

PROGRAMME

9th Meeting of the European Mast Cell and Basophil Research Network (EMBRN) – a Marcus Wallenberg Symposium

June 17 - 19, 2019

Monday, June 17

12.00-13.00 **Registration, outside room X, floor 2**

13.00-13.15 **Welcome address, room X, floor 2** (Gunnar Pejler)

Session I: Mast cell biology: basics and future

(chaired by Lars Hellman and Silvia Bulfone-Paus)

13.15-13.55 **K Frank Austen** (Harvard Medical School): *“Intrinsic and extrinsic directed diversity of tissue mast cells”*

13.55-14.15 **Magda Babina** (Charité - Universitätsmedizin Berlin): *“MRGPRX2 and human skin mast cells - functional aspects and regulation by extracellular cues”*

14.15-14.25 **Petr Draber** (Academy of Sciences of the Czech Republic): *“ORMDL3 regulates leukotriene biosynthesis and chemotaxis in mast cells”*

14.25-14.35 **Karla Alina Ramirez-Valadez** (Unidad Coapa, México): *“Participation of Fyn kinase in the migration of mast cells in response to transforming growth factor β ”*

14.35-14.45 **Gokhan Cildir** (University of South Australia): *“Immunoglobulin E (IgE)-mediated mast cell activation governs a novel chromatin landscape”*

14.45-14.55 **Edismauro Garcia Freitas Filho** (University of São Paulo): *“RACK1: a new scaffold hub for regulated secretion in mast cells”*

14.55-15.35 **Coffee break**, poster mounting

Session II: Mast cells/basophils, IgE and inflammatory lung disease

(chaired by Sara Wernersson and Frank Redegeld)

15.35-16.15 **Stephen J Galli** (Stanford University): *“Mast cells and IgE in health and disease”*

16.15-16.35 **Jenny Hallgren Martinsson** (Uppsala University): *“The significance of mast cell progenitors in allergic asthma”*

16.35-16.55 **Jonas Erjefält** (Lund University): *“Disease and Microenvironments as Determinants for Tissue Mast cell Phenotypes”*

16.55-17.05 **Kwok Ho Yip** (Centre for Cancer Biology, Adelaide): “*A novel role of cytokine receptor common beta subunit in amplifying FcεRI-mediated mast cell activation*”

17.05-17.15 **Anna-Karin Johnsson** (Karolinska Institutet): “*Characterization of lipid mediator release in IgE stimulated human CBMC's and lung mast cells*”

17.15-17.25 **Jane Warner** (University of Southampton): “*Combining immunofluorescent imaging and micro-CT to visualize mast cells and 3D networks in human lung tissue*”

17.25-17.35 **Aida Paivandy** (Uppsala University): “*Mechanism of oxidative stress-induced mast cell apoptosis in response to granule permeabilization*”

17.35-17.45 **Lars Hellman** (Uppsala University): “*Highly selective cleavage of TH2 promoting cytokines by human mast cell tryptase and chymase*”

17.45-20.00 **Poster session I** (snacks and drinks)

P1 - 2B4 direct interactions with Staphylococcus aureus exotoxins play an important role in allergy and bacterial infection

P2 - A novel Kit D816V mutated cell model for mastocytosis

P3 - Activated mast cells contribute to chronic inflammatory conditions in sickle cell anemia

P4 - Amelioration of MRGPRX2-mediated itch and reduced mast cell degranulation by a single-stranded oligonucleotide

P5 - Anti-allergic effects of Inotodiol from Chaga mushroom via a selective mast cell-stabilizing activity

P6 - Ataxin-3, a SCA3 neurodegenerative disorder protein, affects mast cell functions

P7 - Can mast cell progenitors be activated by IgE crosslinking?

P8 - Capitalizing on paradoxical activation of the MAPK pathway for treatment of imatinib-resistant mast cell leukemia

P9 - Characterization of Histaminergic Angioedema and Chronic Spontaneous Urticaria with Angioedema

P10 - Characterization of Rab12 Interactions with its Rab-Interacting Lysosomal Protein (RILP) Family Effectors

P11 - CholU patients exhibit higher numbers of mast cells in the skin

P12 - Different use of BTK and PLC in FcεRI- and KIT-activated mast cells: a minor role of BTK upon KIT activation

P13 - Effects Of PI3K Inhibitors On Human Lung And Cord Blood-Derived Mast Cells

P14 - Ex vivo human skin microdialysis as a tool to investigate allergic reactions and mast cell responses in the skin

P15 - FXII-inhibiting effects reduce due to cleavage of Mast cell chymase to C1 inhibitor.

P16 - Glutamate triggers the expression of ionotropic and metabotropic glutamate receptors in mast cells

P17 - Human Basophils Express Vanilloid Receptor 1 and are Responsive to Stimulation with Capsaicin and Lysophosphatidic Acid

P18 - Human Mast Cells Produce The Mammalian Chondroitin Hydrolase, Hyaluronidase 4

P19 - Hyper-proliferation in mast cells: does tryptase have a role?

