






DR. KATARINA RIESNER

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 Experimental Stem cell transplantation
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PROFESSION

RESEARCH TOPIC | EXPERTISE

Vascular and endothelial biology in applied hematological transplantation immunology
 Use of mouse models and xeno mouse models for GVHD and CRS
 Refinement methods for animal stress reduction and increase of robustness
 Development of in vitro and ex vivo endothelial cultures for animal replacement

DEGREE

Dr. rer. nat. | BIOLOGY Dipl. Mol. Biomed | Molecular Biomedicine

CURRENT JOB POSITION

Principal Investigator and Senior Scientific Officer | Group Experimental stem cell transplantation | Charité Berlin and DKFZ Heidelberg

RESEARCH POSITIONS

Member of Speakers' council, Charité 3R REPLACE | REDUCE | REFINE
<https://charite3r.charite.de/>
 Founding member of Charité 3^R Refinement Taskforce for animal experiments
 Review Editor of Journal Frontiers in Immunology | ISSN 1664-3224
 Reviewer of Journal Science Translational Medicine | ISSN 1946-6234
 Reviewer Board Annual Meeting European Society for Blood and Marrow Transplantation

LANGUAGES

German, English, French

MEMBERSHIP

North American Vascular Biology Organization (NAVBO)
 Berlin University Alliance Postdoc Academy

EDUCATION

12/2011-07/2017

PhD studies at Charité Berlin, Division of Hematology, Oncology and Tumor Immunology
 Topic: Initiation of graft-versus-host disease by angiogenesis
 Degree: Dr.rer.nat. in Biology | Freie Universität Berlin | Magna cum laude

10/2006-03/2011

Molecular Biomedicine
 Excellence degree course at Rheinische Friedrich-Wilhelms-Universität, Bonn
 Degree: Dipl. Mol. Biomed. | Grade 1.0

09/1999-06/2006

Alexander-von-Humboldt-Oberschule Berlin | Gymnasium
 Degree: Abitur | Grade 1.3

SCIENTIFIC ACTIVITIES

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- 11/2023– present** Postdoc at Deutsches Krebsforschungszentrum (DKFZ) located at Charité Berlin, Division of Hematology, Oncology and Tumor Immunology, AG Experimental Stem cell transplantation
- 07/2017– 11/2023** Postdoc at Charité Berlin, Division of Hematology, Oncology and Tumor Immunology, AG Experimental Stem cell transplantation
- 12/2011 – 07/2017** PhD student at Charité Berlin, Division of Hematology, Oncology and Tumor Immunology AG Prof. Dr. Olaf Penack
- 10-12/2012** Internship at Institute of Immunology, Pathology and Genetics, Uppsala University Prof. Lena Claesson-Welsh
- 05-11/2010** Student assistant at Institute of Pathology, University Hospital Bonn Molecularpathology diagnostics
- 03-04/2010** Internship at Biomedical Center Bonn, Department of Immunology, Prof. Ulrich Spengler
- 01-02/2010** Internship at Institute of Pharmacology and Toxicology, University of Bonn Prof. Kurt Racké
- 08-10/2009** Internship at Harvard Medical School, Department of Genetics, Boston Prof. Raju Kucherlapati
- 01-03/2009** Internship at Institute of Pharmacy, University of Bonn Prof. Christa Elisabeth Müller
- 07/2005** Student Academy Hilden for intellectually gifted students

SKILLS AND MANAGEMENT

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- LEADERSHIP SKILLS** Executive Leadership of Group Experimental stem cell transplantation at Charité Berlin since 2018 | Team of 7 colleagues
 Budget planning, acquisition and administration
 Project management
 Scientific coordination of research projects and joint research projects
 Collaboration building and coordination
 Strategic design of research and animal projects and operational staff planning
 Coordination of group and authority administration
 Coordination of staff hiring, onboarding and development
 Scientific and authority communication and presentation
- QUALIFICATIONS** Project leader for LAGESO approved animal experiments | since 2017
 Project leader for Genetic engineering works, Safety level 1 at Charité Berlin | since 2017
 Biological Safety Delegate at Charité Berlin | since 2017
 Certificate for Expertise according to §15 Genetic Technology Safety Regulations | 2017
 Laboratory Animal Science Course CAT. B FELASA | 2012
 Certificate of International Competence of University of Bonn | 2010

MENTORING AND EDUCATION Organization and performance of Refinement Workshop “Get started – Hands-on Kurs zu Medical Training und neuen Applikationstechniken” at Charité Berlin | 2023
 Scientific Feedback on student presentations in 3R Curriculum Workshop | 2022, 2023
 Certificate for Professional skills for student-centered teaching | 2020
 Mentoring of PhD students in biology and medicine | since 2018
 Mentoring of Master and Bachelor degree students in biology | since 2017
 Supervisor of molecular biology practical courses for students | 2010
 Mentoring of undergraduate students from Harvard University | 2008–2010

