

Curriculum Vitae
Natascha (Hermann)-Kleiter

Medizinische Universität Innsbruck
Sektion für Translationale Zellgenetik
Peter-Mayr Str. 1a
A-6020 Innsbruck
Austria
Tel: +43-512-9003-70528
Web: <https://www.kleiter-lab.com/>
Email: natascha.kleiter@i-med.ac.at
ORCID: 0000-0003-4389-9813



Place of birth Salzburg, Austria
Citizenship Austrian

Education
1993 Master in Zoology, University of Salzburg, Austria
1996 PhD in Zoology Institute for Molecular Biology, Austrian Academy of Science, Salzburg, Austria

Career History
1996-1999 Research Assistant with Prof. Klaus Kratochwil, Institute for Molecular Biology, Austrian Academy of Science, Salzburg, Austria
1999-2002 Birth of my two daughters- maternal break
2002-2005 Part time work at the Institute of Human Genetics and Medical Biology (Prof. Gottfried Baier group), Medical University Innsbruck, Austria
2005-2013 Senior Postdoc at Cell Genetics Unit (Prof. Gottfried Baier) Dep. of Medical Genetics, Molecular and Clinical Pharmacology Medical University Innsbruck
2013 **Habilitation** at the Medical University Innsbruck
2014-2017 Assistant Professor at the Department of Medical Genetics, Molecular and Clinical Pharmacology Medical University Innsbruck, Austria
2017- **Associate Professor** at the Department of Medical Genetics, Molecular and Clinical Pharmacology Medical University Innsbruck, Austria

Biographical sketch During my PostDoc position at the Medical University Innsbruck, in the group of Gottfried Baier, I was involved in the molecular analysis of different T cell receptor signaling molecules as protein kinase A and C family members, the E3 ubiquitin-protein ligase Cbl-B, the actin-binding protein Coronin, and the nuclear orphan receptor NR2F6. Subsequently, I pioneered the work regarding the role of the nuclear orphan receptor NR2F6 in T cell biology. Using the combination of in vivo mouse models resembling human diseases such as multiple sclerosis, sepsis or cancer together with in vitro cell culture systems of mouse, human and patient-derived T cells we could identify underlying mechanisms.

Prizes
Prof. Brandl Prize (2018)
Prize of the Capital City Innsbruck, Austria (2009)
Dr. Otto-Seibert Prize (2008)

Publications Number of publications=38, h-index= 15, cited > 942
<https://scholar.google.com/citations?user=kuS1IA4AAAAJ&hl=en>

Patents (WO/2010/004052) AGONISTS OF NR2F6 FOR IMMUNOSUPPRESSION
(WO/2010/004051) ANTAGONISTS OF NR2F6 FOR AUGMENTING IMMUNITY

Other Functions Reviewer for: J. of Clinical Immunology; J. of Experimental Hematology & Immunology, J. of Immunotherapies; Cell and Mol. Medicine; Scientific reports

Research Interests Molecular mechanisms that coordinate immune cell function under the control of nuclear receptors, especially members of the NR2F- family; focus on immune responses during intestinal inflammation and cancer immune surveillance.

Funds obtained

MUI Orphan receptor NR2F6 as barrier against Th17-dependent autoimmunity- Composite analysis of NR2F6-selective signal transduction in Th17 CD4+ T cells	50.000	Medical University Innsbruck	2011-2012
ÖKKT NR2F6 mediates TGFβ-mediated immune-suppression in cancer	35.000	Österreichische Krebs- Krebs- gesellschaft Tirol	2013-2014
FWF grant (P23537) Orphan receptor NR2F6 as barrier against Th17-dependent autoimmunity	250.000	FWF	2011-2014
Doktoratskolleg (W11) , Molecular Cell Biology and Oncology 4 th funding period	205.000	FWF, Med. Uni. Innsbruck	2015-2019
FWF grant (P28694) NR2F6 governs immune defense against microbial pathogens	317.000	FWF	2016-2020