P20 - IL-1beta activates IL-3 primed human basophils with a higher potency than IL-33

P21 - Immune response against HtrA proteases as a potential marker in mast cell- related diseases in children

P22 - Interleukin (IL)-33: novel inducer of mast cell proliferation and new therapeutic target for allergic diseases

P23 - Interleukin-33: a double-edged sword in mast cell responses to rhinovirus infection

P24 - Intraepithelial Mast Cells in Asthmatic Patients are Associated with Less Symptoms and Improved Wound Healing Responses

P25 - Investigating red meat allergy in an alpha Gal deficient mouse model

P26 - Lung Cancer-Derived Microvesicles: a mediator of mast cell activation in the tumor microenvironment

P27 - Mas-related-G-protein-coupled-receptor X2 mediated degranulation of HMC1 cells cultured with latrunculin B

Tuesday, June 18

08.00-09.00 **EMBRN board meeting**, seminar room 3 (“seminarierum 3”), floor 2, congress venue

Session III: Basophil biology

(chaired by Stephan Bischoff and Carole Oskeritzian)

09.00-09.30 **Hajime Karasuyama** (Tokyo Medical and Dental University): *“Crucial role for basophils in emphysema development in a murine model of COPD”*

09.30-09.50 **Merav Cohen** (Weizmann Institute of Science): *“Single cell interaction map reveals a novel role for basophils in lung development”*

09.50-10.10 **Joakim Dahlin** (Karolinska Institute): *“Dissection of the basophil-mast cell fate decision at the single-cell level”*

10.10-10.20 **Yasmine Lamri** (Université Paris Diderot): *“Basophils contribute to Mixed Connective Tissue Disease (Sharp syndrome) development”*

10.20-10.30 **Christophe Pellefigues** (Malaghan Institute of Medical Research): *“Basophils induce the skin barrier dysfunction and participate in the resolution of atopic dermatitis”*

10.30-11.00 **Coffee break**

Session III, continued

11.00-11.20 **Nicholas Charles** (Université Paris Diderot): “*Basophils and IgE in systemic autoimmune diseases*”

11.20-11.30 **Bernhard F. Gibbs** (University of Oldenburg): “*Human Basophils are Recruited in Bullous Pemphigoid and are Activated by IgE-Dependent Mechanisms*”

11.30-11.40 **Sylvia M.T. Groen** (University of Oldenburg): “*Serotonin Inhibits IgE-Dependent IL-4 Secretion from Human Basophils*”

Session IV: A mast cell/basophil smorgasbord

(chaired by Ronit Sagi-Eisenberg and Peter Bradding)

11.40-12.00 **Anne Dudeck** (Otto-von-Guericke University Magdeburg): “*Mast cell and Dendritic cell communication and mutual arming to ensure acute host defense*”

12.00-12.20 **Hans-Jürgen Hoffmann** (Aarhus University & Hospital): “*Basophil activation as a model for the allergic response*”

12.20-12.30 **Edouard Leveque** (Cancer Research Center of Toulouse): “*Eicosanoids: a new step in deciphering mast cells/ CD4+ T cells Crosstalk*”

12.30-12.40 **Zou Xiang** (Guizhou Medical University, China): “*Fcγ receptor-dependent mast cell apoptosis regulates tissue persistence*”

12.40-12.50 **Yiyu Wang** (Charité – Universitätsmedizin Berlin): “*Lyn controls Syk-independent FcεRI signaling in Mast Cells*”

12.50-13.00 **Christopher Von Beek** (Uppsala University): “*Streptococcal streptolysin S encoded by sagA activates a pro-inflammatory response in mast cells by a sublytic mechanism*”

13.00-14.00 **Lunch** (served at congress venue)

Session V: Mast cells and basophils in disease

(chaired by Magnus Åbrink and Francesca Levi-Schaffer)

14.00-14.20 **Silvia Monticelli** (Università della Svizzera Italiana): “*Transcriptional and post-transcriptional regulation of mast cells*”

14.20-14.40 **Gunnar Nilsson** (Karolinska Institute): “*Single-cell analysis to reveal mast cell development in mastocytosis*”

14.40-15.00 **Adrian Piliponsky** (Seattle Children's Research Institute): “*Basophil-derived tumor necrosis factor can enhance innate immunity in a sepsis model in mice*”

15.00-15.10 **Qingqing Jiao** (Universitätsmedizin Berlin): “*Skin mast cells contribute to Sporothrix schenckii infection*”

15.10-15.20 **Flavie Ngo Nyekel** (Paris Diderot University): “*Mast cell degranulation exacerbates skin rejection by enhancing neutrophil recruitment*”

15.20-15.30 **Yana Arestova** (Charité – Universitätsmedizin Berlin): “*Mast cells modulate antigen-specific CD8 T cell activation during viral infections*”

15.30-15.40 **Roberta Sulenti** (Istituto Nazionale dei Tumori, Milan): “*Mast cells- derived osteopontin protects from neuroendocrine prostate cancer*”

