Curriculum Vitae

Personal Data

Name	Dr. med. Michael Karl Sixt
Work address	Institute of Science and Technology Austria Am Campus 1; 3400 Klosterneuburg, Austria
Birth date	September 1, 1973, Weiden, Germany
Nationality	German
Marital status	married to Dr. Sylvia Cremer, one daughter

Academic education

1994 – 2000	Medicine at the Friedrich-Alexander-University Erlangen, Germany
1998 – 2002	Dissertation (MD, „Summa cum laude“) at Universtity of Erlangen: „The Role of Endothelial Cell Laminins in Leukocyte Extravasation“. Supervisor Dr. Lydia Sorokin,

Clinical experience

1/1999-12/2000	Internship in surgery, internal medicine and dermatology
1/2001 – 7/2002	Clinical resident at the Dermatological Clinic Erlangen
7/2002	Full approbation in human medicine

Postdoctoral experience

8/2002-10/2004	Postdoctoral Fellow at the Institute for Experimental Pathology, Lund. Supervisor Prof. Lydia Sorokin

Scientific appointments

11/2004 – 8/2010	Group leader at Max Planck Institute of Biochemistry, Martinsried, Germany
3/2008 – 8/2010	Endowed Professor of the Peter Hans Hofschneider Foundation
Since 9/2010	Tenure Track Assistant Professor, Institute of Science and Technology Austria

Scientific community activities

2007-2009	Secretary of the German Society of Cell Biology
2009	Organizer of the international conference “Imaging Cell Migration”

Referee activity (journals)

Science, Nature, Immunity, Nat Immunol, Nat Rev Immunol, Dev Cell, PLoS Biology, J Cell Biol, EMBO Journal, J Clin Invest, J Exp Med, J Immunol, Eur J Immunol, Eur J Cell Biol, Trends in Immunology, Immunology, PNAS, Biophys J, Mol Biol Cell, Blood, J Cell Science, Exp Cell Research, PLoS One, Immunology, J Invest Dermatol, J Exp Dermatol

Referee activity (funding)

German Research Foundation, Medical Research Council, Welcome Trust, Swiss National Science Foundation, Minerva Foundation, Israel Binational Science Foundation, Netherlands Organization for Scientific Research, Agence Nationale de la Recherche, Sander Foundation

Students and Postdocs Trained

Past Graduate Students	**Degree**	**Graduation**
Tim Lämmermann	PhD	June 2009
Holger Pflicke	PhD	August 2010
Jörg Renkawitz	Master	June 2008
Kathrin Schumann	Diploma	March 2007

Current Graduate Students

Alexander Eichner	PhD
Kathrin Schumann	PhD

Postdoctoral Associate

Michele Weber

Full list of publications

2010

Lämmermann T, Sixt M
In vitro analysis of chemotactic leukocyte migration in 3D environments
Met Mol Biol**,** *in press*

Renkawitz J, Sixt M
Mechanisms of force generation and force transduction during interstitial leukocyte migration
EMBO Rep, 2010 Oct;11(10):744-50

Weber M, Sixt M
MEK signaling tunes actin treadmilling for interstitial lymphocyte migration
EMBO Journal, 2010 Sep 1;29(17):2861-3

Schumann K, Lämmermann T, Bruckner M, Legler DF, Polleux J, Spatz JP, Schuler G, Förster R, Lutz MB, Sorokin L, Sixt M
Immobilized chemokine fields and soluble chemokine gradients shape migration patterns of dendritic cells
Immunity, 2010 May 28;32(5):703-13

Mohan H, Krumbholz M, Sharma R, Eisele S, Junker A, Sixt M, Newcombe J, Wekerle H, Hohlfeld R, Lassmann H, Meinl E
Extracellular matrix in multiple sclerosis lesions: Fibrillar collagens, biglycan and decorin are upregulated and associated with infiltrating immune cells.
Brain Pathol, 2010 Sep;20(5):966-75

Nourshargh S, Hordjik P, Sixt M
Regulation of leukocyte motility: through venular walls and beyond
Nat Rev Mol Cell Biol, 2010 May;11(5):366-78

Riedl J, Flynn KC, Raducanu A, Gärtner F, Beck G, Bösl M, Bradke F, Massberg S, Aszodi A, Sixt M*, Wedlich-Söldner R*
Lifeact mice for studying F-actin dynamics
Nat Methods, 2010 Mar;7(3):168-9

