

# **Annual Meeting of the German Society for Matrix Biology Frankfurt, September 08-10, 2022**

## **Final Programme**

### **Pre-Meeting for Junior Researchers**

(MAINFELD, Raum für Kultur, Im Mainfeld 6, 60528 Frankfurt am Main)  
Organizers: Zsuzsa Jenei-Lanzl (Frankfurt), Anna Rapp (Frankfurt), Alice Stephan (Cologne)

#### **Wednesday, 07.09.2022**

18:00 - 00:00 Social Event (Main Tower & Zum gemalten Haus)

#### **Thursday, 08.09.2022**

09:00 - 10:15 Junior Session I

09:00 - 09:15 Introduction

09:15 - 10:15 Poster pitches I

10:15 - 11:00 Coffee Break

11:00 - 12:15 Junior Session II

11:00 - 12:00 Interactive discussion

12:00 - 12:15 Concluding remarks

12.15 - 14.00 Lunch Break

# Main Meeting

## Thursday, 08.09.2022

11:00 - 18:00 Registration

14:15 - 14:30 Welcome and Opening by Liliana Schäfer & Frank Zaucke (Frankfurt)

### **Session I: PROTEIN SECRETION**

Chairs: Julian Nüchel (Cologne) & Ping Shen (Berlin)

14:30 - 15:00 **Invited Lecture: Ishier Raote (Barcelona)**

TANGO1 in collagen secretion: function and dysfunction

15:00 – 15:15 Elco Eidhof (Münster), ERp57 directs extracellular matrix organization of the C28/I2 chondrocyte cell line

15:15 - 15:30 Tatyana Danyukova (Hamburg), Impaired osteoblastogenesis and extracellular matrix formation in an MBTPS2-knockout cell-based model of X-linked Osteogenesis imperfecta

15:30 - 15:45 Alice Stephan (Cologne), Homozygous Kdelr2-mutant mice display defects in endochondral and intramembranous bone formation

15:45 - 16:15 Coffee Break

### **Session II: MUSKULOSKELETAL BIOLOGY**

Chairs: Rolf Brenner (Ulm) & Anna Rapp (Frankfurt)

16:15 - 16:45 **Invited Lecture: Qing-Jun Meng (Manchester)**

Circadian regulation of extracellular matrix homeostasis: implications in ageing and disease

16:45 - 17:00 Kristina Bubb (Cologne), Cartilage-specific respiratory chain inactivation alters extracellular matrix homeostasis through metabolic signaling

17:00 - 17:15 Daniela Mählich (Cologne), Both plastin 3 overexpression and deficiency leads to matrix degradation in articular cartilage

17:15 - 17:30 Yinebib Dagnachew (Singapore), Collagen deposition in lung parenchyma driven by depletion of LYVE-1+ macrophages protects against emphysema and loss of airway function

17:30 - 18:00 Coffee Break

18:00-19:00 **Keynote Lecture: Shireen Lamandé, Melbourne**

Modelling skeletal disorders using human induced pluripotent stem cells

19:00-22:00 **Welcome Reception and Poster Session**

(MAINFELD, Raum für Kultur, Im Mainfeld 6, 60528 Frankfurt am Main)

## **Friday, 09.09.2022**

### **Session III: MECHANOBIOLOGY**

Chairs: Anja Niehoff (Cologne) & Jana Riegger (Ulm)

09:00 - 09:30 **Invited Lecture:** Andy Pitsillides (London)

Mechanical interplay across the osteochondral junction

09:30 – 09:45 Julia Marzi (Tübingen), Marker-independent Identification of Fibrotic and Epigenetic Alterations in Endometriosis

09:45 – 10:00 Svenja Kleiser (Freiburg), The Impact of Tissue Biomechanics on Epidermal Integrity in Dystrophic Epidermolysis Bullosa

10:00 – 10:15 Wyonna Rindt (Würzburg), Study of the Involvement of single ECM molecules in Multiple Myeloma Bone Disease

10:15 - 10.45 Coffee Break

### **Session IV: GROWTH FACTORS**

Chairs: Gerhard Sengle (Cologne) & Charikleia Spanou (Cologne)

10:45 - 11:15 **Invited lecture: Malgorzata Wygrecka (Gießen)**

Fibroblast-epithelial cell miscommunication in lung fibrosis

11:15 - 11:30 Charikleia Spanou (Cologne), Targeting of bone morphogenetic protein complexes to heparin/ heparan sulfate in bioactive conformation

11:30 - 11:45 Jurij Froese (Münster), Bivalent heparan sulfate interactions determine Hedgehog morphogen gradient robustness and range: A general mechanism for extracellular protein distribution?

