

THE 2001 POLYAMINE GORDON RESEARCH CONFERENCE

<<Poster Presentations>>

[Poster Session I]

1. Y. Ikeguchi, D. E. McCloskley, C. A. Mackintosh, A. E. Pegg
(Pennsylvania State University, USA)
Spermine content affects the sensitivity of mouse fibroblasts to polyamine analogs.
2. M. Franceschetti, A. Dale, C. Illingworth, S. Ellwood, A. J. Michael
(Institute of Food Science, UK)
A smart screen in yeast identifies an Arabidopsis high copy number suppressor of the growth defect caused by polyamine deficiency, bearing a region of homology to the c-ski proto-oncogene.
3. O. A. Ruiz (Unidad de Biotecnología, Argentina)
Metabolism of polyamines in *Sclerotinia sclerotiorum* and their regulation.
4. O. A. Ruiz (Unidad de Biotecnología, Argentina)
Metabolism of polyamines in *Lotus corniculatus* under saline stress.
5. J. W. Olson, Y. Zhang, M. Ruchko, M. N. Gillespie (University of South Alabama, USA)
Ornithine decarboxylase (ODC) and monocrotaline (MCT)-induced apoptosis in rat pulmonary artery endothelial cells (PAEC).
6. A. Yerlikaya, B. A. Stanley (Pennsylvania State College of Medicine, USA)
Substrate effects on S-adenosylmethionine decarboxylase degradation through the ubiquitin-mediated 26S proteasome pathway.

7. A. V. Fraser, P. M. Woster, R. S. Weeks, H. M. Wallace (University of Aberdeen, UK/Wayne State University, USA)
Induction of cell death using polyamine analogues.
8. C. Hegardt, O. T. Johannsson, S. M. Oredsson (Lund University, Sweden)
Induction of apoptosis in the breast cancer cell line L56Br by N1,N11-diethylnorspermine.
9. Y. Yamaguchi, Y. Takatsuka, Y. Kamio (Tohoku University, Japan)
The presence of the protease for specific degradation of the lysine decarboxylase in *Selenomonas ruminatum*.
10. S. Matsufuji (Jikei University School of Medicine, Japan)
Analysis of partial lethality of antizyme 1 knockout mouse.
11. Y. Murakami (Jikei University School of Medicine, Japan)
Regulation of ornithine decarboxylase by antizyme 2.
12. I. Holm (Kristianstad University, Sweden)
Antizyme and polyamine transport.
13. C. Illingworth (Pennsylvania State University College of Medicine, USA)
S15, a ribosome protein, may be involved in intracellular localization of ODC, with possible links to apoptosis and the cell cycle.
14. M. Halmekyto, M. Pietila, K. Niiranen, T. Pirttila, V.-P. Korhonen, L. Alhonen, and J. Janne (University of Kuopio, Finland)
Characterization of spermidine/spermine N1-acetyltransferase deficient cell line.
15. X. Guo, J.-Y. Wang (University of Maryland School of Medicine and Baltimore VA Medical Center, USA)
Polyamines modulate phosphorylation and free pool of β -catenine through a Ca^{2+} dependent process during intestinal epithelial cell migration.

16. D. L. Carlisle (John Hopkins Oncology Center, USA)
Analysis of human proteins that interact with and regulate polyamine transport
using a yeast 2-hybrid strategy.
17. P. M. Carrasco (Universidad de Valencia, Spain)
Functionality of the 5'-UTR region in translation of *Arabidopsis* SAMdC1.
18. C. L. DeBlecourt, J. L. A. Mitchell (Northern Illinois University, USA)
Cellular distribution of antizyme.
19. A. Tassoni, R. Napier, M. Franceschetti, M. A. Venis, N. Bagni
(University of Bologna, Italy/Horticulture Research International, UK)
Maize spermidine-binding proteins.
20. J. L. A. Mitchell, M. Holtorff (Northern Illinois University, USA)
On the induction of antizyme synthesis by polyamines and their analogs.
21. T. Murray-Stewart (Johns Hopkins University, USA)
Transfection of small cell lung carcinoma cells with the complete genomic
sequence of human SSAT to produce a spermidine/spermine
N1-acetyl-transferase (SSAT) inducible to cell line: possibility that intronic
elements are essential for induction of SSAT.
22. S. C. Minocha, P. Bhatnager, R. Minocha (University of New Hampshire,
USA)
Genetic manipulation of the metabolism of polyamines in plants.
23. K. Kashiwagi, A. Innami, H. Tomitori, K. Igarashi (Chiba University,
Japan)
Spermidine uptake system in *Escherichia coli* - characterization of PotA
ATPase complex and identification of amino acid residues involved in the
activity and the regulation by spermidine.
24. C. Hanfrey, M. Franceschetti, M. Mayer, A. J. Michael (Institute of Food
Research, UK)
Abrogation of upstream open reading frame-mediated translational regulation