PhD students in the past 6 years (2012-2019)

PhD Student	PhD Thesis	Start	Defense	Paper
Marlies Meisel (Co-supervisor)	The role of PKCα in CD4+ TH17 effector cell autoimmune pathology	2008	2012	12
Victoria Klepsch (Co-supervisor)	Molecular role and mode of action of the nuclear orphan receptor NR2F6 in cancer immune surveillance	2011	2015	9
William Olson	Identify the role of NR2F/COUP-TF family in the classical helper subset of CD4+ follicular Th (Tfh) cells.	2015	ongoing	1

Master student: Marion Oberhofer: 2014-2015

Bachelor students: Pia Wald: 2019
Rita Steindl: 2017
Alexander Pfeiffer: 2016
Benedikt Angerer: 2015
Anton Späth: 2014

Teaching at the Medical University Innsbruck: since 2009

WS 2017/2018 and SS 2018 is listed below

Titel	LV	h	%	Anzahl der Studenten
Modul 1.06: Bausteine des Lebens II; Biologie - Kohorte 1	PR	5	75	200
Joint Group Seminars in Molecular Cell Biology and Oncology (KF)	SE	0,5	100	MCBO students
Seminar in Molecular Cell Biology and Oncology (VS) WS 2017/2018	SE	0,2	100	MCBO students
Molecular Cell Biology and Oncology II (KF)	VO	0,16	100	MCBO students
Seminar in Molecular Cell Biology and Oncology (VS) SS 2018	SE	0,2	100	MCBO students
Joint Group Seminars in Molecular Cell Biology and Oncology (KF)	SE	0,5	100	MCBO students
Immunological Methods - Adaptive Immunity (KF)	VU	1	100	8
TIME-Ring lecture: tissue, immune and energy homeostasis (KF)	SE	0,14	100	8
Research Training Seminar MCBO (AG) SS 2018	SE	1	100	3
Research Training Seminar MCBO (AG) WS 2017/18	SE	1	100	3
PM3 Infektion und Immunität: Theoretische und praktische Grundlagen-Vorlesung	VO	0,93	100	18
PM3 Infektion und Immunität: Laborpraktikum	PR	3	100	9

Publications: 38

1. Klepsch V, Moschen AR, Tilg H, Baier G and **Hermann-Kleiter N.**: Nuclear receptors regulate epithelial barrier functions and target inflammation- implications for IBD therapy. **Front Immunol** - Review, in press. (IF: 5,6)
2. Schoeler K, Jakic B, Heppke J, Soratroi C, Aufschnaiter A, **Hermann-Kleiter N**, Villunger A, Labi V. CHK1 dosage in germinal center B cells controls humoral immunity. **Cell Death Differ**. 2019 Mar 20. doi: 10.1038/s41418-019-0318-5. (IF: 8,3)
3. Meryk A., Pangrazzi L., Hagen M., Hatzmann F., Jenewein B., Jakic B., **Hermann-Kleiter N.**, Baier G., Trieb K., Grubeck-Loebenstein B.: Fc μ R mediated binding of IgM enhances T cell signalling by accelerating protein transport. **Cell Reports** 2019 (IF: 8,2)
4. Peer S., Cappellano G., **Hermann-Kleiter N**, Hinterleitner R., Baier G and T. Gruber: Regulation of lymphatic GM-CSF expression by the E3 ubiquitin ligase Cbl-b. **Front Immunol**. 2018 Oct 8;9:2311. (IF 5.5)

