

Patrizia Stoitzner

Biographical sketch

I have been working on skin dendritic cells for 20 years to understand their migratory behaviour and their functional role in the immune system. During my master and PhD theses at the Department of Dermatology at the Medical University of Innsbruck, Austria, I demonstrated how Langerhans cells, the dendritic cells of the epidermis, get activated in the skin and migrate to the draining lymph nodes to induce a T cell response. During my post-doctoral fellowship at the Malaghan Institute of Medical Research in Wellington, New Zealand, I developed skin immunization strategies for the treatment of cancer. In 2007 I have started my own research lab at the Department of Dermatology in Innsbruck with the focus on understanding the interaction between dendritic cells and skin tumors with the ultimate goal to improve immunotherapeutic strategies to treat cancer. With mouse tumor models and patient samples for melanoma and non-melanoma skin cancer we study the presence and function of dendritic cell subsets by high dimensional flow cytometry, confocal microscopy and functional immunoassays. The overall aim is to harness dendritic cells for immunotherapy against cancer.

Curriculum vitae	Medical University of Innsbruck Department of Dermatology, Venereology & Allergology Anichstrasse 35 A-6020 Innsbruck Austria Tel: +43-512-504-23016 Web: Lab for Langerhans cell Research Email: patrizia.stoitzner@i-med.ac.at ORCID: 0000-0002-8488-6704
Date of birth	26 September 1972
Place of birth	Feldkirch, Austria
Citizenship	Austrian
Education	
1991	Matura, Gymnasium Feldkirch, Austria
1997	Master in Microbiology, University of Innsbruck, Austria
2001	PhD in Immunology, Department of Dermatology, University of Innsbruck, Austria
Career History	
2001-2005	Research Assistant with Prof. Nikolaus Romani, Department of Dermatology, Medical University of Innsbruck
2005-2007	PostDoc fellowship with Prof. Franca Ronchese, Malaghan Institute of Medical Research, Wellington, New Zealand
since 2007	Head of the Lab for Langerhans Cell Research, Department of Dermatology, Medical University of Innsbruck
2008	Habilitation in Immunology
since 2011	Associate Professor
Fellowships, Awards	Erwin Schroedinger PostDoc fellowship (2005) Heinrich Aupitz award (2006)
Publications	Number of publications: 56 original publications, 12 invited reviews/opinion letters in peer reviewed journals, 3 invited book chapters h-index=39 cited>4000 Google Scholar link

Patents None

Other Functions Reviewer for: DFG, Inserm, HRC, MRC
J Exp Med, Blood, PNAS, Cancer Res, OncoImmunology, J Invest Dermatol, J Immunol, Eur J Immunol, Immunol Cell Biol, Exp Dermatol.

Research Interests Function of dendritic cells in immunosurveillance of cutaneous tumors; skin dendritic cells as bridge between adaptive and innate immunity; development of novel strategies to treat cancer by harnessing skin dendritic cells.

Funds obtained (in €, 5 most important ones)

MFI-9442: Natural killer cells as adjuvants for immunization through the skin against melanoma.	128.000€	Medical Innsbruck of University	2008-2010
FWF Stand alone grant (P21487): Role of dendritic cells in skin cancer.	300.000€	FWF	2009-2014
Doktoratskolleg (W11): Molecular Cell Biology and Oncology 3 rd & 4 th funding period	207.400€ & 205.000€	FWF, Medical University of Innsbruck	2012-2018
FWF Stand alone grant (P27001): Dendritic cells as bridge of innate and adaptive immunity in carcinogenesis.	330.000€	FWF	2014-2017
EU-Marie-Curie-ITN-641549: Immutrain	250.000€	EU	2015-2018

PhD students since 2013

PhD Student	PhD Thesis	Start	Defense	Paper
David G. Mairhofer	Consequences of spontaneous mouse melanoma development on the immunological landscape	2011	2015	3
Anastasia Prokopi	The tumor strikes back: loss of skin dendritic cells upon spontaneous tumor development	2015	ongoing	0
Lydia Bellmann	Targeting of human skin dendritic cells with antibody-antigen fusion proteins to improve treatment of melanoma.	2016	ongoing	0
Athansios Seretis	Combination therapies to improve DC-based treatment of melanoma.	2016	ongoing	0

International collaborators projects

	Project	Joint public.	lab for stay abroad
Björn E. Clausen (Johannes Gutenberg University Mainz, D)	Role of skin dendritic cells in disease	7	yes
Suzie Chen (Rutgers University, NJ, USA)	Immunological features of the spontaneous melanoma mouse model tg(Grm1)EPv	2	no
Sandrine Henri (CIML, Marseille, France)	Characterization of myeloid cells in tumors	0	yes

International Network: EU-Marie-Curie-ITN-641549: Immutrain

Patrizia Stoitzner; 10 most important scientific publications:

1. Ortner D, Tripp CH, Komenda K, Dubrac S, Zelger B, Hermann M, Doppler W, Tymoszuk PZ, Boon L, Clausen BE, **Stoitzner P**. Langerhans cells and NK cells cooperate in the inhibition of chemical skin carcinogenesis. **OncoImmunology**. 2016. 6, NO. 2, e1260215.
2. Mairhofer DG, Ortner D, Tripp CH, Schaffenrath S, Fleming V, Heger L, Komenda K, Reider D, Dudziak D, Chen S, Becker JC, Flacher V, **Stoitzner P**. Impaired gp100-specific CD8+ T cell responses in the presence of myeloid-derived suppressor cells in a spontaneous mouse melanoma model. **J Invest Dermatol**. 2015. Nov;135(11):2785-93. PMID:26121214.
3. Sparber F, Tripp CH, Komenda K, Scheffler JM, Clausen BE, Huber LA, Romani N, **Stoitzner P**. The late endosomal adaptor molecule p14 (LAMTOR2) regulates TGF beta1-mediated homeostasis of Langerhans cells. **J Invest Dermatol**. 2015. Jan;135(1):119-29. PMID:25078666.
4. Flacher V, Tripp CH, Mairhofer DG, Steinman RM, **Stoitzner P**, Idoyaga J, Romani N. Murine Langerin+dermal dendritic cells prime CD8+ T cells while Langerhans cells induced cross-tolerance. **EMBO Mol Med**. 2014. Aug 1;6(9):1191-204. Erratum in: *EMBO Mol Med*. 2014 Dec;6(12):1638. PMID:25085878. *Shared corresponding authorship Romani and Stoitzner*.
5. Sparber F, Scheffler JM, Amberg N, Tripp CH, Heib V, Hermann M, Zahner SP, Clausen BE, Reizis B, Huber LA, **Stoitzner P**, Romani N. The late endosomal adaptor molecules p14 (LAMTOR2) represents a novel regulator of Langerhans cell homeostasis. **Blood**. 2014. Jan 9;123(2):217-27. PMID:24092934. *Shared corresponding authorship Romani and Stoitzner*.
6. Tripp CH, Sparber F, Hermans IF, Romani N, **Stoitzner P**. Glycolipids injected into the skin are presented to NKT cells in the draining lymph node independently of migratory skin dendritic cells. **J Immunol**. 2009. Jun 15;182(12):7644-54. PMID:19494288.
7. **Stoitzner P**, Green LK, Jung JY, Price KM, Tripp CH, Malissen B, Kissenpfennig A, Hermans IF, Ronchese F. Tumor immunotherapy by epicutaneous immunization requires langerhans cells. **J Immunol**. 2008. Feb 1;180(3):1991-8. PMID:18209098.
8. **Stoitzner P**, Tripp CH, Eberhart A, Price KM, Jung JY, Bursch L, Ronchese F, Romani N. Langerhans cells cross-present antigen derived from skin. **Proc Natl Acad Sci U S A**. 2006. May 16;103(20):7783-8. PMID:16672373.
9. **Stoitzner P**, Tripp CH, Douillard P, Saeland S, Romani N. Migratory Langerhans cells in mouse lymph nodes in steady state and inflammation. **J Invest Dermatol**. 2005 Jul;125(1):116-25. PMID:15982311.
10. **Stoitzner P**, Holzmann S, McLellan AD, Ivarsson L, Stössel H, Kapp M, Kämmerer U, Douillard P, Kämpgen E, Koch F, Saeland S, Romani N. Visualization and characterization of migratory Langerhans cells in murine skin and lymph nodes by antibodies against Langerin/CD207. **J Invest Dermatol**. 2003 Feb;120(2):266-74. PMID:12542532.

