

Poster Abstracts (continued)

Amino Acid Oxidases

- P01 **Structure and function of *Rhodotorula gracilis* D-amino acid oxidase 1: site-directed mutagenesis of tyrosines 223 and 238** Gianluca Molla, Christopher M. Harris, Angelo Boselli, Silvia Sacchi, Mirella S. Pilone and Loredano Pollegioni
- P02 **Structure and function of *Rhodotorula gracilis* D-amino acid oxidase 2: site-directed mutagenesis of arginine 285 and pH effects** Viviana Job, Christopher M. Harris, Davide Porrini, Gianluca Molla, Cristina Vegezzi, Laura Motteran, Sandro Ghisla, L. Pollegioni and Mirella S. Pilone
- P03 **Very high resolution crystallographic structures of D-amino acid oxidase complexed with substrate and various ligands** Stephan Umhau, Davide Porrini, Gianluca Molla, Loredano Pollegioni, Kay Diederichs, Sandro Ghisla, Wolfram Welte and Mirella Pilone
- P04 **Mutation in a hydrophobic sequence motif common to N-hydroxylating enzymes** Oliver Seth, Liliana Smau, Peter Macheroux, Sandro Ghisla and Wolfram Welte
- P05 **Oligomerization and aggregation of lysine-N⁶-hydroxylase – an enzyme of the bacterial aerobactin biosynthesis** Liliana Smau, Oliver Seth, Peter Macheroux, Wolfram Welte and Sandro Ghisla
- P06 **Gender dependent tissue distribution of D-aspartate oxidase in *Xenopus laevis*** Gabriella Tedeschi, Armando Negri, Giovanni Bernardini, Emanuella Oungre, Fabrizio Cecilian and Severino Ronchi
- P07 **Characterization of L-amino acid oxidase from the Malayan pit viper *Calloselasma rhodostoma*** Peter Macheroux, Karina Kitzing, Michael Vetsch, Sandro Ghisla, Margarete Schwarz and Manfred Kurfürst
- P08 **Role of the hydrogen-bonding network associated with isoalloxazine in the catalysis of D-amino acid oxidase** Chiaki Setoyama, Retsu Miura, Yasuzo Nishina, Kiyoshi Shiga, Hisashi Mizutani, Ikuko Miyahara and Ken Hirotsu

Dehydrogenation, Various

- Q01 **Cholesterol oxidase from *Brevibacterium sterolicum* and *Streptomyces hygroscopicus*: a covalent FAD binding vs. a non-covalent one** Laura Motteran, Sandro Ghisla, Mirella S. Pilone and Loredano Pollegioni
- Q02 **The dual role of Asp170 in vanillyl-alcohol oxidase** Robert H. H. van den Heuvel, Marco W. Fraaje andrea Mattevi and Willem J. H. van Berkel
- Q03 **Dynamics and spatial peculiarities of the mitochondrial NADH dehydrogenase. Spectroscopic studies.** Nikolai Vekshin, Irina Sharova and Vladislav Sukharev

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| Q04 | An iso-mechanism for nitroalkane oxidase: evidence for a slow proton transfer to solvent coupled to isomerization of the free reduced enzyme | Giovanni Gadda and Paul F. Fitzpatrick |
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Dihydroorotate Dehydrogenases

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| R01 | Roles of three prosthetic groups in the tetrameric dihydroorotate dehydrogenase B from <i>Lactococcus lactis</i> | Kaj Frank Jensen, Olof Bjørnberg, Finn S. Nielsen, Mette Ottosen, Palle G. Sørensen, Paul Rowland, Sofie Nørager and Sine Larsen |
| R02 | The function of dihydroorotate dehydrogenases (DHOD) | Sofie Nørager, Sine Larsen, Olof Bjørnberg and Kaj Frank Jensen |
| R03 | The dihydroorotate dehydrogenases of <i>Escherichia coli</i> and <i>Lactococcus lactis</i> represent two distinct families of the enzyme | Olof Bjørnberg and Kaj Frank Jensen, Anne Charlotte Grüner, Mette Ottosen, Palle Gravegaard Sørensen, Sine Larsen, Paul Rowland and Sofie Nørager |
| R04 | Dihydroorotate dehydrogenase from <i>Saccharomyces cerevisiae</i> | Douglas B. Jordan, John J. Bisaha and Michael A. Picollelli |
| R05 | Reduction reactions of two dihydroorotate dehydrogenases | Bruce A. Palfey, Olof Bjørnberg and Kaj Frank Jensen |
| R06 | Studies on dihydroorotate dehydrogenase (DHODHase) and pyrD from the thermoacidophilic archaeon <i>Sulfolobus solfataricus</i> | Palle Gravegaard Sørensen and Gert Dandanell |
| R07 | Expression, purification and characterization of the human and rodent flavoenzyme dihydroorotate dehydrogenase | Alexandra Ullrich, Wolfgang Knecht, Ute Bergjohann, Markus Fries, Benjamin Bader and Monika Löffler |
| R08 | Reversible unfolding and stability of dihydroorotate dehydrogenase A from <i>Lactococcus lactis</i> | Mette Brimheim Ottosen, Olof Bjørnberg, Kaj Frank Jensen, Lise Schack and Sine Larsen |