5. Klepsch V, **Hermann-Kleiter N**, Do-Dinh P, Jakic B, Offermann A, Efremova M, Sopper S, Rieder D, Krogsdam A, Gamerith G, Perner S, Tzankov A, Trajanoski Z, Wolf D, Baier G. Nuclear receptor NR2F6 inhibition potentiates responses to PD-L1/PD-1 cancer immune checkpoint blockade. **Nat Commun**. 2018 Apr 18;9(1):1538. (IF: 12.3)
6. Efremova M, Rieder D, Klepsch V, Charoentong P, Finotello F, Hackl H, **Hermann-Kleiter N**, Löwer M, Baier G, Krogsdam A, Trajanoski Z.: Targeting the PD-1/PD-L1 pathway potentiates immunoediting to counterbalance neutral evolution in a mouse model of colorectal cancer. **Nat Commun**. 2018 Jan 2;9(1):32. (IF: 12.3)
7. Gerner RR, Klepsch V, Macheiner S, Arnhard K, Adolph TE, Grander C, Wieser V, Pfister A, Moser P, **Hermann-Kleiter N**, Baier G, Oberacher H, Tilg H, Moschen AR.: NAD metabolism fuels human and mouse intestinal inflammation. **Gut**. 2018 Oct;67(10):1813-1823. (IF:17)
8. Klepsch V, Gerner RR, Klepsch S, Olson WJ, Tilg H, Moschen AR, Baier G, **Hermann-Kleiter N**. Nuclear orphan receptor NR2F6 as a safeguard against experimental murine colitis. **Gut**. 2018 Aug;67(8):1434-1444. (IF: 17)
- 9.
10. Siegmund K., Thuille N., Wachowicz K., **Hermann-Kleiter N.**, and Baier G.: Protein kinase C theta is dispensable for suppression mediated by CD25+CD4+ regulatory T cells. **PlosOne** 2017 May 22;12(5) (IF: 3.5)
11. Siegmund K, Klepsch V, **Hermann-Kleiter N**, Baier G.: Proof of Principle: Coronin 1A: An Intrinsic Modulator of T Lymphocyte Function. **J Biol Chem**. 2016 Aug 26. (IF: 4.6)
12. Pfeifhofer-Obermair C, Albrecht-Schgoer K, Peer S, Nairz M, Siegmund K, Klepsch V, Haschka D, Thuille N, **Hermann-Kleiter N**, Gruber T, Weiss G, Baier G. Role of PKC θ in macrophage-mediated immune response to Salmonella typhimurium infection in mice. **Cell Commun Signal**. 2016 Jul 28. (IF: 4.7)
13. Klepsch V, **Hermann-Kleiter N**, Baier G.: Beyond CTLA-4 and PD-1: Orphan nuclear receptor NR2F6 as T cell signaling switch and emerging target in cancer immunotherapy. **Immunol Lett**. 2016 Mar 15. (IF 2.5)
14. **N. Hermann-Kleiter**, V. Klepsch, S. Wallner, K. Siegmund, S. Klepsch, S. Tuzlak, A. Villunger, S. Kaminski, C. Pfeifhofer-Obermair, T. Gruber, D. Wolf, and G. Baier: The nuclear orphan receptor NR2F6 is a central checkpoint for cancer immune surveillance – **Cell Reports** 12, 1–14, September 29, 2015 (IF: 8.5)
15. **N. Hermann-Kleiter** & G.Baier: Orphan nuclear receptor NR2F6 acts as an essential gatekeeper of Th17 CD4+ T cell effector functions. **Cell Commun Signal**. 2014 Jun 12. Review. (IF: 4.7)
16. K. Wachowicz, **N. Hermann-Kleiter**, M. Meisel, N. Thuille, and Baier G.: Protein Kinase C θ regulates Th17/Th1 plasticity in mouse CD4+ T lymphocytes. **PLoS One** 2014 May 2;9(5) (IF: 3.7)
17. B. Thauerer, P. Voegelé, **N. Hermann-Kleiter**, N. Thuille, ME. de Araujo, M. Offterdinger, G. Baier, LA. Huber, and G. Baier-Bitterlich. LAMTOR2-mediated modulation of NGF/MAPK activation kinetics during differentiation of PC12 cells. **PLoS One**. 2014 Apr 21;9(4). (IF: 3.7)
18. T. Gruber, R. Hinterleitner, M. Meisel, C. Pfeifhofer-Obermair, I. Kleiter, C. Mary Wang, A. Viola, **N. Hermann-Kleiter**, and Gottfried Baier: Cbl-b mediates TGF β sensitivity by downregulating inhibitory SMAD7 in primary T cells. **J Mol Cell Biol**. 2013 Jun 26. (IF: 7.7)

