

**SFB 914 –  
Trafficking of Immune  
Cells in Inflammation,  
Development and Disease**



# International Conference on Leukocyte Trafficking

March 26–28, 2014  
Carl Friedrich von Siemens Foundation  
Nymphenburg Palace, Munich

With generous support by:

**DFG** Deutsche  
Forschungsgemeinschaft



*Carl Friedrich von Siemens Stiftung*

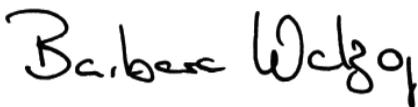
Dear Colleagues,

It is our great pleasure to welcome you to the *International Conference on Leukocyte Trafficking* organized by the Munich-based Collaborative Research Center (Sonderforschungsbereich) SFB 914 entitled “Trafficking of Immune Cells in Inflammation, Development and Disease”.

Our Collaborative Research Center was initiated by researchers of the Ludwig-Maximilians-University to conduct ambitious projects with long-term perspective on leukocyte trafficking. Being launched in 2011, our initiative focusses on the cell intrinsic migratory profiles of immune cells as a critical prerequisite for immune surveillance under physiological steady state conditions and during disease states. To date, the molecular and cellular signatures that control and organize this complex process of mammalian immune cell trafficking are still incompletely understood. It is therefore the mission of our SFB 914 to dissect the signals and mechanisms that regulate the migratory responses of distinct leukocyte subsets during inflammation, development and in disease states. A graduate school entitled “Leukocyte Trafficking” flanks our scientific efforts. All research groups of SFB 914 will present their work during the poster session.

We look forward to an intense scientific exchange and hope you will enjoy our meeting.

Welcome to Munich!

A handwritten signature in black ink that reads "Barbara Walzog". The script is cursive and fluid, with the first letters of each word being capitalized and prominent.

Barbara Walzog, Speaker of SFB 914  
On Behalf of the Scientific Organizing Committee

13:00 **Barbara Walzog**  
*Speaker of SFB 914 (Munich, Germany)*  
and

**Barbara Conradt**  
*LMU Vice President for Research and Diversity (Munich, Germany)*  
**Welcome Address**

### **Session 1: *In Vivo* Imaging of Immune Responses**

Chairs: **Alexander Khandoga, Barbara Walzog**

13:15-13:45 **Ronald Germain**  
*National Institutes of Health (Bethesda, MD, USA)*  
**Probing innate and adaptive immunity using dynamic intravital and highly multiplex static imaging methods**

13:45-14:15 **Matthias Gunzer**  
*University of Duisburg-Essen (Essen, Germany)*  
**New approaches to study neutrophil biology *in vitro* and *in vivo***

14:15-14:45 **Thorsten Mempel**  
*Harvard Medical School (Charlestown, MA, USA)*  
**Cell migration and cell-cell interactions in the adaptive immune system**

14:45-15:15 **Steffen Massberg**  
*Ludwig-Maximilians-Universität München (Munich, Germany)*  
**Crosstalk between pericytes and innate immune cells**

15:15-15:45 *Coffee Break*

### **Session 2: Alarmins and Danger Signals**

Chairs: **Christoph Reichel, Markus Sperandio**

15:45-16:15 **Denisa Wagner**  
*Harvard Medical School (Boston, MA, USA)*  
**NETs fueling disease**

16:15-16:45 **Nancy Hogg**  
*Cancer Research UK (London, UK)*  
**New functions for S100A8/A9**

16:45-17:15 **Johannes Roth**  
*University of Münster (Münster, Germany)*  
**S100-alarmins: amplifier of innate immunity**

- 17:15-17:45 **Kodimangalam Ravichandran**  
*University of Virginia (Charlottesville, VA, USA)*  
**'Find-me' signals from apoptotic cells and a new role for pannexin channels**
- 17:45-18:00 **Kirsten Lauber**  
*Ludwig-Maximilians-Universität München (Munich, Germany)*  
**Dying cell-derived 'find-me' signals in monocyte recruitment**
- 18:00-18:15 **Oliver Söhnlein**  
*Ludwig-Maximilians-Universität München (Munich, Germany)*  
**The double-edged role of FPR2 ligands in arterial leukocyte recruitment**

