**Brazilian Symposium on Chemistry and Physiology of Proteases and their Inhibitors**

**São Carlos, September 28-30, 2014**

The Federal University of São Carlos through its Department of Chemistry and Graduate Program on Chemistry would like to invite you to participate in the Brazilian Symposium on Chemistry and Physiology of Proteases and their Inhibitors to be held from September 28-30, 2014 in São Carlos.

This new conference is aimed to combine the expertise of chemists, biochemists, structural biologists as well as pharmacists to discuss novel protease inhibitors, proteases and their pharmaceutical relevance. The conference is primarily targeting Brazilian graduate students and researchers but is also open for international participation.

The Symposium will focus mainly the following topics:

- Proteases in diseases and as drug targets

- Chemistry of novel inhibitors and substrates

- Proteases and infectious diseases

- Natural product and endogenous protease inhibitors

The Organizing Committee welcomes and wishes a very pleasant and fruitful event to all participants.

**SCIENTIFIC PROGRAM**

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| **28.09.2014 (Sunday)**  15:00-19:00 Registration  19:00-19:15 Opening remarks  19:15-20:00 Opening Lecture: Michael N.G. James (University of Alberta, Edmonton/Canada)  *What can Avian Ovomucoids teach us about Serine Peptidase Specificity?*  20:30-22:30 Welcome reception |

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| **29.09.2014 (Monday)**  **8:30-12:00 Morning Session**  **PROTEASES IN DISEASES AND AS DRUG TARGETS**  8:30-9:10 Dieter Brömme (University of British Columbia Vancouver/Canada)  *From protease mechanisms to mechanism-based inhibitors*  9:10-9:40 Maria Luiza Vilela Oliva (UNIFESP, São Paulo-SP/Brazil)  *Regulation of cellular signaling in the human diseases by using plant protease inhibitor*  9:40-10:00 Hamilton Cabral (USP, Ribeirão Preto-SP/Brazil)  *Production of protease by fungus: biotechnological and pharmaceutical aspects*  10:00-10:20 Suelem Demuner Ramalho (UFSCAR, São Carlos-SP/Brazil)  *Evaluation of light-activated cathepsin B inhibitor in 3D models using triple negative breast cancer cells*  **Coffee break**  10:40-11:10 Robert A. Lazarus (Genentech, South San Franciso/USA)  *Noncanonical Modulators of BACE1 Activity for Alzheimer’s Disease*  11:10-11:40 Thomas Reinheckel (Albert-Ludwigs University Freiburg/Germany)  *Genetic analysis of lysosomal proteases in mouse models of human cancers*  11:40-12:00 Douglas Gatte Picchi (Unesp, São Vicente-SP/Brazil)  *Heterologous production of a cryptic microviridin from Microcystis spp. bloom through metagenomic mining approach and evaluation of its protease inhibitory activity*  **Lunch break**  **14:00-18:00 Afternoon Session**  **CHEMISTRY OF NOVEL INHIBITORS AND SUBSTRATES**  14:00-14:40 Tanja Schirmeister (University of Mainz, Germany)  *Tuning the reactivity and affinity of protease inhibitors*  14:40-15:10 Luiz Juliano Neto (UNIFESP, São Paulo-SP/Brazil)  *Interface studies of cancer with the hydrolytic activities and inhibition of Kallikrein Related Peptidases (KLKs)*  15:10-15:30 Rosy Iara Maciel de Azambuja Ribeiro (UFSJ, Divinópolis-MG/Brazil)  *Phytochemical study and evaluation of the protease inhibitor potential of Stryphnodendron adstringens (Mart.) Coville*  15:30-15:50 Silvia Gomes Passos  *Analysis of Pseudo-peptides as inhibitors for human tissue kallikreins 5 and 7*  **Coffee break**  16:20-16:50 Matthew Bogyo (Stanford University, California/USA)  *Using small molecules to study protease function: applications to parasites, cancer and inflammation*  16:50-17:20 Arlene Gonçalves Correa (UFSCAR, São Carlos/Brazil)  *Synthesis of Natural Product and Analogs as Inhibitors of Cysteine Proteases*  17:20-17:40 Rodrigo Luiz O. R. Cunha (UFABC, São Paulo-SP/Brazil)  *Organoelement compounds as cysteine protease inhibitors and beyond*  17:40-18:00 Klaus Liedl (University of Innsbruck, Austria)  *Impact of Local Dynamics and Local Interaction Potentials on Serine Protease Recognition*  18:00-19:30 Poster Session |
| **30.09.2014 (Tuesday)**  **8:30-12:00 Morning Session**  **PROTEASES AND INFECTIOUS DISEASES**  8:30-9:10 Connor Caffrey (University of California San Francisco, California/USA)  *Targeting orthologous proteases for anti-parasite chemotherapy*  9:10-9:40 Francois Jean (University of British Columbia Vancouver/Canada)  *Human site-1-protease/SKI-1: An emerging host-cell target for anti-dengue drug discovery*  9:40-10:00 Ana Paula Cabral de Araújo Lima (UFRJ, Rio de Janeiro-RJ/Brazil)  *Natural protease inhibitors in pathogenic protozoa*  10:00-10:20 Lorena Ramos Freitas de Sousa (UFSCAR, São Carlos-SP/Brazil)  *Flavonoids as inhibitors of Dengue virus protease*  **Coffee break**  10:50-11:20 Rafael Victorio Carvalho Guido (USP, São Carlos-SP/Brazil)  *Structural Biology and Medicinal Chemistry Approaches Toward the Discovery of New Bioactive Compounds: Applications in Infectious Diseases*  11:20-11:40 Carlos Alberto Montanari (USP, São Carlos-SP/Brazil)  *Non-peptidic Cruzain Inhibitors with Trypanocidal Activity Discovered by Virtual Screening and in vitro Assay*  11:40-12:00 Rafaela Salgado Ferreira (UFMG, Belo Horizonte-MG/Brazil)  *Discovery of Cruzain and Rhodesain Small Molecule Inhibitors Through Experimental Screening*  **Lunch break**  **14:00-18:00 Afternoon Session**  **NATURAL PRODUCT AND ENDOGENOUS PROTEASE INHIBITORS**  14:00-14:40 Vanderlan da Silva Bolzani (UNESP, Araraquara-SP/Brazil)  *Peptides from Violaceae plant species, Discovering New Biologically Active Compounds from Brazilian Biodiversity*  14:40-15:10 Luciano Puzer (UFABC, São Paulo-SP/Brazil)  *Development of Inhibitors for Human Tissue Kallikreins 5 and 7 (KLK5 AND KLK7)*  15:10-15:30 Vivian Estevam Cornelio (UFSCAR, São Carlos-SP/Brazil)  *Inhibitory activity evaluation of plant extracts and isolated compounds against cathepsin D using solution assays and immobilized enzyme*  15:30-15:50 Simon Law (University of British Columbia Vancouver/Canada)  *Exosite Inhibitors of Cathepsin K in Collagen Degradation*  **Coffee break**  16:20-16:50 Quezia Bezerra Cass (UFSCar, São Carlos-SP/Brazil)  *New models of protein ligand screening*  16:50-17:30 Maurício Marques (Agilent Technologies)  *LC-MS as a powerful tool for characterizing therapeutic proteins*  17:30-17:50 Richele Priscila Severino (UFG, Catalão-GO/Brazil)  *Natural products as novel cathepsin inhibitors*  19:00-22:00 Brazilian barbecue |