19. F.J. Bock, G. Krumschnabel, C. Manzl, L. Peintner, **N. Hermann-Kleiter**, L. Llacuna, J. Yelamos, and A. Villunger: PIDD-mediated NFkB signaling after DNA- damage controls cytokine production but not cell survival or transformation. **Cell Death and Differentiation** Cell Death Differ. 2013 Apr;20(4):546-57 (IF: 8.9)
20. M. Meisel, **N. Hermann-Kleiter**, R. Hinterleitner, T. Gruber, C. Pfeifhofer-Obermair, F. Fresser, M. Leitges, C. Soldani, A. Viola, S. Kaminski, G. Baier. PKCalpha selectively promotes Th 17 immune responses through the canonical TGFbeta receptor pathway. **Immunity**. 2013 Jan 1. (IF: 21.6)
21. N. Thuille, K. Wachowicz, **N. Hermann-Kleiter**, S. Kaminski, F. Fresser, C. Lutz-Nicoladoni, M. Leitges, M. Thome, R. Massoumi and G. Baier: PKCtheta and CYLD are antagonistic partners in the NFkB and NFAT transactivation pathways of primary mouse CD3+ T lymphocytes. **PLoS One**. 2013;8(1). (IF: 4.1)
22. **N. Hermann-Kleiter**, Meisel M., Fresser F, Thuille N, Müller M, Roth L, Katopodis A, Baier G. Nuclear orphan receptor NR2F6 directly antagonizes NFAT and ROR γ t binding to the Il17a promoter. **J Autoimmun**. 2012 Dec;39(4):428-40. (IF: 7.3)
23. S. Kaminski, **N. Hermann-Kleiter**, M. Meisel, N. Thuille, F. Fresser J.M. Penninger and G. Baier: Coronin 1A is an essential regulator of the TGFbeta receptor/SMAD3 signaling pathway in CD4+ Th17 cells. **J Autoimmun**. 2011 Jun 21. (IF: 7.4)
24. **N. Hermann-Kleiter**, and G. Baier: NFAT pulls the strings during CD4+ T helper cell effector functions. **Blood**. 2010 Apr 15;115(15):2989-97. (IF: 9.9)
25. N. Thuille, C. Lutz-Nicoladoni, T. Letschka, **N. Hermann-Kleiter**, I. Heit and G. Baier: PKCtheta and Itk functionally interact during primary mouse CD3+ T cell activation. **Immunol. Lett**. 2009 Sep 22;126(1-2):54-9. (IF: 2.5)
26. T. Gruber, **N. Hermann-Kleiter**, R. Schneider, G. Gastl, J.M. Penninger and G. Baier: PKC θ prevents T cell anergy by targeting Cbl-b for ubiquitination and degradation. **Science Signaling** 2009 June Vol 2 Issue 76. (IF: 7.5)
27. J.P. Evenou, J. Wagner, G. Zenke, V. Brinkmann, K. Wagner, J. Kovarik, K. Welzenbach, G. Weitz-Schmidt, C. Guntermann, H. Towbin, S. Cottens, S. Kaminski, T. Letschka, C. Lutz-Nicoladoni, T. Gruber, **N. Hermann-Kleiter**, N. Thuille and G. Baier. The potent protein kinase C selective inhibitor AEB071 (Sotrastaurin) represents a new class of immunosuppressive agents affecting early T cell activation. **J. Pharmacol. Exp. Ther**. 2009 Jun 2. (IF: 3.8)
28. **N. Hermann-Kleiter***, T. Gruber*, C. Pfeifhofer, T. Letschka, N. Thuille, C. Lutz-Nicoladoni, B. Metzler, J. Wagner, M. Leitges, and G. Baier: PKCtheta cooperates with PKCalpha in allo-immune responses of CD3+ T cells in vivo. **Mol. Immunol**. 2009 Apr 6. * contributed equally (IF:2.9)
29. **N. Hermann-Kleiter**, N. Ghaffari-Tabrizi, M. Blumer, C. Schwarzer, M. Agata Mazur, and I. Artner: Lasp1 misexpression influences chondrocyte differentiation in the vertebral column: **Int. J. Dev. Biol**. 2009 Mar 16. (IF: 2.8)
30. **N. Hermann-Kleiter**, T. Gruber, C. Lutz-Nicoladoni, N. Thuille, F. Fresser, V. Labi, N. Schiefermeier, M. Warnecke, L. A. Huber, A. Villunger, G. Eichele, S. Kaminski and G. Baier: The Nuclear Orphan Receptor NR2F6 Suppresses Lymphocyte Activation and T Helper 17-Dependent Autoimmunity. **Immunity**. 2008 Aug;29(2):205-16. (IF: 21.6)

