1999 GORDON RESEARCH CONFERENCE ON POLYAMINES

<<Poster Presentations>>

[Poster Set I]

1. J. Moshier
Continuing studies on the role of ODC deregulation on tumorigeneic transformation. New studies utilizing inhibitors of polyamine uptake on progressively tumorigenic human breast cell lines.

2. M. va der Graaf, R. Shipper, G. O. N. Oosterhof, J. A. Shalken, A. A. J. Verhofstad, A. Heerschap (University Hospital Nijmegen, Netherland)
H MRS of prostatic tissue focused on the detection of spermine, a possible biomarker of malignant behaviour in prostate cancer.

3. J. Ekstrom (Cornell University, USA)
Structural studies of *S*-adenosylmethionine decarboxylase.

4. O. Levillain, J.-J. Diaz, I. Reymond, A. Greco, A. Didier (Lyon RTH Laennec/CNRS, France)
Fine localization of ornithine decarboxylase in the kidney of control and testosterone-treated female mouse.

5. K. Kiiransen (University of Kuopio, Finland)
Disruption of the mouse spermine synthase gene.

6. R. Shipper, N. Romain, A. A. Otten, J. Tan, W. P. Lange, A. A. J. Verhofstad (University Hospital Nijmegen, Netherland; Presbyterian Hospital of Dallas/University of Texas Southwestern Medical Center at Dallas, USA)
Immunocytochemical detection of ornithine decarboxylase.

7. M. Cayre, C. Strambi, P. Charpin, R. Augier, A. Strambi (CNRS, France)
Influence of polyamines on structuring the brain of an adult insect.

8. B. P. Kirby, S. Ryder, J. Renault, N. Seiler, G. G. Shaw (Trinity College/Universite de Rennes1/IRCAD, France)
N1-dansyl-spermine: a new antagonist of spermine's modulatory action at the NMDA receptor macrocomplex.

9. P. Berntsson (Lund University, Sweden)
Differential translational regulation of ornithine decarboxylase and *S*-adenosylmethionine decarboxylase during the cell cycle.

10. C.-Lin, V. Tolia, R. Vijesurier (Wayne State University and Children's Hospital of Michigan, USA)
Essential role of polyamine biosynthesis in intestinal growth induced by early weaning.

11. S. M. Oredsson, P. S. H. Berntsson, K. Alm (Lund University, Sweden)
Half lives of ornithine decarboxylase and *S*-adenosylmethionine decarboxylase activities during the cell cycle of Chinese hamster ovary cells.

12. W. O'Brien (Baylor College of Medicine, USA)
Understanding the role of arginase II in physiology and in polyamine synthesis.

13. M. C. Bastida, F. Tejada, A. Cremades, R. Penafiel (University of Murcia, Spain)
Effects of polyamine deprivation on sex hormones and reproductive functions in mice.

14. L. J. Shore, M. B. Hodgins, S. K. Gilmour, J. D. Pitts, M. E. Finbow (CRC Beatson Institute for Cancer Research, Scotland)
Keratinocyte gap junctional intercellular communication is regulated by ornithine decarboxylase and polyamines.

15. K. Alm, S. Oredsson (Lund University, Sweden)
Spermine deficiency induced DNA strand brakes in Chinese hamster ovary cells.

16. C. Audit (Universite de Bordeaux, France)
Mechanism of thalidomide teratogenicity.

17. R. Autelli, P. Gaddi, E. Dametto, L. Persson, S. Crepaldi, G. Bonelli, F. M. Baccino (University of Turin/Centro CNR di Immunogenetica ed Oncologia Sperimentale, Italy; University of Lund, Sweden)
Efect of cysteine replacement on ornithine decarboxylase degradation and activity.

18. C. S. Coleman, A. E. Pegg (Pennsylvania State University, USA)
Ubiquitin targets spermidine/spermine N1-acetylspermine (SSAT) for degradation by the proteasome.

19. F. Flamigni, A. Facchini, C. Capanni, C. Stefanelli, B. Tantini, C. M. Caldarera (Universita di Bologna, Italy)
p44/42 mitogen-activated protein kinase is involved in the expression of the ornithine decarboxylase in leukaemia L1210 cells.

20. C. Hegardt, G. Andersson, S. Oredsson (Lund University/Active Biotech Research, Sweden)
Different roles of spermine in glucocorticoid- and FAS-induced apoptosis.

21. E. A. Hudson, L. Howells, M. S. Squires, M. M. Manson (University of Leicester, UK)
Mechanisms of action of the chemopreventive agent indole-3-carbinol.

22. D. E. McCloskey, A. E. Pegg (Pennsylvania State University, USA)
Altered SSAT activity as a cause of cellular resistance to polyamine analogues.

