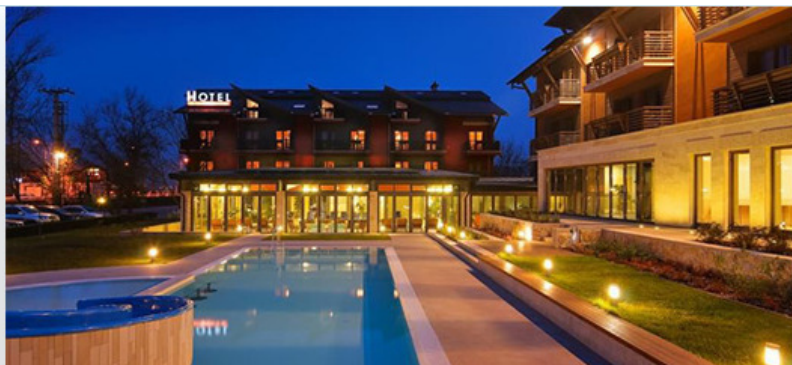


DOMAINS  
MODELING  
GENOMICS  
PROTEOMICS  
LIPIDOMICS  
NETWORKS



INTERDISCIPLINARY  
SIGNALING  
WORKSHOP  
VISEGRAD, HUNGARY, 2014



## PRELIMINARY SCIENTIFIC PROGRAM

21 July 2014

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14:00 Registration starts

16:00 Opening ceremony

*Opening keynote lecture:*

**Douglas Lauffenburger, MIT, USA**

Dynamical feedback circuits in cell biology: Network analysis of proteolytic shedding effects on receptor/ligand signaling

17:30 Welcome reception and dinner

20:30 Informal evening program  
(bowling, table soccer, swimming, etc)



Organizers:

**Ce-M-M-**  
Research Center for Molecular Medicine  
of the Austrian Academy of Sciences

**NetBio**  
Network Biology Group

**TGAC**  
The Genome Analysis Centre™

Sponsors:

**Science Signaling**  
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the network medicine company

**AllSeq**

**Cell Signaling**  
TECHNOLOGY™

**Molecular**  
**BioSystems**

**Integrative**  
**Biology**

22 July 2014

## Structural biology and high-throughput experimental techniques

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**9:00 Keynote lecture:**

**Giulio Superti-Furga**, *CeMM, Austria*

Genes, protein, protein complexes and environmental exchange: Understanding drug action in the context of environmental complexity

**9:45 Expert talk:**

**Rune Linding**, *Technical University of Denmark, Denmark*

Decoding network dynamics in cancer

**10:15 Expert talk:**

**Anne-Claude Gavin**, *EMBL, Germany*

Lipid transport in budding yeast

**10:45 Tea/coffee break**

**11:15 Expert talk:**

**Gabor Balogh**, *BRC, Hungary*

Lipidomics: Role of lipids in signalling networks

**11:45 Contributed talks:**

**Laszlo Buday**, *MTA-TTK, Hungary*

Tks scaffold proteins in tyrosine kinase signalling

**Ivana Vonkova**, *EMBL, Germany*

A systematic analysis of the PH domain recruitment to membranes using novel liposome microarray-based assay

**Christin Zasada and Raphaela Fritsche**, *Max-Delbrueck-Center Berlin, Germany*

From signaling to metabolism and vice versa

**12:30 Lunch**

**14:00 Teamwork - part 1**

**14:00** Getting know each other

**14:30** Presenting the problem to be solved

**16:45** Tea/coffee break

**17:15** Medieval team building competition, informal discussions in the meantime

**19:00 Dinner**

**21:30 Poster session 1**

**22:30 Informal evening program**

**Organizers:**



**Sponsors:**



23 July 2014

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## Network modelling

**9:00 Keynote lecture:**

**Boris Kholodenko**, *University College Dublin, Ireland*  
Catching signals surfing the net

**9:45 Expert talk:**

**Laurence Calzone**, *INSERM at Institut Curie, France*  
Mathematical modelling of bladder tumorigenesis to explain co-occurrence and exclusivity of genetic alterations