31. T. Letschka, V. Kollmann, C. Lutz-Nicoladoni, G. J. Obermair, F. Fresser, M. Leitges, **N. Hermann-Kleiter**, S. Kaminski and G. Baier: PKC θ selectively controls the adhesion-stimulating molecule Rap1. **Blood**. 2008 Dec 1;112(12):4617-27. (IF: 9.9)
32. **N. Hermann-Kleiter**, N. Thuille, C. Pfeifhofer, T. Gruber, M. Schäfer, C. Zitt, A. Hatzelmann, C. Schudt and G. Baier: PKC θ and PKA are antagonistic partners in NF-AT activation of CD3⁺ T lymphocytes. **Blood**. 15 June 2006 Jun 15;107(12):4841-8. (IF: 9.9)
33. N. Thuille, T. Gruber , C. Pfeifhofer, **N. Hermann-Kleiter**, C. Lutz-Nicoladoni , T. Letschka , V. Kollmann, M. Leitges , and G. Baier. Physiological and Non-Redundant functions of PKC isotypes in T lymphocytes. **Cur.Imun. Rev.** 2006, (2) 143-156.
34. C. Pfeifhofer, T. Gruber, N. Thuille, C. Lutz, **N. Hermann-Kleiter**, M. Leitges and G. Baier: PKC alpha^{-/-} mice show a defect in IgG2a/2b class switching. **J. Immun.** 2006, May 15;176(10):6004-11. (IF: 5.8)
35. T. Gruber, N. Thuille, **N. Hermann-Kleiter**, M. Leitges and G. Baier: Protein kinase Cepsilon is dispensable for TCR/CD3-signaling. **Mol. Immunol.** 2005 Feb;42(3):305-10. (IF: 2.9)
36. **N. Kleiter**, I. Artner , N. Gmachl , N. Ghaffari-Tabrizi, and K. Kratochwil (2002) Mutagenic transgene insertion into a region of high gene density and multiple linkage disruptions on mouse chromosome 11. **Cytogenet Genome Res.** 2002; 97(1-2): (IF: 1.5)
37. **N. Kleiter**, I. Artner, N.G. Copeland, D.J. Gilbert, N. A. Jenkins and K. Kratochwil (2000) Genomic organization and chromosome location of the murine Rpl23 gene. **Cytogenet Cell Genet.** 2000;90(3-4):227-30. (IF: 1.5)
38. **N. Kleiter** and A. Lametschwandtner (1995) Microvascularization of the cerebellum in the turtle, *Pseudemys scripta elegans* (Reptilia). **Anat. Embryol.** 191: 145 – 153 (IF: 1.4)
39. **N. Kleiter** and A. Lametschwandtner (1995) Microvascularization of the pineal gland in the freshwater turtle, *Pseudemys scripta elegans* (Reptilia): A scanning electron microscopic study of vascular corrosion casts. **J. Pineal Res.** 19: 93 – 102. (IF: 5.8)