamine metabolism in mammals

Ted Sybertz (Genzyme):

Inhibitors of S-adenosylmethionine decarboxylase for the treatment of African
sleeping sickness

Sigrid Roberts (Oregon Health Sciences University):

Effects of ornithine decarboxylase knockouts on growth of Leishmania in vivo

Otto Phanstiel IV (University of Central Florida):

Synthesis and biological evaluation of dihydromotuporamine derivatives in
cells containing active polyamine transporters

Short TalksErin Willert (University of Texas Southwestern Med Center):

Allosteric activation of trypanosomatid S-adenosylmethionine decarboxylase
by a catalytically dead homolog

Shridhar Bale (Cornell):
Structural insights into putrescine activation of human S-adenosylmethionine
decarboxylase

CATABOLIC PATHWAYS

Chair: Heather Wallace (University of Aberdeen)

Steve Ealick (Cornell):

Structure MTA phosphorylase and MTA recycling

Kami Kim (Einstein):

MTA recycling in Plasmodium parasites

Maria Bewley (Penn State):

Structures of wild-type and mutant human spermidine/spermine N1-acetyl
transferase, a potential therapeutic drug target

Short Talks Shin Kurihara (Riken BRC-JCM):

A novel putrescine degradation pathway involves γ -glutamylated
intermediates in E. coli



[TUESDAY June 19, 2007]

SYSTEMS BIOLOGY

Chair: Keiko Kashiwagi (Chiba Institute of Science)

Oliver Fiehn (UC Davis):

Use of metabolomics to analyze metabolic perturbation

Tony Michael (Institute of Food Research, Norwich):

Transcriptomic analysis of the response of plant cells to changes in polyamine
levels

Benjamin Tu (UT Southwestern):

Logic of a yeast metabolic cycle

David Morris (University of Washington):

Applications of the polysome-associated transcriptome to systems biology

Selected from Graduate Research Symposium: Jeongmi Lee (UT Southwestern
Medical Center):

Evolution of substrate specificity in the type IV ornithine decarboxylase

family

Selected from Graduate Research Symposium: Paula L Feinberg-Zadek
(Massachusetts Institute of Technology):

Polyamines facilitate a 'molecular switch' from LTD to LTP in the medial
nucleus tractus solitarius

Poster Session

POST-TRANSLATIONAL REGULATION

Chair: Myung Park (NIH)

John Atkins (Cork and University of Utah):

Frameshifting in antizyme expression

Ursula Mangold (Harvard):

Antizyme inhibitor: modulator of cell proliferation

Kuang Yu Chen (Rutgers):

Partners and function of eukaryotic initiation factor 5A

Short Talks Manas Chattopadhyay (NIH):

The function of spermidine in yeast



[WEDNESDAY June 20, 2007]

SIGNALLING

Chair: Stina Oredsson (Lund University)

Susan Gilmour (Lankenau Institute for Medical Research):

Effects of polyamines on kinase cascades and relationship to tumor promotion

Lisa Shantz (Penn state):

Regulation of ODC synthesis in Ras-transformed intestinal epithelial cells

Keith Wilson (Vanderbilt University):

Helicobacter pylori-induced macrophage apoptosis requires activation of
ornithine decarboxylase by c-Myc

Tomonobu Kusano (Tohoku University):

Evidence for a protective role of the polyamine spermine against
environmental stresses in Arabidopsis thaliana

Short Talks Yoshihiko Ikeguchi (Josai University):

Apoptosis signal - regulating kinase 1 affects polyamine contents and the sensitivity of mouse fibroblasts to polyamine analogs

Lan Xiao (University of Maryland):

Regulation of ATF-2 mRNA stability by RNA-binding protein HuR following polyamine depletion in intestinal epithelial cells

Poster Session

BACTERIAL PATHOGENESIS

Chair: Anthony Pegg (Penn State)

Paul Williams (University of Nottingham):

Look who's talking: cell-to-cell communication in the bacterial world

Phil Rather (Emory):

Role of amino acid decarboxylases in regulating swarming motility in *Proteus mirabilis*

Matt Mulvey (University of Utah):

Polyamine-mediated resistance of uropathogenic *Escherichia coli* to nitrosative stress

Short Talks Walid A. Houry (University of Toronto):

X-ray structure of the *E. coli* inducible lysine decarboxylase: implications for the role of the bacterial stringent response during acid stress



[THURSDAY June 21, 2007]

POLYAMINES IN MAMMALIAN PATHOGENESIS

Chair: Gene Gerner (University of Arizona)

Bob Casero (Johns Hopkins):

Histone modifying enzymes as new targets for polyamine analogues

Carl Porter (Roswell Park Cancer Institute):

Downstream consequences of SSAT-induced changes in metabolic flux

Juhani Janne (University of Kuopio):

Polyamine catabolism and the regulation of glucose and energy metabolism

Laurence Marton (Cellgate):

Clinical trials of polyamine analogs in cancer and macular degeneration

Short TalksSalim Merali (Temple School of Medicine):
Mechanism and tissue specificity of nicotine-mediated lung
S-adenosylmethionine reduction and resistance to pneumocystis infection
Gene Gerner (University of Arizona):
Difluoromethylornithine plus sulindac for the prevention of sporadic
colorectal adenomas

Poster Session

KEYNOTE

Chair: Nigel Yarlett(Pace University)

Cy Bacchi (Pace University)
ODC and AdoMetDC inhibitors as therapy for African sleeping sickness



[FRIDAY June 22, 2007]

Departure