2009

Pflicke H, Sixt M
Preformed portals facilitate dendritic cell entry into afferent lymphatic vessels
J Exp Med, 2009 Dec 21;206(13):2925-35

Renkawitz J, Schumann K, Weber M, Lämmermann T, Pflicke H, Polleux J, Spatz JP, Sixt M
Adaptive force transmission in amoeboid cell migration
Nat Cell Biol, 2009 Dec;11(12):1438-43

Schymeinsky J, Gerstl R, Mannigel I, Niedung K, Frommhold D, Panthel K, Heesemann J, Sixt M, Quast T, Kolanus W, Mocsai A, Wienands J, Sperandio M, Walzog B
A fundamental role of mAbp1 in neutrophils: impact on β2 integrin-mediated phagocytosis and adhesion in vivo
Blood, 2009 Nov 5;114(19):4209-20

Lammermann T, Sixt M
Review: Mechanical modes of amoeboid cell migration
Curr Opin Cell Biol, 2009 Oct;21(5):636-44

Wolf AM, Hochegger K, Zeiser R, Duerr C, Gerlach UV, Sixt M, Markut L, Baier G, Rosenkranz AR, Wolf D
FTY720 abrogates the therapeutic potential of adoptively transferred Treg via inhibition of IL-2 induced in vivo expansion
J Immunol, 2009 Sep 15;183(6):3751-60

Lammermann T, Renkawitz J, Wu X, Brakebusch C, Sixt M
Plenary paper: Cdc42-dependent leading edge coordination is essential for interstitial dendritic cell migration.
Blood, 2009 Jun 4;113(23):5703-10

Quast T, Tappertzhofen B, Schild C, Grell J, Czeloth N, Forster R, Alon R, Fraemohs L, Dreck K, Weber C, Lammermann T, Sixt M, Kolanus W
Cytohesin-1 controls the activation of RhoA and modulates integrin-dependent adhesion and migration of dendritic cells.

Blood, 2009 Jun 4;113(23):5801-10

Moser M, Bauer M, Schmid S, Ruppert R, Schmidt S., Sixt M, Wang HV, Sperandio M, Fässler R
Kindlin-3 is required for β2 integrin-mediated leukocyte adhesion to endothelial cells.
Nat Med, 2009 Mar;15(3):300-5

Bauer M, Brakebusch C, Coisne C, Sixt M, Wekerle H, Engelhardt B, Fassler R
Beta 1 Integrins differentially control extravasation of inflammatory subsets into the CNS during autoimmunity.
PNAS, 2009 Feb 10;106(6):1920-5

Cremer S, Sixt M
Review: Analogies in the evolution of individual and social immunity.
Philos Trans R Soc Lond B Biol Sci, 2009 Jan 12;364(1513):129-42

2008

Lämmermann T, Bader BL, Monkley SJ, Worbs T, Wedlich-Söldner R, Hirsch K, Keller M, Förster R, Critchley DR, Fässler R, Sixt M
Rapid leukocyte migration by integrin-independent flowing and squeezing.
Nature, 2008 May 1;453(7191):51-5

Riedl J, Crevenna AH, Kessenbrock K, Yu JH, Neukirchen D, Bista M, Bradke F, Jenne D, Holak TA, Werb Z, Sixt M*, Wedlich-Soldner R*
Lifeact: a versatile marker to visualize F-actin.
Nat Methods**,** 2008 Jul;5(7):605-7

Lämmermann T, Sixt M
Review: The microanatomy of T-cell responses.
Immunol Rev, 2008 Feb;221:26-43

Lokmic Z, Lämmermann T, Sixt M, Cardell S, Hallmann R, Sorokin L
Review: The extracellular matrix of the spleen as a potential organizer of immune cell compartments.
Semin Immunol**,** 2008 Feb;20(1):4-13

Kessenbrock K, Fröhlich L, Sixt M, Lämmermann T, Pfister H, Bateman A, Belaaouaj A, Ring J, Ollert M, Fässler R, Jenne DE.
Proteinase 3 and neutrophil elastase enhance inflammation in mice by inactivating antiinflammatory progranulin.
J Clin Invest**,** 2008 Jul;118(7):2438-47