23. S. L. Moore, J. L. A. Mitchell (Northern Illinois University, USA)
Antizyme forms originating from the first start site of the AZ-1 gene.

24. P. Berntsson, K. Alm, D. Kramer, C. Porter, S. Oredsson (Lund University, Sweden; Roswell Park Cancer Center, USA)
Early cell cycle effects in Chinese hamster ovary cells treated with N1, N11-diethylnorspermine (DENSPM).

25. M. Sanjay (University of Pittsburgh, USA)
Cloning and tissue-specific expression of agmatinase: an alternative pathway for polyamine synthesis in mammalian cells.

26. L. Shantz (The Milton S. Hershey Medical Center, USA)
The mechanism of ODC induction during Ras transformation.

27. K. T. Thompson, H. M. Wallace (University of Aberdeen Medical School, UK)
The role of polyamines in cytotoxicity.

28. C. Toth, P. Coffino (University of California, USA)
Regulated degradation of yeast ornithine decarboxylase.
[Poster Set II]

29. M. T. Olmo, H. Hayashi, M. A. Medina, F. Sanchez-Jimenez (University of Malaga, Spain)
Spectroscopic and direct mutagenesis approaches to the catalytic mechanism of mammalian histidine decarboxylase.

30. A. Khomutov (Bakh Institute of Biochemistry, Russia)
Novel acid-free deprotection of N-(2-hydroxyarylidene) amines.

31. I. D. Algranati (Fundacion Campomar, Argentina)
Expression of an exogenous ornithine decarboxylase gene in Trypanosoma cruzi epimastigotes.

32. S. Roberts (Oregon Health Sciences University, USA)
Genetic analysis of polyamine metabolism in Leishmania donovani.

33. S. Biondi, S. Fornale, S. Scaramagli, K. Oksman-Caldentey, N. Bagni, P. Torrigiani (University of Bologna, Italy; VTT Biotechnology & Food Research, Finland)
Jasmonate-stimulated polyamine biosynthesis in cultured plant tissues leads to over-accumulation of hydroxycinnamoyl amides and methylputrescine.

34. M. Franceschetti, C. Hanfrey, S. Scaramagli, A. J. Michael (Institute of Food Research, UK)
Conservation of the bicistronic message structure and rapid processing characteristics of the *S*-adenosylmethionine decarboxylase family between monocots and dicots.

35. C. Hanfrey, A. J. Michael (Institute of Food Research, UK)
The Arabidopsis *S*-adenosylmethionine decarboxylase is translationally regulated by the encoded product of an upstream ORF.

36. F. Hennion J. Martin-Tanguy (Universite de Rennes, France)
Amine distribution and content in organs of the subantarctic apecies *Pringlea actiscorbutica* are responsive to external conditions.

37 C. Illingworth, A. J. Michael (Institute of Food Research, UK)
Post-translatonal regulation of polyaine biosynthesis in plants; isolation of ornithine decarboxylase-binding protein from Arabidopsis.

38. H. Maki (Japan Women's University, Japan)
Biosynthesis and function of polyamines in growth of rice cells.

39. M. Mayer, S. Sommer, A. Liggett, J. Hamill, A. J. Michael (Institute of Food Research, UK)
Early events in the regulation of plant polyamine metabolism by wounding and jasmonate.

40. S. Minocha (University of New Hampshire, USA)
Genetic manipulation of the metabolism of polyamines and its effects on related pathways.

41. E. Morlon, A. J. Michael (Institute of Food Research, UK)
Use of a 'smart' genetic screen in yeast to isolate Arabidopsis suppressors of the growth defect caused by low levels of polyamines.

42. R. Minocha, S. Long (USDA Forest Service, USA)
Polyamines as markers of environmental stress in forest trees.

43. D. Serafini-Fracassini, S. Del Duca, D. Dondini, M. Della Mea (University of Bologna, Italy)
Plant transglutaminases: possible roles in cytoskeleton organization and photosynthesis.

44. A. Tassoni, R. Napier, N. Bagni, M. Venis (University of Bologna, Italy; Horticulture Research Internatioinal, UK)
Purification of a specific spermidine-binding protein from maize (zea mays L) coleoptiles.

45. J. Atkinson (Brock University, Canada)
Synthesis of hydroxycinnamoyl amides of polyamines and assessment of their neurotoxicity to invertebrates in comparison to polyamine spider toxins.

46. E. Csuhai (Transylvania University, USA)
The spermine binding site of NRD convertase.

47. K. Samejima (Josai University, Japan)
Application of ultrafiltration for measurements of macromolecule-bound and liberated polyamines in rat liver homogenates.

48. M. Belting, L. Fransson (Lund University, Sweden)
Binding of polyamines to proteoglycans - implications for growth regulation.

49. M. Matsushima, E. Fujiwara, M. Wada, A. Shirahata (Josai University, Japan)
Detection of biotinylated proteins in HTC cells cultured in the presence of biotinylpolyamine.