15.40-15.50 **Martin Houde** (Université de Sherbrooke): “*Mouse Mast Cell Protease 4 Deletion Protects Heart Function and Survival After Permanent Myocardial Infarction*”

15.50-16.00 **Rajia Bahri** (University of Manchester): “*The melanoma micro-milieu alters mast cell characteristics and conditions their activities*”

16.00-18.00 **Poster session II** (drinks + snacks)

P28 - Mast cell activation and microtubule organization is modulated by miltefosine through protein kinase C inhibition

P29 - Mast cell exosomes stimulate collagen synthesis

P30 - Mast cell extracellular trap formation upon bacterial stimulation occurs independently of reactive oxygen species

P31 - Mast cell protease activity in sputum of asthma patients during and out of pollen season

P32 - Mast cell proteases regulate inflammation and impairs anti-viral response in human bronchial epithelial cells

P33 - NvCI carboxypeptidase inhibitor dampens airway hyperreactivity and goblet cell hyperplasia in a model of allergic asthma

P34 - PI3K-dependent regulation of FOXO1 tunes the inflammatory response of mast cells

P35 - Polyphenols affect circadian expression of clock genes and chemokines in human mast cells

P36 - Protective role of mouse mast cell tryptase mMCP6 in melanoma

P37 - Protein Tyrosine Phosphatase SHP-1 Regulates Microtubule Nucleation in Mouse Bone Marrow-Derived Mast Cells

P38 - Proteomic profiling of lipid rafts isolated from RBL-2H3 mast cells

P39 - RBL-MRGPRX2 cells are a valid model for dissecting the underlying mechanisms of MRGPRX2 function

P40 - Resveratrol and nobiletin inhibit IgE-antigen-mediated STAT3 activation in mast cells

P41 - Role of mast cells in melanoma brain metastases: Identification of primary cancer-specific prognostic mediators.

P42 - Selectivity of the human mast cell tryptase for positively charged substrates

P43 - Syk and Nf-kB are critical for basophil activation by diverse stimuli

P44 - The Basoph8xiDTR mice allow a reliable identification and a specific conditional depletion of basophils.

P45 - The frequency of circulating mast cell progenitors correlates with female gender and reduced lung function

P46 - The function and regulation of IL-33 and ATP in mast cell activation

P47 - The mast cell chymase locus during 400 million years of tetrapod evolution

P48 - The mouse chymase MCP-4 regulates intestinal inflammatory responses during infection with *Giardia intestinalis*

P49 - The MRGPRX2 agonist Cortisatin-14 degranulates human skin mast cells in vitro and in vivo

P50 - The role of complement anaphylatoxins C3a and C5a in human mast cell function

P51 - The role of mast cells in a mouse model of Alzheimer's disease

P52 - The Role Of Myosin1f In Ige-Dependent And Independent Degranulation In Mast Cells.

P53 - Valproic acid modulates FcERI mediated mast cell activation

P54 - Wnt signaling activates human mast cells and cause cytokine release

P55 - Skin microbiome regulates stem cell factor (SCF) level in Keratinocytes and defines mast cell maturation

P56 - Microbiota-mast cell interactions in a humanized mouse model of IBS

P57 - Novel method for assessing basophil activation by measuring altered expression of membrane-bound and intracellular basogranulin stores

19.00 **Conference dinner (Norrlands Nation)**

Wednesday, June 19

09.00-09.50 **EMBRN general assembly** (all EMBRN members welcome)

09.50-10.20 **Coffee break**

Session VI: Mast cell and basophils: therapy and diagnostics

(chaired by Bernard Gibbs and Bettina Jensen)

10.20-10.40 **Ana Olivera** (NIH): *"Mastocytosis-derived extracellular vesicles with a mast cell signature as unsuspected contributors to disease pathology"*

10.40-10.50 **Jelle Folkerts** (Utrecht University): *"Butyrate Inhibits Human Mast Cell Activation Through Regulation of Expression of Key Signal Transducers"*

10.50-11.00 **Jesper Säfholm** (Karolinska Institutet): “*Prostacyclin Inhibits Mannitol-induced Contractions of Isolated Human Small Airways*”

11.00-11.10 **Carole A. Oskeritzian** (University of South Carolina): “*Newly uncovered angiogenic remodeling in asymptomatic eczema requires mast cells and sphingosine kinase 1*”

11.10-11.20 **Susanne Kaesler** (University Munich): “*Targeting melanoma-resident mast cells to boost tumor immune defense*”

11.20-11.30 **Devavani Chatterjea** (Macalester College): “*Tetrahydrocannabinol reduces DNFB-driven vaginal mast cell accumulation and persistent genital pain in ND4 outbred mice*”

11.30-12.00 **Marcus Maurer** (Charité - Universitätsmedizin Berlin): “*Mast cells and basophils as therapeutic targets – past, present, future*”

12.00-12.10 **Presentation of EMBRN 2021**

12.10-12.30 **Prize ceremony (travel grants; attendance required for eligibility)**

12.30-12.40 **Closing remarks: Gunnar Pejler**