Patrizia Stoitzner; all publications since 2013

1. Ober-Blöbaum JL, Ortner D, Haid B, Brand A, Tripp CH, Clausen BE, **Stoitzner P**. Monitoring skin dendritic cells in steady state and inflammation by immunofluorescence microscopy and flow cytometry. **Methods Mol Biol**. 2017; 1559:37-52. PMID: 28063035.
2. Ortner D, Tripp CH, Komenda K, Dubrac S, Zelger B, Hermann M, Doppler W, Tymoszuk PZ, Boon L, Clausen BE, **Stoitzner P**. Langerhans cells and NK cells cooperate in the inhibition of chemical skin carcinogenesis. **OncoImmunology**. 2016. 6, NO. 2, e1260215.
3. Zelle-Rieser C, Thangavadivel S, Biedermann R, Brunner A, **Stoitzner P**, Willenbacher E, Greil R, Jöhrer K. T cells in multiple myeloma display features of exhaustion and senescence at the tumor site. **J Hematol Oncol**. 2016 Nov 3;9(1):116. PMID:27809856.
4. Clausen BE, **Stoitzner P**. Functional specialisation of skin dendritic cell subsets in regulating T cell responses. **Front Immunol**. Oct 22; 6:534. PMID:26557117.
5. Haid B, Schlögl DE, Hermann M, Tripp CH, **Stoitzner P**, Romani N, Flacher V. Langerhans cells in the sebaceous gland of the murine skin. **Exp Dermatol**. 2015 Nov;24(11):899-901. PMID:26174007.
6. Mairhofer DG, Ortner D, Tripp CH, Schaffenrath S, Fleming V, Heger L, Komenda K, Reider D, Dudziak D, Chen S, Becker JC, Flacher V, **Stoitzner P**. Impaired gp100-specific CD8+ T cell responses in the presence of myeloid-derived suppressor cells in a spontaneous mouse melanoma model. **J Invest Dermatol**. 2015. Nov;135(11):2785-93. PMID:26121214.
7. Abd Warif NM, **Stoitzner P**, Leggatt GR, Mattarollo SR, Frazer IH, Hibma MH. Langerhans homeostasis and activation is altered in hyperplastic human papillomavirus type 16 E7 expressing epidermis. **PLoS One**. 2015. May 18;10(5):e0127155. PMID:25992642.
8. Sparber F, Tripp CH, Komenda K, Scheffler JM, Clausen BE, Huber LA, Romani N, **Stoitzner P**. The late endosomal adaptor molecule p14 (LAMTOR2) regulates TGF beta1-mediated homeostasis of Langerhans cells. **J Invest Dermatol**. 2015. Jan;135(1):119-29. PMID:25078666.
9. **Stoitzner P**, Schaffenrath S, Tripp CH, Reider D, Komenda K, Del Frari B, Djedovic G, Ebner S, Romani N. Human skin dendritic cells can be targeted in situ by intradermal injection of antibodies against lectin receptors. **Exp Dermatol**. 2014. Dec;23(12):909-15. PMID:25346475. *Shared first authorship Stoitzner and Schaffenrath.*
10. Scheffler JM, Sparber F, Tripp CH, Herrmann C, Humenberger A, Blitz J, Romani N, **Stoitzner P**, Huber LA. LAMTOR2 regulates dendritic cell homeostasis through FLT3-dependent mTOR signalling. **Nat Commun**. 2014. Oct 22;5:5138. PMID:25336251.
11. Flacher V, Tripp CH, Mairhofer DG, Steinman RM, **Stoitzner P**, Idoyaga J, Romani N. Murine Langerin+dermal dendritic cells prime CD8+ T cells while Langerhans cells induced cross-tolerance. **EMBO Mol Med**. 2014. Aug 1;6(9):1191-204. Erratum in: *EMBO Mol Med*. 2014 Dec;6(12):1638. PMID:25085878. *Shared corresponding authorship Romani and Stoitzner.*
12. Tóke ER, Lőrincz O, Csiszovszki Z, Somogyi E, Felföldi G, Molnár L, Szipőcs R, Kolonics A, Malissen B, Lori F, Trocio J, Bakare N, Horkay F, Romani N, Tripp CH, **Stoitzner P**, Lisziewicz J. Exploitation of Langerhans cells for in vivo DNA vaccine delivery into the lymph nodes. **Gene Ther**. 2014 Jun;21(6):566-74. PMID:24694539.
13. Voisin B, Mairhofer DG, Chen S, **Stoitzner P**, Mueller CG, Flacher V. Anatomical distribution analysis reveals lack of Langerin+dermal dendritic cells in footpads and tail of C57BL/6 mice. **Exp Dermatol**. 2014. May;23(5):354-6. PMID:24629018.

14. Bouwer AL, Saunderson SC, Caldwell FJ, Damani TT, Pelham SJ, Dunn AC, Jack RW, **Stoitzner P**, McLellan AD. NK cells are required for dendritic cell-based immunotherapy at the time of tumor challenge. **J Immunol**. 2014. Mar 1;192(5):2514-21. PMID:24477907.
15. Sparber F, Scheffler JM, Amberg N, Tripp CH, Heib V, Hermann M, Zahner SP, Clausen BE, Reizis B, Hubr LA, **Stoitzner P**, Romani N. The late endosomal adaptor molecules p14 (LAMTOR2) represents a novel regulator of Langerhans cell homeostasis. **Blood**. 2014. Jan 9;123(2):217-27. PMID:24092934. *Shared corresponding authorship Romani and Stoitzner*.
16. Hannesdóttir L, Tymoszuk P, Parajuli N, Wasmer MH, Philipp S, Daschil N, Datta S, Koller JB, Tripp CH, **Stoitzner P**, Müller-Holzner E, Wieggers GJ, Sexl V, Villunger A, Doppler W. Lapatinib and doxorubicin enhance the Stat1-dependent antitumor immune response. **Eur J Immunol**. 2013. Oct;43(10):2718-29. PMID:23843024.
17. Wallner S, Lutz-Nicoladoni C, Tripp CH, Gastl G, Baier G, Penninger JM, **Stoitzner P**, Wolf D. The role of the e3 ligase cbl-B in murine dendritic cells. **PLoS One**. 2013. Jun 6;8(6):e65178. PMID:23762309.