2015 Scopes Workshop

Mathematical modeling and experimental models in vascular biology

University of Fribourg, Switzerland
February 2 and 3, 2015

Organizers:
Curzio Rüegg, University of Fribourg, Switzerland
Nenad Filipovic, University of Kragujevac, Serbia

Information:
http://www.unifr.ch/med/scopes_modeling-2015/

Day one: Monday, February 2nd, 2015 - Auditorium A140 (1st floor), Pérolles II

09:50 Welcome Address Curzio Rüegg

Session 1: Chair: Valentin Djonov

10:00 – 10:30 Nenad Filipovic, University of Kragujevac
Computer simulation in cancer disease

10:30 – 10:50 Daniel Brönnimann, University of Bern
Vascular damages induced by synchrotron microbeam radiation therapy in adult Zebrafish

10:50 – 11:10 Milos Radovic, University of Kragujevac
Computational modeling of atherosclerosis

11:10 – 11:30 Ghimire Kedar, University of Fribourg
Fluid shear stress-regulated MAGI1 modulates eNOS expression through PKA

11:30 – 11:50 Igor Saveljic, University of Kragujevac
Numerical modeling and simulations of pulsatile blood flow in acute aortic dissection

12:00 – 13:30 Lunch at Pavillon Vert, Botanical Garden

Session 2: Chair: Curzio Rüegg

13:30 – 14:15 Valentin Djonov, University of Bern
Microbeam Radiation Therapy: a promising new antiangiogenic strategy in tumors

14:15 – 15:00 Simone Deparis, EPFL, Lausanne
Mathematical modeling and simulations for the cardio-vascular system

15:00 – 15:20 Laura Schaad, University of Bern
The vascular network of murine hind limb and its adaptations to endurance exercise

15:20 – 15:40 Bojana Andjelkovic Cirkovic, University of Kragujevac
A prediction model for estimation of survival rate and relapse for breast cancer patients

15:40 – 16:15 Tea and coffee break at Hall A130
Prolonged moderate elevation of Angiopoietin-2 profoundly changes the murine vasculature

Swapna Ravikumar, University of Bern
Intussusceptive angiogenesis in Zebrafish model

Chiara Secondini, University of Fribourg
Anti-angiogenesis therapy affects mobilization of inflammatory cells and modulates metastatic development

Workshop dinner for all speakers
Pizzeria “Sole Mio” Rue de Lausanne 76 – 1700 Fribourg

Day two: Tuesday, February 3rd, 2015 - Auditorium A140 (1st floor), Pérolles II
Session 3: Chair: Jelena Zaric

Zhihong Yang, University of Fribourg
Targeting arginase in age-associated cardiovascular and metabolic diseases

Curzio Rüegg, University of Fribourg
Role of integrins in endothelial cell migration, survival and permeability

Velibor Isailovic, University of Kagujevac
Finite element model of human cochlea: air conduction and bone conduction

Tea and coffee break in Hall A130

Nikolaos Stergiopulos, EPFL, Lausanne
Modeling and understanding wave propagation phenomena in the arterial tree

Lunch at Pavillon Vert

Session 4: Chair: Nenad Filipovic

Adrien Lucker, University of Zurich
Multi-scale modeling of oxygen transport in the cerebral microvasculature

Christian Mazza, University of Fribourg
Self-organization of plant vascular systems

Dalibor Nikolic, University of Kagujevac
Prediction of the wall shear stress in arteries with myocardial bridge by neural networks

Tea and coffee break in Hall A130

Zarko Milosevic, University of Kagujevac
Mathematical model of semicircular canal

Yi Yu, University of Fribourg
Role of p38mapk in arginase-II-mediated eNOS-uncoupling and endothelial senescence

End of the workshop

17:00 – 18:00 Internal discussion SCOPES