

# Program

## Friday, 2 September

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16:00–18:00 Registration

**Chairpersons: Renato Iozzo and Nikos Karamanos**

18:00–18:30 Welcome Addresses by the Chairman and members of the Organizing Committee  
**S. Gonos**, *Director of Research, Natl Hellenic Res Fnd, Athens, Greece*  
Member of FEBS Advanced Course Committee

### OPENING LECTURES / TUTORIALS (L1–L2)

18:30–19:15 **J. Esko** (*University of California, San Diego, USA*)  
Syndecan–1 shedding reduces clearance of triglyceride-rich lipoproteins by human hepatocytes and causes hypertriglyceridemia

19:15–20:00 **L. Schaefer** (*Goethe–Univeristat, Frankfurt, Germany*)  
SLRPs signaling in innate and adaptive immunity

20:00–20:30 Honorary Medal Awards to Prof. **J. Esko** and Prof. **L. Schaefer** granted by the Rector of the University of Patras

20:30 Welcome Reception

## Saturday, 3 September

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**Chairperson/discussion leader: Hideaki Nagase**

### LECTURES / TUTORIALS – METALLOPROTEINASES (L3–L4)

9:00–9:30 **J. O. Winberg** (*University of Tromsø, Norway*)  
Functions and properties of matrix metalloprotease complexes

9:30–10:00 **H. Nagase** (*Imperial College, London, UK*)  
Fibrillar collagen degradation and cell migration

10:00–10:30 Coffee break

## LECTURES / TUTORIALS – PROTEOGLYCANS (L5–L7)

*Chairperson/discussion leader: John Couchman*

- 10:30–11:00      **J. Couchman** (*University of Copenhagen, Denmark*)  
Syndecans, proteoglycan regulators of cell adhesion
- 11:00–11:30      **J. Whitelock** (*University of New South Wales, Australia*)  
The complexity of proteoglycans – different cores, different glycosaminoglycans in different cells and tissues at different times
- 11:30–12:00      **A. Theocharis** (*University of Patras, Greece*)  
Novel roles of serglycin in malignancy
- 12:00–14:00      Lunch
- 14:00–16:00      Poster session (I) / Discussion groups (I)

*Chairperson/discussion leader: Kristofer Rubin*

## LECTURES / TUTORIALS – INTEGRINS (L8–L9)

- 16:00–16:30      **K. Rubin** (*Uppsala University, Sweden*)  
Role of loose connective tissues in microvascular fluid exchange and drug uptake in carcinoma and localized infections
- 16:30–17:00      **J. Pouwels** (*University of Turku, Finland*)  
Negative regulation of integrin Activity

## LECTURES / TUTORIALS – ECM REMODELLING IN CANCER (L10–L11)

- 17:00–17:30      **I. Kovalsky** (*Semmelweis University, Hungary*)  
Extracellular matrix remodelling in cervical cancer
- 17:30–18:00      **D. Vynios** (*University of Patras, Greece*)  
Reorganization of extracellular matrix in cancer
- 21:00                Dinner

## Sunday, 4 September

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*Chairperson/discussion leader: Renato Iozzo*

### MATRIX PATHOBIOLOGY (L12 – L14)

- 9:00–9:30 **R. Iozzo** (*Thomas Jefferson University, USA*)  
Perlecan interacts with both the  $\alpha 2\beta 1$  integrin and VEGF receptor 2 via its C-terminal angiostatic fragment endorepellin:  
A novel concept of dual receptor antagonism
- 9:30–10:00 **S. Menashi** (*University Paris–Est, CNRS, France*)  
EMMPRIN: key regulator in the dynamic interplay between tumor cells and their microenvironment
- 10:00–10:30 **I. Vlodavsky** (*Cancer and Vascular Biology Research Center, Haifa, Israel*)  
Involvement of heparanase in cancer progression, chronic inflammation and diabetic nephropathy
- 10:30–11:00 Coffee break

### SELECTED TALKS (ST1 – ST4)

- 11:00–11:15 **E. Karousou** (*University of Insubria, Italy*)  
Extracellular matrix perturbation in human cells and tissue affected with Down syndrome
- 11:15–11:30 **C. Bui** (*Newcastle University, UK*)  
DNA methylation: a possible implication in MMP-13 deregulation in osteoarthritis?
- 11:30–11:45 **S. Swaidani** (*Cleveland Clinic, USA*)  
Endogenous TSG-6 is crucial for the development of antigen induced pulmonary hyaluronan deposition, eosinophilia, and air way hyperresponsiveness
- 11:45–12:00 **K. Kouvidi** (*University of Crete, Greece*)  
Hyaluronan signaling through RHAMM in fibrosarcoma cell adhesion
- 12:00–12:30 Light lunch
- 12:30–14:30 Speakers' corner (I)
- 14:30–22:30 Excursion tour and dinner

## Monday, 5 September

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*Chairperson/discussion leader: Vincent Hascall*