of *Arabidopsis* S-adenosyl L-methionine decarboxylase leads to severe growth abnormalities in transgenic plants.

25. P. S. H. Berntsson, A. K. Wiklander, S. M. Oredsson (Lund University, Sweden)

Protein expression during the cell cycle in DENSPM-treated MCF-7 cells.

26. L. Hawel, III, K. E. Pastorian, S. M. Wilson, C. V. Byus (University of California, USA)

Alterations in intracellular and extra-cellular polyamine levels in 293 and MCF-7 cells stably transfected with a tetracycline-inducible truncated ODC gene.

27. F. Gaboriau, C. Leduc, J. G. Delcros, J. P. Moulinoux (Groupue de Recherche en Therapeutique Anticancer, France)

Modulation of iron entry into cells by the polyamine transport system.

28. D. Serafini-Fracassini, S. Del Duca, M. Dello Mea (University of Bologna, Italy)

Free and protein-conjugated polyamines in flowers undergoing programmed cell death.

29. L. Lan, B. Paul, C. Trempus, S. K. Gilmour (Lankenau Institute for Medical Research/NIEHS, USA)

Inhibition of ornithine decarboxylase decreases tumor vascularization and reverses spontaneous tumors in ODC/Ras transgenic mice.

30. M. J. Mayer, B. N. Perry, R. A. Casero, Jr., A. J. Michel (Institute of Food Research, UK)

Subversion of polyamine metabolism in *Saccharomyces cerevisiae* by heterologous expression of human SSAT.

31. H. Pendeville, Carpino, J.-C. Marine, J. Cleveland (St. Jude Children's Research Hospital, USA/University of Liege, Belgium/University of Tennessee, USA)

Ornithine decarboxylase is essential for cell survival during early murine development.

[Poster Session II]

1. L. Birkholtz, F. Joubert, A. Louw (University of Pretoria, South Africa)

Structural characterisation of ornithine decarboxylase of *Plasmodium falciparum*.

2. S. Nasizadeh (Lund University, Sweden)

Rapid turnover of a trypanosomal ornithine decarboxylase.

3. M. C. O'Sullivan, M. Fennie, M. Kobaslija, B. Ganem, C. J. Bacchi
(Canisius College/Cornell University/Pace University, USA)

Inhibition of trypanothione reductase and anti-trypanosomal activities of polyamine derivatives containing N-(3-phenylpropyl) or N-(2-naphthylmethyl)substituents.

4. B. H. Devens (Oridigm Corporation, USA)

Development of modified polyamines as therapeutics for the treatment of human diseases.

5. R. Gardner, P. M. Cullis (Leicester University, UK)

Synthesis of a novel polyamine-conjugate to probe the mechanism of uptake of nucleotides and other related compounds.

6. S. Merali (New York University School of Medicine, USA)

Pneumocystis carinii growth and polyamine metabolism: It's all about SAM.

7. S. C. Roberts (Oregon Health Sciences University, USA)

Characterization of the polyamine pathway in *Leishmania donovani*.

8. K. Luersen, M.-L. Eschbach, E. Liebau, R. D. Walter (Bernhard Nocht Institute for Tropical Medicine, Germany)

Caenorhabditis elegans spermidine synthase - a membrane-associated protein that is expressed in intestinal cells.

9. Y. Takatsuka, Y. Yamaguchi, M. Ono, Y. Kamio (Tohoku University, Japan)

Gene cloning and molecular characterization of lysine decarboxylase from *Selenomonas ruminantium* delineate its evolutionary relationship to ornithine decarboxylases from eukaryotes.

10. S. L. Moore (Northern Illinois University, USA)

Antizyme activation in chemotherapy and chemoprevention.