Flavoproteins and -SS-/SH

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| S01 | A NADH oxidase functional as alkyl hydroperoxide reductase | Youichi Niimura, Yoshitaka Nishiyama, Toshihiro Watanabe, Kenji Ohnishi, Takeshi Nishino and Vincent Massey |
| S02 | Kinetic isotope effects on coenzyme A disulfide reductase | James Luba and Al Claiborne |
| S03 | Identification of the critical cysteine residues for XDH to XO conversion | Masanari Tsujimura and Vincent Massey |
| S04 | Functional characterization of the N-terminus of AhpF by chimeric construction with TrR | C. Michael Reynolds and Leslie B. Poole |
| S05 | Egg white sulfhydryl oxidase: catalysis of the formation of disulfide bonds in protein and peptides | Karen L. Hooper, Stacey L. Sheasley and Colin Thorpe |

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| S06 | Functional and regulatory studies of two distinct NADH oxidases from <i>Streptococcus mutans</i> | M. Higuchi, Y. Yamamoto, L. Poole, M. Shimada, Y. Sato, N. Takahashi and Y. Kamio |
| S07 | Thioredoxin reductase from <i>Plasmodium falciparum</i>: evidence for interaction between the C-terminal cysteine residues and the active site disulfide/dithiol | Pan-Fen Wang, L. David Arscott, Tim-Wolf Gilberger, Sylke Müller and Charles H. Williams, Jr. |
| S08 | Tetryl as inhibitor and “subversive substrate” for human erythrocyte glutathione reductase | Vanda Miskiniene, Zilvinas Anusevicius, Audrone Maroziene, Regina Kliukiene, Henrikas Nivinskas, Jonas Sarlauskas, Katja Becker and Narimantas Cenas |
| S09 | NADPH destabilizes disulfide reductases | Markus Schirmer, Michael Scheiwein, Stephan Gromer, Katja Becker and R. Heiner Schirmer |

Protein-Protein Interactions

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| T01 | The flavin domain of plasma membrane-bound nitrate reductase in roots of higher plants | Stefanie Wienkoop, Ute Reck, Wolfram R. Ullrich and Christiane Stöhr |
| T02 | Evidence for conformational changes associated with catalysis and flavodoxin binding of B₁₂-dependent Methionine Synthase | Sha Huang and Rowena G. Matthews |
| T03 | Interactions between <i>E. coli</i> flavodoxin and methionine synthase-probing protein contacts via crosslinking and mutagenesis | Diane A. Hall, Martha L. Ludwig and Rowena G. Matthews |
| T04 | Analysis of a trimeric complex involving chorismate synthase from <i>Bacillus subtilis</i> | Teresa Fitzpatrick, Nikolaus Amrhein and Peter Macheroux |
| T05 | Regulation of electron transfer in flavocytochrome b₅₈₈ by the activation domain of p67^{phox} | Yukio Nisimoto, Chang-Hoon Han, Shabnam Motalebi and David J. Lambeth |

Biosynthesis/Katabolism

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| U01 | ¹⁹F NMR studies on lumazine synthase from <i>Bacillus subtilis</i> | Karl Kugelbrey, Johannes Scheuring, Markus Fischer, Mark Cushman and Adelbert Bacher |
| U02 | Reconstitution of 6-hydroxy-d-nicotine oxidase holoenzyme with N⁶-[N-(2-methylferrocene)-caproylamidoethyl]-FAD | Carmen Brizio andreas F. Bückmann and Roderich Brandsch |
| U03 | Riboflavin transport and metabolism in isolated mitochondria | Maria Barile, Carmen Brizio, Caterina De Virgilio and Salvatore Passarella |
| U04 | Synthesis and application of FAD analogs, functionalized at the N⁶-position of the adenine | Achim Stocker, Hans-Jürgen Hecht, Eugenii Katz, Itamar Willner, Maria Dosch, Clare Troupe and Andreas F. Bückmann |

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| U05 | Biosynthesis of riboflavin: NMR studies on the 46-kDa dimeric protein, 3,4-dihydroxy-2-butanone 4-phosphate synthase | Gerald Richter, Cornelia Krieger, Adelbert Bacher, Mark Kelly, Yihua Yu, Linda J. Ball, Peter Schmieder and Hartmut Oschkinat |
| U06 | Studies on the reaction mechanism of riboflavin synthase | Boris Illarionov, Wolfgang Eisenreich, Gerald Richter, Sabine Eberhardt, Markus Goesse and Adelbert Bacher |
| U07 | Investigation of the binding of certain fluorolumazines and a phosphonic acid to lumazine synthase by $^{15}\text{N}\{^{19}\text{F}\}$ REDOR NMR | Jon M. Goetz, Barbara Poliks, Daniel R. Studelska, Andreas Gießauf, Markus Fischer, Karl Kugelbrey, Adelbert Bacher, Mark Cushman and Jakob Schaefer |
| U08 | Biosynthesis of riboflavin: the reaction catalysed by 6,7-dimethyl-8-ribityllumazine synthase can proceed without catalysis under physiological conditions. | Klaus Kis, Karl Kugelbrey and Adelbert Bacher, |