### INTERACTIONS AND FUNCTIONS OF MATRIX MACROMOLECULES (L15 – L18)

- 9:00–9:30            **V. Hascall** (*Cleveland Clinic Foundation, USA*)  
Bone marrow stem cells that divide in hyperglycemic glucose  
initiate intracellular hyaluronan synthesis, autophagy and  
pathological adipogenesis
- 9:30–10:00        **A. Passi** (*University of Insubria, Italy*)  
Aspects of regulation of hyaluronan synthesis
- 10:00–10:30        Coffee break
- 10:30–11:00        **P. Heldin** (*Ludwig Institute for Cancer research, Uppsala, Sweden*)  
The role of hyaluronan–CD44 interactions in tumor progression
- 11:00–11:30        **S. Misra** (*Medical University of South Carolina, USA*)  
Hyaluronan/CD44v6 signaling, motility, angiogenesis and  
tumorigenesis in colon cancer

### SELECTED TALKS (ST5 – ST7)

- 11:30–11:45        **C. Rydén** (*Uppsala University, Sweden*)  
Interaction between *Staphylococcus aureus* and extracellular matrix  
protein bone sialoprotein induces an immunological response  
in patients
- 11:45–12:00        **I. Sørensen** (*University of Bergen, Norway*)  
Generation of transgenic mouse strains overexpressing integrin  
 $\alpha 11$  in muscle tissues
- 12:00–12:15        **A. Korpetinou** (*University of Patras, Greece*)  
Serglycin is secreted by aggressive breast cancer cells and inhibits  
the complement system
- 12:15–14:00        Lunch
- 14:00–16:00        Poster Session (II) / Discussion groups (II)

*Chairperson/discussion leader: Paraskevi Heldin*

## MATRIX – MEDIATED SIGNALING AND EMT (L19)

16:00–16:30 **M. Pavão** (*Universtiy of Rio de Janeiro, Brasil*)  
Dual effects of unique oversulfated dermatan sulfates on tumor invasion: inhibition of epithelial–mesenchymal transition and hematogeneous metastasis

## SELECTED TALKS (ST8 – ST15)

16:30–16:45 **S. Magnussen** (*University of Tromso, Norway*)  
Characterization of the murine oral squamous cell carcinoma cell line AT84 stably overexpressing uPAR

16:45–17:00 **H. Porsh** (*Ludwig Institute for Cancer Research, Sweden*)  
Role of Hyaluronan synthase 2 (HAS2) in TGFβ–induced epithelial–to–mesenchymal transition (EMT) of NMuMG normal mammary epithelial cells

17:00–17:15 **M.V. Nastase** (*Goethe–University, Germany*)  
The matrix component biglycan induces generation of reactive oxygen species by signaling through TLR2/TLR4 receptors and the inflammasome

17:15–17:30 **Ch. Gialeli** (*University of Patras, Greece*)  
Targeting epidermal growth factor receptor in colon cancer

17:30–17:45 **C. Jarosz** (*University Paris–Est, CNRS, France*)  
EMMPRIN modulates TGFβ signalling pathway: implications in tumour stroma activation

17:45–18:00 **H. C. Lim** (*University of Copenhagen, Denmark*)  
Interplay between syndecans and cadherins in breast carcinoma

18:00–18:15 **A. Evangelatov** (*Sofia University, Bulgaria*)  
Src, but not FAK, regulates cellular migration in three dimensional environment

18:15–18:30 **E. Milia–Argeiti** (*University of Patras, Greece*)  
Imbalance of MMP–2 and MMP–9 expression versus TIMP–1 and TIMP–2 reflects increased invasiveness of human testicular germ tumors

18:30–19:30 Speakers' corner (II)

21:00 Dinner

Tuesday, 6 September

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*Chairperson/discussion leader: Lena Kjellen*

**GLYCOBIOLOGY AND METABOLIC REGULATION OF ECM MOLECULES (L20 – L21)**

- 9:00–9:30            **K. Sugahara** (*University of Hokkaido, Japan*)  
Involvement of chondroitin sulphate E-type structure in the experimental metastasis of the Lewis lung carcinoma cell line
- 9:30–10:00        **L. Kjellen** (*University of Uppsala, Sweden*)  
Regulation of heparan sulfate biosynthesis
- 10:00–10:30        Coffee break

*Chairperson/discussion leader: Carl-Henrik Heldin*

**SIGNALING AND DISEASE MOLECULAR TARGETING – 1 (L22 – L25)**

- 10:30–11:00        **C.H. Heldin** (*Ludwig Institute for Cancer research, Sweden*)  
Signaling via receptors for TGF $\beta$  via Smad and non-Smad pathways
- 11:00–11:30        **N. Karamanos** (*University of Patras, Greece*)  
Cellular models to evaluate ECM as pharmacological target in breast cancer bone metastasis