19:00 *Speakers' Dinner*

## Thursday, 27 March 2014

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### Session 3: Cell Decisions in Adaptive Immunity

Chairs: **Melanie Laschinger, Thomas Brocker**

- 9:00-9:30 **Reinhold Förster**  
*Hannover Medical School (Hannover, Germany)*  
**Swarm hunting of cytotoxic T cells *in vivo***
- 9:30-10:00 **Ulrich von Andrian**  
*Harvard Medical School (Boston, MA, USA)*  
**The mystery of NK cell memory**
- 10:00-10:30 **Philippe Bousso**  
*Institut Pasteur (Paris, France)*  
**Visualizing how T cells collect activation signals *in vivo***
- 10:30-11:00 **Dirk Busch**  
*Technische Universität München (Munich, Germany)*  
***In vivo* single T cell fate mapping and its implications for immunotherapy**
- 11:00-11:30 *Coffee Break*

## Session 4: Signaling in Leukocyte Trafficking

Chairs: **Ralph Böttcher, Christoph Klein**

- 11:30-12:00 **Attila Mocsai**  
*Semmelweis University School of Medicine (Budapest, Hungary)*  
Src-family kinases in leukocyte trafficking and inflammation
- 12:00-12:30 **Hugo Castro Faria Neto**  
*Oswaldo Cruz Institute – Fiocruz (Rio de Janeiro, Brasil)*  
Src-family kinase inhibitor Dasatinib protects from lethality in a sepsis model: The effect on leukocyte trafficking and function
- 12:30-13:00 **Waldemar Kolanus**  
*University of Bonn (Bonn, Germany)*  
Novel role of a small GTPase in leukocyte adhesion regulation
- 13:00-14:30 *Lunch*

## Session 5: Chemokines

Chairs: **Markus Moser, Christian Weber**

- 14:30-15:00 **Michael Sixt**  
*Institute of Science and Technology Austria (Klosterneuburg, Austria)*  
Mechanisms of gradient sensing during interstitial migration
- 15:00-15:30 **Ronen Alon**  
*Weizmann Institute of Science (Rehovot, Israel)*  
Endothelial heparan sulfates: Chemokine presenters and barriers for leukocyte diapedesis
- 15:30-16:00 **Klaus Ley**  
*La Jolla Institute for Allergy & Immunology (La Jolla, CA, USA)*  
CCR5-dependent trafficking of a unique T cell subset in atherosclerosis
- 16:00-16:30 **Antal Rot**  
*University of Birmingham (Birmingham, UK)*  
Expression and function of CCRL1 in lymph nodes
- 16:30-17:00 *Coffee Break*
- 17:00-18:30 **Poster Session**