Frommhold D, Ludwig A, Bixel MG, Zarbock A, Babushkina I, Weissinger M, Cauwenberghs S, Ellies LG, Marth JD, Beck-Sickinger AG, Sixt M, Lange-Sperandio B, Zernecke A, Brandt E, Weber C, Vestweber D, Ley K, Sperandio M
Sialyltransferase ST3Gal-IV controls CXCR2-mediated firm leukocyte arrest during inflammation.
J Exp Med**,** 2008 Jun 9;205(6):1435-46

Tripp C, Haid B, Flacher V, Sixt M, Peter H, Farkas J, Gschwentner R, Sorokin L, Romani N, Stoitzner P
The lymph vessel network in mouse skin visualized with antibodie against the hyaluronan receptor LYVE
Immunobiology, 2008 213(9-10):715-28

2007

Woolf E, Grigorova I, Sagiv A, Grabovsky V, Feigelson S, Shulman Z, Hartmann T, Sixt M, Cyster JG, Alon R
Lymph node chemokines promote sustained T lymphocyte motility without triggering stable integrin adhesiveness in the absence of shear forces.
Nat Immunol**,** 2007 Oct;8(10):1076-85

Dorn T, Kuhn U, Bungartz G, Stiller S, Bauer M, Ellwart J, Peters T, Scharffetter-Kochanek K, Semmrich M, Laschinger M, Holzmann B, Klinkert WE, Straten PT, Køllgaard T, Sixt M, Brakebusch C
RhoH is important for positive thymocyte selection and T-cell receptor signaling.
Blood, 2007 Mar 15;109(6):2346-55

2006

Sixt M, Bauer M, Lämmermann T, Fässler R
Review: Beta1 integrins: zip codes and signaling relay for blood cells.
Curr Opin Cell Biol, 2006 Oct;18(5):482-90

Drumea-Mirancea M, Wessels JT, Müller CA, Essl M, Eble JA, Tolosa E, Koch M, Reinhardt DP, Sixt M, Sorokin L, Stierhof YD, Schwarz H, Klein G
Characterization of a conduit system containing laminin-5 in the human thymus: a potential transport system for small molecules.
J Cell Sci**,** 2006 Apr 1;119(Pt 7):1396-405

Chu H, Thievessen I, Sixt M, Lämmermann T, Waisman A, Braun A, Noegel AA, Fässler R
gamma-Parvin is dispensable for hematopoiesis, leukocyte trafficking, and T-cell-dependent antibody response.
Mol Cell Biol, 2006 Mar;26(5):1817-25

2005 and earlier

Sixt M, Kanazawa N, Selg M, Samson T, Roos G, Reinhardt DP, Pabst R, Lutz MB, Sorokin L
The conduit system transports soluble antigens from the afferent lymph to resident dendritic cells in the T cell area of the lymph node.
Immunity, 2005 Jan;22(1):19-29

Zhang H, Baader S, Sixt M, Kappler J, Rauch U
Neurocan-GFP fusion protein: a new approach to detect hyaluronan on tissue sections and living cells.
J Histochem Cytochem, 2004 Jul;52(7):915-22

Witte V, Laffert B, Rosorius O, Lischka P, Blume K, Galler G, Stilper A, Willbold D, D'Aloja P, Sixt M, Kolanus J, Ott M, Kolanus W, Schuler G, Baur AS
HIV-1 Nef mimics an integrin receptor signal that recruits the polycomb group protein Eed to the plasma membrane.
Mol Cell, 2004 May 28;153(5):933-46

Sixt M, Engelhardt B, Pausch F, Hallmann R, Wendler O, Sorokin LM
Endothelial cell laminin isoforms, laminins 8 and 10, play decisive roles in T cell recruitment across the blood-brain barrier in experimental autoimmune encephalomyelitis.
J Cell Biol, 2001 May 28;153(5):933-46

Sixt M, Hallmann R, Wendler O, Scharffetter-Kochanek K, Sorokin LM
Cell adhesion and migration properties of beta 2-integrin negative polymorphonuclear granulocytes on defined extracellular matrix molecules. Relevance for leukocyte extravasation.
J Biol Chem, 2001 Jun 1;276(22):18878-87

Wolf D, Hallmann R, Sass G, Sixt M, Küsters S, Fregien B, Trautwein C, Tiegs G
TNF-alpha-induced expression of adhesion molecules in the liver is under the control of TNFR1--relevance for concanavalin A-induced hepatitis.
J Immunol, 2001 Jan 15;166(2):1300-7