**SELECTED TALKS (ST16 – ST18)**

- 11:30–11:45        **S.S. Skandalis** (*Ludwig Institute for Cancer research, Sweden*)  
Proteomic identification of CD44 interacting proteins: the CD44–IASPP–p53 axis
- 11:45–12:00        **G.P. Botta** (*Drexel University College of Medicine, USA*)  
K–Ras activation of ERK2 in 3–D human pancreatic cells regulates invasion and proliferation via induction of matrix metalloproteinase–1 and tissue inhibitor of matrix metalloproteinase–1
- 12:00–12:15        **M. Mongiat** (*Experimental Oncology Division, Italy*)  
The ECM protein MULTIMERIN2 impairs tumor angiogenesis growth by interfering with VEGFR2 signaling
- 12:15–14:00        Lunch

- 14:00–14:30 **D. Nikitovic–Tzanakakis** (*University of Crete, Greece*)  
Glycosaminoglycan / proteoglycans–mediated–signaling  
in cancer growth
- 14:30–15:00 **D. Kletsas** (*NCSR “Demokritos”, Greece*)  
Cellular senescence: Molecular mechanisms and implications  
in tissue homeostasis
- 15:00–15:30 Coffee break

*Chairperson/discussion leader: Dimitris Kletsas*

## **SIGNALING AND DISEASE MOLECULAR TARGETING – 2 (L26 – L29)**

- 15:30–16:00 **R. Tenni** (*University of Pavia, Italy*)  
Interaction of collagen 1 with three small leucine–rich  
proteoglycans
- 16:00–16:30 **A. Giannis** (*Univeristy of Leipzig, Germany*)  
Synthesis and development of bioactive natural products
- 16:30–17:00 **M. Zaman** (*Boston University, USA*)  
Quantitative approaches to probe Integrin cluster diffusion  
and downstream signaling in native like 3D environments
- 17:00–17:30 **S. Ghatak** (*University of South Carolina, USA*)  
Differentiation of heart valve progenitor cells is dependent  
on communication between periostin–integrin and  
hyaluronan–induced signalling

## **SELECTED TALKS (ST19 – ST22)**

- 17:30–17:45 **Elin Hadler–Olsen** (*University of Tromsø, Norway*)  
Stromal impact on tumor invasiveness and gelatinolytic activity  
at the invasive front
- 17:45–18:00 **C.L.R. Belmiro** (*Universtiy of Rio de Janeiro, Brasil*)  
Nanoparticles of heparins of marine invertebrates:  
anti–inflammatory effect on model of inflammatory bowel disease
- 18:15–18:30 **K. Moreth** (*University of Frankfurt, Germany*)  
Biglycan aggravates lupus nephritis through TLR2/4 and  
regulation of the B cell chemoattractant CXCL13
- 18:30–18:45 **V. Tillgren** (*Lund University, Sweden*)  
Extracellular matrix proteins with short clusters of basic amino  
acids show tight binding to glycosaminoglycan chains of cell  
surface proteoglycans leading to a unique targeting and activation  
of specific cell types

- 18:45–19:15      Extra talk by **M. McDowall**  
*(Waters MS Technology Centre, Manchester, United Kingdom)*  
 A Ion Mobility Assisted Data Independent Approach Towards the-  
 Qualitative and Quantitative Profiling of Biomarkers in Complex  
 Protein Mixtures
- 21:00              Dinner

## Wednesday, 7 September

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*Chairperson/discussion leader: Dick Heinegård*

### MATRIX REGULATION IN HEALTH AND DISEASE (L30–L32)

- 09:00–09:30      **G. Murphy** *(Cancer Research Institute, Cambridge, UK)*  
 Metalloproteinases and their roles in the tumour  
 microenvironment
- 09:30–10:00      **K. Dobra** *(Karoliska Institutet, Stockholm, Sweden)*  
 Transdifferentiation of mesenchymal tissues; with special focus  
 on syndecan–1 cell membrane nucleus
- 10:00–10:30      **D. Heinegård** *(University of Lund, Sweden)*  
 ECM derived molecular fragments with roles in the innate  
 immune response

### SELECTED TALKS (ST23–ST26)

- 10:30–10:45      **Megan Lord** *(The University of New South Wales, Australia)*  
 Perlecan, a multifunctional proteoglycan in the vasculature
- 10:45–11:00      **T. Neill** *(Thomas Jefferson University, USA)*  
 Decorin negatively regulates the tumor proangiogenic
- 11:00–11:15      **H. Siiskonen** *(University of Eastern Finland, Finland)*  
 Intracellular hyaluronan localization and effect of microinjected  
 oligosaccharides on hyaluronan coat in HAS3 transfected MCF–7  
 cells
- 11:15–11:30      **C.E. de Andrea** *(Leiden University Medical Center, Netherlands)*  
 Growth plate regulation and osteochondroma formation: insights  
 from tracing proteoglycans in zebrafish models and human  
 cartilage
- 11:30–12:00      Closing remarks: D. Heinegård, V. Hascall, R. Iozzo  
 and N. Karamanos
- 12:00–13:00      Farewell Party
- Afternoon        Departure