19:00 *Social Dinner at "Schlosscafé im Palmenhaus"*

**Session 6: Leukocyte – Endothelial Cell Axis**

Chairs: **Annette Müller-Taubenberger, Fritz Krombach**

9:00-9:30 **Catherine Robin**

*Hubrecht Institute (Utrecht, The Netherlands)*

The origin of blood stem cells

9:30-10:00 **Frederic Geissmann**

*King's College London (London, UK)*

Monocyte and macrophage interactions with capillaries and the endothelium

10:00-10:30 **Sussan Nourshargh**

*Barts and The London School of Medicine and Dentistry (London, UK)*

Mode and inflammatory consequences of neutrophil-vessel wall interactions

10:30-11:00 **Dietmar Vestweber**

*Max-Planck-Institute of Molecular Biomedicine (Münster, Germany)*

Leukocyte diapedesis and endothelial junctions

11:00-11:30 *Coffee Break*

**Session 7: Leukocyte Trafficking in Disease**

Chairs: **Christoph Scheiermann, Rainer Haas**

11:30-12:00 **Triantafyllos Chavakis**

*Technische Universität Dresden (Dresden, Germany)*

Leukocyte trafficking in metabolic disease

12:00-12:30 **Britta Engelhardt**

*University of Bern (Bern, Switzerland)*

The brain barriers control immune cell trafficking into the CNS

12:30 *Short Lunch*

## Posters by Research Projects of SFB 914

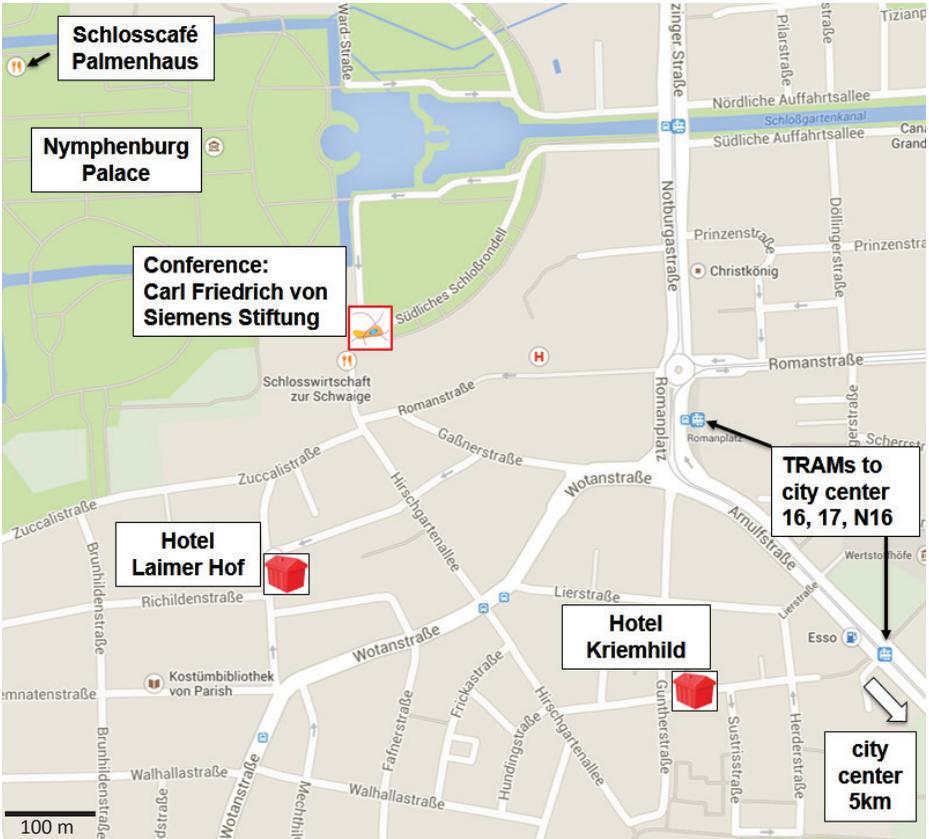
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- A01 Moser** Platelets and neutrophils require different Kindlin-3 copy numbers to control integrin-mediated functions *in vivo*
- A02 Walzog** Role of the mAbp1 interactome for neutrophil trafficking in innate immunity
- A03 Benoit/Massberg** Adhesion and mechanics of T cells cued by the lipid chemokine sphingosine 1-phosphate
- A04 Laschinger** T cell migration – how LFA-1 signalling regulates ERM activity
- A05 Böttcher/Fässler** Characterization of conformation-specific cytoplasmic integrin interactors
- A06 Brocker** Control of dendritic cell migration and biology by Rho-family GTPases
- A07 Schleicher/Müller-Taubenberger** Cytoskeletal dynamics in migrating leukocytes and *Dictyostelium* amoebae
- A08 Klein** Mutations in MST1 and JAGN1 affect cell migration and cause primary immunodeficiency diseases
- B01 Sperandio** Blood cell function during fetal development
- B02 Massberg** Leukocyte migration in sterile inflammation
- B03 Krombach/Reichel** MMPs modulate ameboid-like migration of neutrophils through inflamed interstitial tissue
- B04 Busch/Verschoor** Factors in the induction of effective cytotoxic T cell immunity to *Listeria monocytogenes*
- B05 Haas** Differential effects of the major *H. pylori* virulence factors VacA and CagA on neutrophil and dendritic cell migration
- B06 Lauber** Dying cell-derived ‘find-me’ signals in monocyte recruitment
- B07 Hilbi** Modulation of phagocyte migration by *Legionella*
- B08 Weber/Söhnlein** Distinct function of chemokine receptor axes in the atherogenic mobilization and recruitment of classical monocytes
- \*B09 Scheiermann** Circadian control of leukocyte trafficking
- Z1 Massberg/Khandoga** *In vivo* visualization of leukocyte migration by 2-photon microscopy