Medical Aspects

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| V01 | Cell transformation by the superoxide-generating oxidase Mox1 | J. David Lambeth, Rebecca S. Arnold, Young-Ah Suh, Bernard Lassegue, Jing Shi, Xiangxi Xu, Dan Sorescu andrew B. Chung and Kathy K. Griendling |
| V02 | D-amino acid oxidase activity in the senescence-accelerated mouse | Nobuko Ohishi, Shin-ichiro Yokoyama, Miyuki Kurata, Masashi Tanaka, Sadaaki Komura and Kunio Yagi |
| V03 | Riboflavin derivatives in food | Anna Gliszczynska and Anna Koziolowa |
| V04 | A covalently bound flavin discovered in the reductase component of a tetrahydrofuran-induced multicomponent monooxygenase | Barbara Thiemer, Jan R. Andreesen and Thomas Schröder |
| V05 | Investigating the role of covalent flavinylation in vanillyl-alcohol oxidase | Marco W. Fraaije, Robert H. H. van den Heuvel, Willem J. H. van Berkel and Andrea Mattevi |
| V06 | Implication of flavin and flavoprotein in protection of our body from age-related diseases | Kunio Yagi, Sadaaki Komura and Nobuko Ohishi |
| V07 | Review of the biochemical, clinical and radiological manifestations of subacute necrotizing encephalomyelopathy | TLW Stephens |
| V08 | Functional studies of the estrogen binding protein from <i>Candida albicans</i> | James S. Buckman and Susan M. Miller |
| V09 | Dihydroorotate dehydrogenase a new target for anti-pyrimidine drugs | Monika Löffler and Wolfgang Knecht |

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| V10 | Gene expression of D-amino acid oxidase in nervous system | K. Fukui, T. Kanamori, M. Obayashi, O. Jinnouchi, K. Kanda, Y. Urai, Y. Shishido, A. Suzue and T. Sakai |
| V11 | Characterization of an adrenodoxin reductase-like protein of <i>Mycobacterium tuberculosis</i> | Alessandro Aliverti, Federico Fischer, Sara Pasquini, Maria A. Vanoni, Rita Cantoni, Manuela Branzoni, Giovanna Riccardi, Bruno Curti and Giuliana Zanetti |
| V12 | Inhibitors of <i>T. cruzi</i> trypanothione reductase and human glutathione reductase as leads for antiparasitic drug development | Susanne Bonse, Ilme Schlichting and R. Louise Krauth-Siegel |
| V13 | Characterization of glutathione reductase from the malarial parasite <i>Plasmodium falciparum</i> – reductive and oxidative half reactions | C. C. Böhme, L. D. Arscott, K. Becker, R.H. Schirmer and C.H. Williams, Jr. |
| V14 | Cloning and mapping of the cDNA for human sarcosine dehydrogenase, a flavoenzyme defective in patients with sarcosinemia | Michel Eschenbrenner and Marilyn Schuman Jorns |

Regulation, Messengers

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| W01 | Regulation of D-amino acid oxidase expression in the obligatory aerobic yeast <i>Rhodotorula gracilis</i> | Simona Rizzi, Gianluca Molla, Sonia Fantinato and Loredano Pollegioni |
| W02 | Studies of the PutA protein from <i>Escherichia coli</i>: is the flavin redox state a regulatory signal? | Elizabeth Thomas, Michelle Sharpe and Donald F. Becker |

Old Yellow Enzyme

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| X01 | 12-oxo-phytodienoic acid reductase: plant members of the family of Old Yellow Enzymes | Florian Schaller and E. W. Weiler |
| X02 | Overexpression and characterization of 12-oxo-phytodienoic acid reductase from tomato, a member of the OYE family | Jochen Strassner, Andreas Fürholz, Florian Schaller, Peter Macheroux, Elmar W. Weiler, Nikolaus Amrhein and Andreas Schaller |
| X03 | Study of the function of Old Yellow Enzyme in <i>Saccharomyces cerevisiae</i> | Bette Jo Brown and Vincent Massey |
| X04 | The Old Yellow Enzyme family of flavoproteins - comparison of substrate specificity and activity against explosives | Richard E. Williams, Deborah Rathbone, Nigel S. Scrutton, Peter C. E. Moody, Stephen Nicklin and Neil C. Bruce |
| X05 | Structure and mechanism of an opiate-transforming redox enzyme: morphinone reductase | Peter C. E. Moody, Daniel H. Craig, Neil C. Bruce and Nigel S. Scrutton |