50. M. Halmekyto S. Vujcic, J. Janne, C. W. Porter (Roswell Park Cancer Institute, USA; University of Kuopio, Finland)
Over-expression of spermidine/spermine N1-acetyltransferase activity in MCF-7 breast carcinoma cells causes growth inhibition and increases sensitivity to the polyamine analog N1, N11-diethylnorspermine.

51. K. Kaasinen, L. Alhonen, J. Koistinaho, A. Vitanen (University of Kuopio, Finland)
Injury induced glial fibrillary acidic protein expression is reduced in mice by overexpressing spermidine/spermine N1-acetyltransferase.

52. C. A. Mackintosh, D. J. Feith, A. E. Pegg (Pennsylvania State University, USA)
Characterization of mice and cells deficient in spermine synthase.

53. M. Pietila, T. Hyvonen, J. Parkkinen, M. Halmekyto, L. Alhonen, J. Janne (University of Kuopio, Finland)
Life without fat; transgenic mice which overexpress spermidine/spermine N1-acetyltransferase (SSAT) show accelerated fatty acid breakdodwn.

54. S. Suppola (University of Kuopio, Finland)
Characterization of transgenic mice overexpressing both ODC and SSAT.

55. M. Kaouass, M. Audette R. Poulin (CHUL research Center, Canada)
Polyamine homeostasis is under the control of calcineurin and Ppz phosphatases in *Sccharomyces cerevisiae*.

56. K. Kashiwagi, A. Kuraishi, K. Igarashi (Chiba University, Japan)
Identification of amino acid residues in PotE involved in putrescine uptake and excretion.

57. J. W. Olson, P. Babal, M. Ruchko, M. N. Gillespie (University of South Alabama, USA)
Hypoxia regulation of ornithine decarboxylase (ODC) and polyamine transport in rat pulmonary artery endothelial cells (PAEC).

58. K. Sakata, K. Kashiwagi, K. Igarashi (Chiba University, Japan)
Regulation of polyamine transport by the antizyme.

59. R. S. Weeks, S. M. Vanderwerf, C. L. Carlsson, M. R. Burns, C. L. O'Day, F. Cai, H. Webb (Oridigm Corporation, USA)
Novel lysine-spermine conjugate alters *in vitro* and *in vivo* tumour cell grorwth through inhibition of polyamine transport.

60. M. Yoshida, D. Meksuriyen, K. Kashiwagi, G. Kawai, K. Igarashi (Chiba University/Chiba Institute of Technology, Japan)
Polyamine stimulation of the synthesis of oligopeptide-binding protein (OppA): involvement of a structural change of the Shine-Dalgarno sequence and the initiation codon AUG in OppA mRNA.

61. A. K. Mattoo, T. Cassol, A. Handa, R. Mehta, N. Li, N. Ali (USDA-S Vergetable Laboratory, USA)
Tomato fruits transformed with the yeast SAMDC gene accumulates spermidine and polyamines.

62. L. Kovassin, D. Soulet, M. Audette, R. Charest-Gaudreault, R. Poulin (Laval University Medical Research Centre, Canada)
Design and evaluation of a spermidine - bodipy conjugate as a probe of the polyamine transport system.

63. L. Kovassin, M. J. Bonneau, M. D. Jardins, M. Audette, R. Charest-Gaudreault, R. Poulin (Laval University Medical Research Centre, Canada)
Non-cytotoxic spermidine and norspermidine diamers act as pure antagonists of polyamine transport and potentiate polyamine depletion caused by alpha-difluoromethylornithine (DFMO).

64. R. Minocha, S. Long, H. Maki, S. C. Minocha (University of New Hanpshire, USA)
Assays for the activities of polyamine biosynthetic enzymes using intact tissues.

65. P. Torrigiana, S. Scaramagli, M. M. Altamura, S. Biondi (University of Bologna, Italy)
Perturbation of the free to conjugated polyamine ratio alters organogenesis in tobacco plants.

66. Y. Hanzawa, T. Takahashi, Y. Komeda (Hokkaido University, Japan)
The first genetic evidence of the involvement of a spermine synthese in plant development.

67. A. Nakabachi, H. Ishikawa (University of Tokyo, Japan)
Unique profile of polyamine composition in aphid's endosymbiotic system.

68. K. Shiokawa, M. Kai, T. Higo, J. Yokosuka, M. Shibata, Y. Yasuhiko, M. Nagano, E. Takayama, K. Igarashi, H. Fukamachi (University of Tokyo/Chiba University, Japan)
Overexpression of *S*-adenosylmethionine decarboxylase (SAMDC) in early *Xenopus* embryos switches on apoptotic program shortly after MBT and inhibits transition from the blastula to gastrula stage.