\* associated project



## Map & Addresses



### Conference Venue:

Carl Friedrich von Siemens Stiftung  
Südliches Schlossrondell 23, 80638 Munich

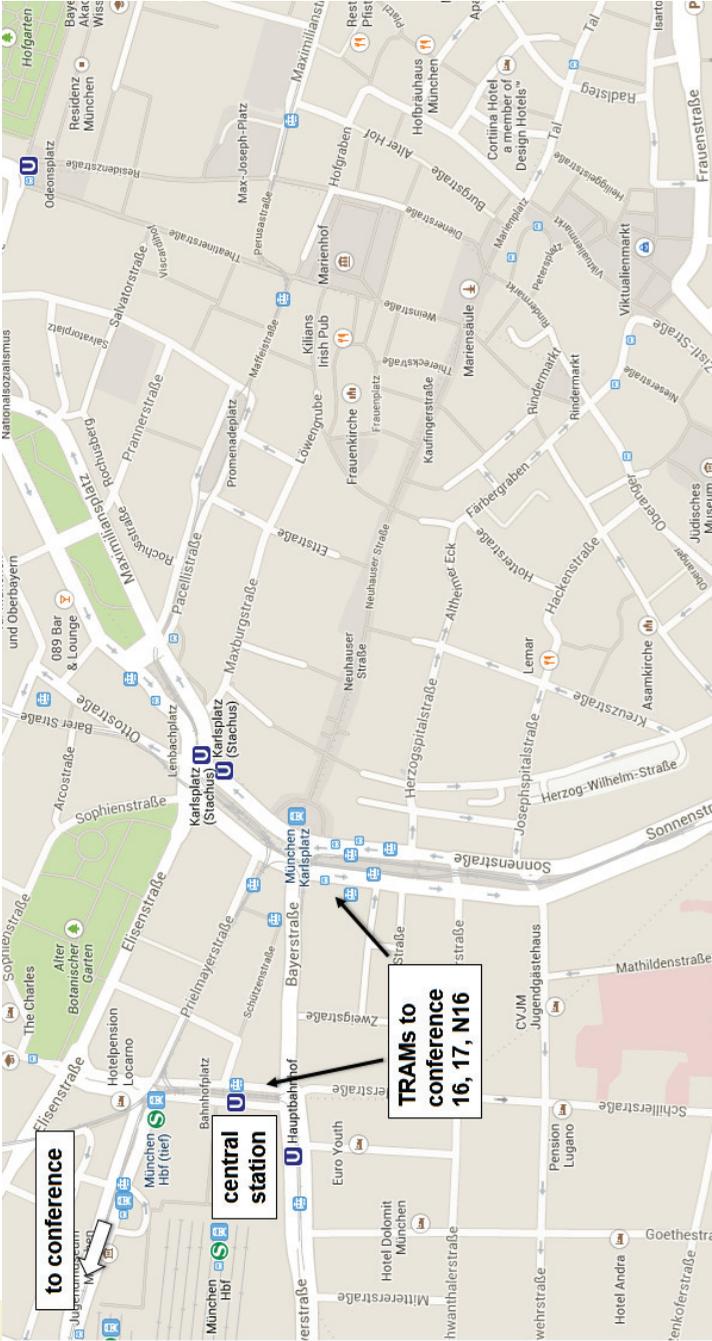
### Hotels:

Hotel Laimer Hof, Laimer Straße 40, 80639 Munich, +49 (0)89-17 80 380  
Hotel Kriemhild, Guntherstraße 16, 80639 Munich, +49 (0)89-17 11 170

### Social Dinner (Thursday evening):

Schlosscafé im Palmenhaus, Schloß Nymphenburg 43, 80638 München

# Inner City Map



**To City Center:** From the conference venue go to tram stop “Romanplatz” and take Tram #16 “St. Emmeram” or Tram #17 “Schwanseestraße” – travel time ca. 11 min to Munich central station (“Hauptbahnhof”)

## Scientific Organizing Committee

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**Kirsten Lauber** Board Member of SFB **914**  
Department of Radiation Oncology, LMU München

**Steffen Massberg** Vice-Speaker of SFB **914**  
Medizinische Klinik und Poliklinik I, LMU München

**Christoph Scheiermann** Associated Member of SFB **914**  
Walter Brendel Centre of Experimental Medicine, LMU München

**Oliver Söhnlein** Member of SFB **914**  
Institute for Cardiovascular Prevention, LMU München

**Markus Sperandio** Board Member of SFB **914**  
Walter Brendel Centre of Experimental Medicine, LMU München

**Barbara Walzog** Speaker of SFB **914**  
Walter Brendel Centre of Experimental Medicine, LMU München

### Phone Contact During the Conference:

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### SFB 914 Office

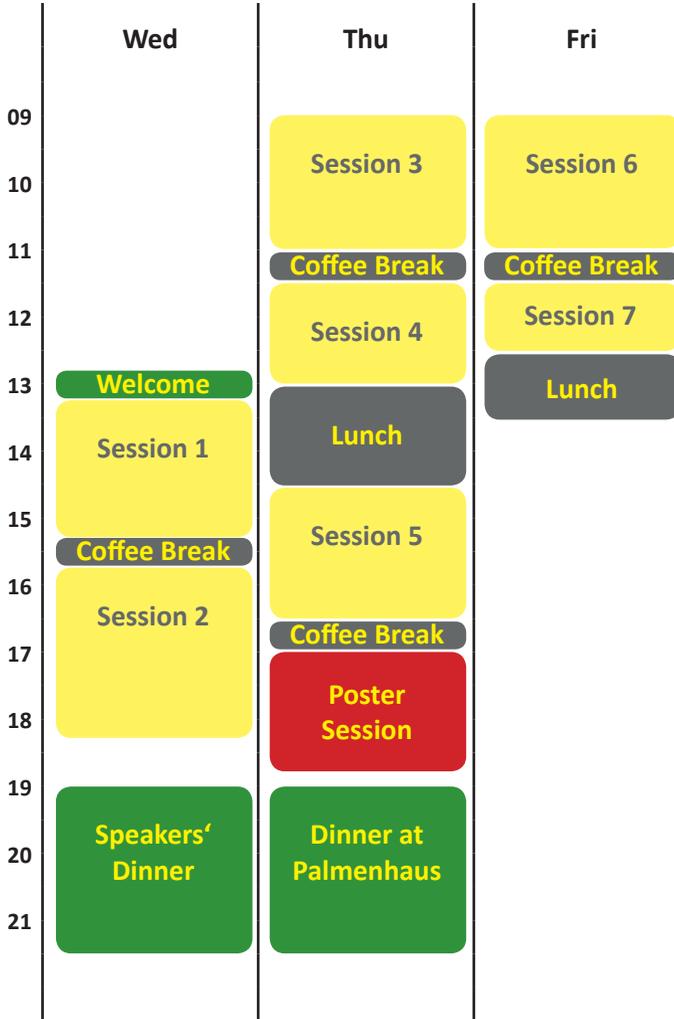
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# Program at a Glance



- Session 1: *In Vivo* Imaging of Immune Responses
- Session 2: Alarmins and Danger Signals
- Session 3: Cell Decisions in Adaptive Immunity
- Session 4: Signaling in Leukocyte Trafficking
- Session 5: Chemokines
- Session 6: Leukocyte - Endothelial Cell Axis
- Session 7: Leukocyte Trafficking in Disease