11:45 - 12:00 Ping Shen (Berlin), NOS inhibition reverses TLR2-induced chondrocyte dysfunction and attenuates age-related osteoarthritis

12:00 - 13:00 Lunch Break

13:00 - 14:00 Poster Session

### **Session V: CLINICAL TRANSLATION**

Chairs: Katja Schenke-Layland (Reutlingen) & Alice Stephan (Cologne)

14:00 - 14:30 **Invited Lecture: Martin Götte (Münster)**

Syndecans as pathogenesis factors and targets for cancer therapy

14:30 - 14:45 Max Urbanczyk (Tübingen), Decorin improves pancreatic  $\beta$ -cell function and regulates ECM expression in vitro

14:45 - 15:00 Jana Riegger (Ulm), Senolytic combination of Dasatinib and Quercetin increases matrix production in osteoarthritic chondrocytes

15:00 - 15:15 Chenglong Wang (Regensburg), Human osteogenic differentiated BMSCs derived EVs rescue osteogenic ability of hBMSCs impaired by hypoxia

15:15 - 15:45 Coffee Break

## **Session VI: CONNECTIVE TISSUE DISORDERS**

Chairs: Rita Dreier (Münster) & Helen Dietmar (Heidelberg)

### **15:45 - 16:15 Invited Lecture: Sandra Pohl (Hamburg)**

Skeletal matrix degradation in lysosomal storage disorders

16:15 - 16:30 Julian Nüchel (Cologne), GRASP55 regulates the cis-Golgi transport of the GlcNAc-1-phosphotransferase and correct targeting of lysosomal hydrolases

16:30 - 16:45 Uwe Hansen (Münster), Organization of lamellae in the corneal stroma: Mouse models for better understanding of the pathomechanism of keratoconus

16:45 - 17:00 Julia Etich (Cologne), Mutation in a cilia-associated gene impairs collagen fibril formation and leads to Osteogenesis imperfecta

17:00 – 17:15 Coffee break

### **17:15 - 18:20 Young Investigator Award Session**

Chairs: Mats Paulsson (Cologne) & Klaus von der Mark (Erlangen)

17:15 - 17:20 Introduction

17:20 - 17:50 Gundula Rösch (Frankfurt), Sympathectomy and  $\beta$ 2-adrenoceptor deficiency attenuate subchondral bone matrix sclerosis in murine osteoarthritis model

17:50 - 18:20 Nanpeng Chen (Munich), Focal adhesion disassembly at mitotic entry

18:30 - 19:30 Business Meeting of the German Society for Matrix Biology

20:00 - 00:00 Conference Dinner (Restaurant Dorade, Carl-von-Noorden-Platz 5, 60596 Frankfurt am Main)

## **Saturday, 10.09.2022**

### **Session VII: CANCER**

Chairs: Alexander Nyström (Freiburg) & Julia Marzi (Tübingen)

### **09:00 - 9:30 Invited Lecture: Gertraud Orend (Straßburg)**

Tenascin-C orchestrating an immune suppressive tumor microenvironment

09:30 - 09:45 Daniela Schulz (Regensburg), Differential cell cycle dependent PD-L1 variants in cell fractions of head and neck cancer cells

09:45 - 10:00 Chuan-En Lu (Tübingen), Raman Microspectroscopy identifies that macrophage polarization correlates to biomaterial-induced fibrosis in vivo

10:00 - 10:15 Nancy Espinoza-Sanchez (Münster), Impact of syndecan-1 (CD138) on the lateral transmission of aggressive breast cancer cell behavior

10:15 - 11:00 Coffee Break

## **Session VIII: DEVELOPMENT**

Chairs: Susanne Grässel (Regensburg) & Zsuzsa Jenei-Lanzl (Frankfurt)

11:00 - 11:30 **Invited Lecture: Didier Stainier (Bad Nauheim)**

Biological robustness: genetic compensation and transcriptional adaptation

11:30 - 11:45 Steffen Lütke (Cologne), Extracellular targeting of hemicentins to the fibrillin microfibrillar network

11:45 - 12:00 Kay Grobe (Münster), Hedgehog long-range signaling requires direct morphogen switching from one heparan sulfate chain to the next

12:00 - 12:15 Ratish Raman (Liege), Osteoblast transcriptome in 4 days old zebrafish larvae and the role of Fbln1 and Col10a1a bone extracellular matrix proteins during zebrafish skeletal development.

12:15 Concluding remarks and end of conference