Dr. Annkristin Heine, MD

Institute of Experimental Immunology
Medical Clinic III for Oncology, Hematology and Rheumatology

new Member since 2015

Rheinische Friedrich-Wilhelms-Universität Bonn
Institute of Experimental Immunology and Medical Clinic III for Oncology, Hematology and Rheumatology

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Research Expertise

Dr. Heine and her group are interested in the mechanisms governing antigen cross-presentation and cytotoxic T cell induction in the context of anti-tumor immune responses. Effective cancer vaccines should not only induce strong and durable T cell responses, but also optimally modulate the balance between suppressive and stimulatory factors in the tumor microenvironment. The aim of her research is the identification of novel immunotherapeutic strategies that accomplish both, with a special focus on different pathways of dendritic cell licensing and chemokine receptor modulation.

Education / Training

University of Bonn, Germany, Internal Medicine, Hematology, Oncology, Medical Specialist, 2013

University of Tübingen, Germany, Clinical Immunology, MD thesis, 2006

University of Tübingen, Germany; University of Bordeaux, France; Mount Sinai School of Medicine, New York, USA, MD, 2006

Appointments / Positions Held

since 2013
Senior Physician in the Medical Clinic III for Oncology, Hematology and Rheumatology, University of Bonn, Germany

since 2015
Group leader of a clinical-translational junior research group, Institute of Experimental Immunology and Medical Clinic III, University of Bonn, Germany

2013 - 2014
Group leader of a BONFOR junior research group, Institute of Experimental Immunology, University of Bonn, Germany
2010 - 2012 Postdoctoral fellow, Institute of Experimental Immunology, University of Bonn, Germany

Honors / Awards

2015
Lisec-Artz-price for best junior scientist in the field of oncology

2014
Poster Prize for best abstract in the category “Immunotherapy“ of the German Society for Hematology and Oncology

2012
BONFOR young scientists award in the category “post-doc“

2006
Carl-Liebermeister prize for excellent scientific research of medical students

10 Most Relevant Publications for Dr. Annkristin Heine

1. **Heine A**, Schilling J, Grünwald B, Krüger A, Gevensleben H, Held SAE, Garbi N, Kurts C, Brossart P, Knolle P, Diehl L and Höchst B. The induction of human myeloid-derived suppressor cells through hepatic stellate cells is dose-dependently inhibited by the tyrosine kinase inhibitors nilotinib, dasatinib and sorafenib, but not sunitinib. Cancer Immunol Immunotherapy 2016 Mar;65(3):273-82
2. Rittig SM, Haentschel M, Weimer KJ, **Heine A**, Muller MR, Brugger W, Horger MS, Maksimovic O, Stenzl A, Hoerr I, Rammensee HG, Holderried TA, Kanz L, Pascolo S, Brossart P. Long-term survival correlates with immunological responses in renal cell carcinoma patients treated with mRNA-based immunotherapy. Oncoimmunology 2015 Oct 29;5(5)
3. Held SAE*, **Heine A***, Kesper AR, Beckers A, Wolf D, Brossart P. Interferon gamma modulates sensitivity of CML cells to tyrosine kinase inhibitors. Oncoimmunology, in press
4. **Heine A**, Held SAE, Daecke SN, Riethausen K, Flores C, Kurts C and Brossart P. The VEGF-receptor inhibitor axitinib impairs dendritic cell phenotype and function. PlosOne, 2015 Jun 4;10(6):e0128897
5. Schonberg K, Rudolph J, Vonnahme M, Parampalli Yajnanarayana S, Cornez I, Hejazi M, Manser A, Uhrberg M, Verbeek W, Koschmieder S, Brummendorf TH, Brossart P, **Heine A**, Wolf D. JAK inhibition impairs NK cell function in myeloproliferative neoplasms. Cancer Res. 2015 Apr 1. pii: canres.3198.2014
6. Parampalli Yajnanarayana S, Stübig T, Cornez I, Alchalby H, Schönberg K, Rudolph J, Triviai I, Wolschke C, **Heine A**, Brossart P, Kröger N, Wolf D. JAK1/2 inhibition impairs T cell function in vitro and in patients with myeloproliferative neoplasms. Br J Haematol. 2015 Mar 30
7. **Heine A**, Brossart P, Wolf D. Ruxolitinib is a potent immunosuppressive compound: is it time for anti-infective prophylaxis? Blood. 2013 Nov 28;122(23):3843-4
8. **Heine A**, Held SAE, Daecke SN, Wallner S, Yajnanarayana SM, Kurts C, Wolf D and Brossart P. The JAK-inhibitor Ruxolitinib impairs dendritic cell function in vitro and in vivo. Blood. 2013 Aug 15;122(7):1192-202
9. Held SAE, Duchardt KM, Tenzer S, Rückrich T, von Schwarzenberg K, Bringmann A, Schild HJ, Driessen C, Brossart P and **Heine A**. Imatinib mesylate and nilotinib affect MHC-class I presentation by modulating the proteasomal processing of antigenic peptides. Cancer Immunol Immunother. 2012 Nov 25.
10. **Heine A**, Grünebach F, Holderried T, Appel S, Weck MM, Dörfel D, Sinzger C, Brossart P. Transfection of dendritic cells with in vitro-transcribed CMV RNA induces polyclonal CD8+- and CD4+-mediated CMV-specific T cell responses. Mol Ther. 2006 Feb;13(2):280-8.

*These authors contributed equally