**10:15 Expert talk:**

**Julio Saez-Rodriguez**, *EMBL-EBI, United Kingdom*  
Logic modelling of signalling networks in disease

**10:45 Tea/coffee break**

**11:15 Contributed talks:**

**Attila Csikasz-Nagy**, *Kings College London, United Kingdom*  
Epithelial topology dynamics in tissue homeostasis and tumorigenesis

**Abulikemu Abudukelimu**, *VU University Amsterdam, The Netherlands*  
One stone, two birds: a therapy to both inflammation and tumorigenesis in a complex model of tumor incited inflammation

**Aaron Meyer**, *MIT, USA*  
The AXL receptor is a sensor of ligand spatial heterogeneity

**Orsolya Kapuy**, *Semmelweis University, Hungary*  
A systems-level study of mTOR-regulated autophagy induction during endoplasmic reticulum stress

**Alexey Kolodkin**, *Luxembourg Centre for Systems Biomedicine, Luxembourg*  
ROS-activated signaling network: dynamic modelling and design principles study

**12:30 Lunch**

**14:00 Teamwork - part 2**

**14:00** Discussing the problem to be solved

**15:30** Catamaran boat trip in the Danube Bend (each team in each catamaran)

**17:00** Tea/coffee break

**17:30** Summary activity on the problem, creating a presentation

**19:00 Dinner**

**21:30 Poster session 2**

**22:30 Informal evening program**

**Organizers:**



**Sponsors:**



24 July 2014

## Signaling systems & network medicine

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**9:00 Keynote lecture:**

**Hans Westerhoff**, *BioCentrum Amsterdam, The Netherlands*  
Signalling principles

**9:45 Expert talk:**

**Peter Csermely**, *Semmelweis University, Hungary*  
Adaptation of molecular networks and their use in drug design: a signaling perspective

**10:15 Expert talk:**

**Paul Bates**, *Cancer Research, United Kingdom*  
Modelling tumour heterogeneity and metastasis

**10:45 Tea/coffee break**

**11:15 Contributed talks:**

**Sakshi Gulati**, *Cancer Research, UK - LRI, United Kingdom*  
Comprehensive analysis of molecular markers associated with survival and the impact of intratumour heterogeneity in clear cell renal cell carcinoma

**Ferenc Gallyas**, *University of Pecs, Hungary*  
Mitochondrial network dynamics, tumour malignancy and small heat-shock protein expression: Is there a connection?

**Alba Gutiérrez**, *Universitat Pompeu Fabra, Hospital del Mar Medical Research Institute, Spain*  
A network medicine approach to explore comorbidity patterns in Catalonia

**Nadezhda Doncheva**, *Max Planck Institute for Informatics, Germany*  
Dynamic residue interaction networks for understanding signaling protein interactions

**András Zeke**, *MTA-TTK, Hungary*  
Identifying novel mitogen-activated protein kinase partners by a combined structural, sequence-based & evolutionary analysis

**12:30 Lunch**

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**14:00** *Contributed talks*

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**Further signaling network topics**

**Katalin Toth**, *University of Missouri, USA*

Phosphorylation events involved in early perception of soybean rhizobial symbiont *B. Japonicum*

**Bhaswar Ghosh**, *ZMBH, University of Heidelberg, Germany*

Evolutionary flexibility achieved through phosphatase sharing in multilayer MAPK cascade

**Nilgun Yilmaz**, *VU University Amsterdam, The Netherlands*

Low stress weekends promote adaptation to stressful weeks, or do they?

**14:45 Maria Victoria Schneider**, *TGAC, United Kingdom*

How to be an interdisciplinary scientist - integrated discussion on the needs and requests

**15:30 Presentation of teams**

(10 minutes/team)

**16:45 Tea/coffee break**

**17:15 Discussing group presentations, novel ideas, and concrete actions (e.g. collaborations)**

**18:00 Closing Keynote:**

**Toby Gibson**, *EMBL, Germany*

Regulation by molecular switching

**19:00 Renaissance Farewell Feast,**

**Award presentation for teams and poster presenters**

**Closing remarks**

**22:00 Informal evening program with music**

**25 July 2014**

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**Departure's day**

**Organizers:**



**Sponsors:**

