

Sebastian Temme, PhD

Date and Place of Birth

15.02.1977, Bonn, Germany

Nationality

German

Current Position

Group leader for Molecular Imaging

Department of Anaesthesiology, University Hospital, Medical Faculty, Heinrich-Heine University
Düsseldorf

Website: [Molecular Imaging](#)

Biographical Sketch

- 1998-2004 **Biology studies:** Rheinische Friedrich-Wilhelms-University Bonn (Germany)
- 2004 **Diploma Thesis:** Rheinische Friedrich-Wilhelms-University Bonn (Germany); Prof. Dr. N. Koch. Title: Association of glycoprotein B of different herpesviruses with class II molecules
- 2009 **PhD Thesis:** Rheinische Friedrich-Wilhelms-University Bonn; Prof. Dr. N. Koch; Impact of glycoprotein B of herpes simplex virus type 1 for the intracellular sorting and distribution of HLA class II-molecules “
- 2019 **Habilitation:** Experimental Medicine; Heinrich-Heine-University Düsseldorf; Prof. Dr. J. Schrader; Visualization of inflammatory processes by noninvasive ¹⁹F-magnetic resonance tomography

Professional Experience

- 2009-2010 **Postdoc:** Viral Evasion by herpes simplex glycoprotein B; Assembly and intracellular transport of MHC class II molecules. Section Immunobiology, Department of Genetics, Rheinische Friedrich-Wilhelms-University, Bonn (Germany).
- 2010-2013 **Postdoc:** Development of Nanoemulsions of per- and semifluorinated alkanes for *in vivo* ¹⁹F-MR-diagnostics of inflammatory processes; Department of Cardiovascular Physiology, Heinrich-Heine-University, Düsseldorf (Germany).
- 2013-2017 **Postdoc:** Targeting of Perfluorocarbon Nanoemulsions for the visualization of specific surface epitopes by noninvasive *in vivo* ¹⁹F MRI: Department of Molecular Cardiology, Heinrich-Heine-University, Düsseldorf (Germany).
- 2017-2021 **Project Leader:** Noninvasive visualization of thromboinflammatory processes and cell tracking. Experimental Cardiovascular Imaging; Department of Molecular Cardiology, Heinrich-Heine-University, Düsseldorf (Germany).

Since 2021 **Group Leader** for “Molecular Imaging” at the Department of Anaesthesiology, Medical Faculty and University Hospital. Heinrich-Heine-University, Düsseldorf (Germany)

Awards and Scientific Community Services

2015 Edens-award of the Heinrich-Heine-University: Noninvasive imaging of early venous thrombosis by ^{19}F MRI with targeted perfluorocarbon nanoemulsions.

Since 2016 Member of the European Society for Molecular Imaging (ESMI)

Reviewer for Nature Communications; FASEB Journal; Frontiers in cardiovascular medicine; Frontiers in Immunology, Stem Cell Research; International Journal of Nanomedicine; Analytical Chemistry; Magnetic Resonance Materials in Physics Biology and Medicine (MAGMA); European Journal of Pharmacology (EJP); Archives of Medical Science (AMS); Contrast Media & Molecular Imaging; BioMed Research International.

Main Research Interests

Unraveling the impact of immunological processes for the development and progression of inflammatory diseases by noninvasive $^1\text{H}/^{19}\text{F}$ magnetic resonance imaging. Development and manufacturing of novel targeted/nontargeted ^{19}F tracer for molecular imaging.

Research Funding

2017-2021 **DFG Funding:** TE1209/1-1, FL303/6-1: „Simultaneous detection of multiple structures by ^{19}F MRI for in vivo assessment of thrombus stage and inflammatory thrombosis“

since 2021 **DFG Funding:** TE 1209/1-2, FL 303/6-2, GR 4374/2-2: „Concurrent tracking of the trafficking of individual immune cell populations after myocardial infarction by ‘multicolor’ $^1\text{H}/^{19}\text{F}$ MRI“