11. R. Madhubala (Jawaharal Nehru University, India)

Effect of *Leishmania donovani* lipophosphoglycan on ornithine decarboxylase activity in macrophages.

12. Y. Wang (Hebrew University-Hadassah Medical School, Israel)

The anticancer activities of green tea polyphenol (-)-epigallocatechin gallate: ornithine decarboxylase as a target.

13. M. Yoshida, K. Kashiwagi, G. Kawai, A. Ishihama, K. Igarashi (Chiba University/Chiba Institute of Technology/National Institute of Genetics, Japan)

Polyamine enhancement of the synthesis of adenylate cyclase at the translational level and consequential stimulation of the synthesis of the RNA polymerase sigma 28 subunit.

14. Y.-S. Terui (Tokyo University of Pharmacy and Life Science, Japan)

Tetrakis(3-aminopropyl)ammonium, a unique polyamine produced by an extreme thermophile, stabilizes nucleic acid at high temperature.

15. V. S. Raj, H. Tomitori, M. Yoshida, A. Apirakaramwong, K. Kashiwagi, K. Takio, A. Ishihama, K. Igarashi (Chiba University/Institute of Physical and Chemical Research (RIKEN)/National Institute of Genetics, Japan)

Properties of a revertant of *Escherichia coli* viable against spermidine accumulation: increase in L-glycerol 3-phosphate.

16. K. Sakata, K. Kashiwagi, S. Shahana, S. Ueda, S. Iwasaki, A. Shirahata, K. Igarashi (Chiba University/Josai University, Japan)
Acrolein produced from spermine may be a major uremic toxin.
17. J. E. Rider (Johns Hopkins Oncology Center, USA)
Role of glutathione S-transferase activity and glutathione depletion in antitumor effects of polyamine analogs.
18. M. Ohnuma (Tokyo University of Pharmacy and Life Science, Japan)
*Study of polyamine synthetic enzymes of *Thermus thermophilus* HB8.*
19. M. Yatin, I. M. Burkner, C. McCusker, S. Hiltier, E. A. Carter, A. J. Fischman (Massachusetts General Hospital/MIT/Schriber's Hospital for Children, USA)
*Polyamine involvement in *Escherichia coli* infected rats.*
20. O. Phanstiel (University of Central Florida, USA)
Synthesis and biological evaluation of polyamine-DNA intercalator conjugates.
21. C.-H. Lin, H. Lyons, M. S. Seelbach, R. Tolia (Wayne State University, USA)
Ornithine decarboxylase is essential in growth but not differentiation or functional development of stomach induced by early weaning.
22. Y. Wang, W. Devereux, P. M. Woster, T. M. Stewart, M. Hacker, R. A. Casero, Jr. (Johns Hopkins University/Wayne State University, USA)
Cloning and characterization of a human polyamine oxidase that is inducible by polyamine analogue exposure.
23. D. L. Wheeler, P. J. Reddig, N. E. Dreeschmidt, A. K. Verma (University of Wisconsin)
Protein kinase C δ -mediated signals to ornithine decarboxylase induction and to suppression of skin tumor promotion are independent.

24. Y. Guo, K. Visvanathan, K. J. Helzlsouer, P. Strickland, S. Hoffman, T. G. O'Brien (Johns Hopkins School of Public Health/Lanckeanau Medical Research Center, USA)
Association of an ODC polymorphism and the risk of prostate cancer: a nested case-control study.
25. C. M. Bastida, M. T. Castells, J. Martinez, F. Canizares, A. Cremades, R. Penafiel (University of Murcia, Spain)
Mouse adrenal ornithine decarboxylase: sexual dimorphism and implication in adrenal hormone content.
26. C. M. Henley, R. A., Mayer, Jr. (Amgen Inc./Carolinas Medical Center, USA)
Hearing dysfunction in spermine deficient gyro male mouse, a mutant with extensive disruption of the spermine synthase gene.
27. P. M. J. Clement, H. M. Hanauske-Abel, E. C. Wolff, M. Park (National Institute of Dental Craniofacial Research, USA)
The antifungal drug ciclopiroxolamine is the most potent inhibitor of deoxyhypusine hydroxylase in mammalian cells.
28. A. Khomutov, T. Hyvonen, J. Vepsalainen, T. Keinanen, J. Janne (Russian Academy of Sciences, Russia)
Novel SSAT inhibitors derived from aminoxy analogues of polyamines.