NETWORKING AND COMMUNICATION Building up a cross-disciplinary networking platform for postdocs from Berlin Universities in BUA funded project (collaboration of life science from Charité Berlin with engineering from TU Berlin)

Support in scientific communication of DKMS on “Women in Science”
https://twitter.com/DKMS_SciMed/status/1492056190993448972
<https://mediacenter.dkms.de/news/riesner/>

SPONSORSHIP Small Animal Imager in bioluminescence, fluorescence and μ CT by Major Research Instrumentation Program per Art. 91b GG
 Deutsche Forschungsgemeinschaft (DFG) | 469.000 Euro funding volume | 2023

Project leader of networking project “Bridging the gap between life sciences and engineering communities: A cross-disciplinary online platform “Team up Buddies” to liaise postdocs”
 Berlin University Alliance (BUA) | 1 year | 10.000 Euro funding volume | 2023

Project leader of research project “Mechanisms and therapeutic targets of endothelial damage during GVHD”
 DKMS Stiftung | 3 years | 1 PhD position | 240.000 Euro funding volume | 2019

BIH Gender Equality Fund
 BIH | 1 year | 5000 Euro funding volume | 2019

Project leader of research project “Therapeutic targets to decrease pathological angiogenesis during GVHD and tumor growth after stem cell transplantation”
 Deutsche Krebshilfe | 3 years | 1 PhD position | 222.815 Euro funding volume | 2018

HONORS

AWARDS Best Young Poster Abstract Award of the 46th Annual EBMT Meeting | 2019
 Hans Jochem Kolb Research Award for outstanding contributions in the field of hematopoietic stem cell transplantation immunology, GvH/GvL conference | 2018
 Abstract Achievement Award of American Society of Hematology, ASH Annual Meeting | 2016

SCHOLARSHIPS Ruth-Jeschke-Travel Scholarship of the Charité academic grants committee: NAVBO Meeting, Newport, USA | 2018
 José-Carreras-Research-Scholarship for 3 years | 2017
 PhD completion scholarship of the Charité academic grants committee | 2016
 DAAD Travel Scholarship, ASH Annual Meeting, San Diego, USA | 2016
 DAAD Student Travel Scholarship: Harvard Medical School, Boston, USA | 2009

PUBLICATIONS

Verlaat L, **Riesner K**, Kalupa M, Jung B, Mertlitz S, Schwarz C, Mengwasser J, Fricke C, Penack O. Novel pre-clinical mouse models for chronic Graft-versus-Host Disease. *Front Immunol.* 2023 Jan 24;13:1079921. doi: 10.3389/fimmu.2022.1079921. PMID: 36761159; PMCID: PMC9902926.

Cordes S, Mokhtari Z, Bartosova M, Mertlitz S, **Riesner K**, Shi Y, Mengwasser J, Kalupa M, McGeary A, Schleifenbaum J, Schrezenmeier J, Bullinger L, Diaz-Ricart M, Palomo M, Carreras E, Beutel G, Schmitt CP, Beilhack A, Penack O. Endothelial damage and dysfunction in acute graft-versus-host disease. *Haematologica.* 2021 Aug 1;106(8):2147-2160. doi: 10.3324/haematol.2020.253716. PMID: 32675225; PMCID: PMC8327719.

Gehlsen U, Stary D, Maass M, **Riesner K**, Musial G, Stern ME, Penack O, Steven P. Ocular Graft-versus-Host Disease in a Chemotherapy-Based Minor-Mismatch Mouse Model Features Corneal (Lymph-) Angiogenesis. *Int J Mol Sci.* 2021 Jun 8;22(12):6191. doi: 10.3390/ijms22126191. PMID: 34201218; PMCID: PMC8228997.

Riesner K, Cordes S, Peczynski C, Kalupa M, Schwarz C, Shi Y, Mertlitz S, Mengwasser J, van der Werf S, Peric Z, Koenecke C, Schoemans H, Duarte RF, Basak GW, Penack O. Reduced Calcium Signaling Is Associated With Severe Graft-Versus-Host Disease: Results From Preclinical Models and From a Prospective EBMT Study. *Front Immunol.* 2020 Aug 11;11:1983. doi: 10.3389/fimmu.2020.01983. PMID: 32849661; PMCID: PMC7431962.

Schwarz CS, Bucher CH, Schlundt C, Mertlitz S, **Riesner K**, Kalupa M, Verlaat L, Schmidt-Bleek O, Sass RA, Schmidt-Bleek K, Duda GN, Penack O, Na IK. Spatio-Temporal Bone Remodeling after Hematopoietic Stem Cell Transplantation. *Int J Mol Sci.* 2020 Dec 29;22(1):267. doi: 10.3390/ijms22010267. PMID: 33383915; PMCID: PMC7795370

Martinez-Sanchez J, Hamelmann H, Palomo M, Mir E, Moreno-Castaño AB, Torramade S, Rovira M, Escolar G, Cordes S, Kalupa M, Mertlitz S, **Riesner K**, Carreras E, Penack O, Diaz-Ricart M. Acute Graft-vs.-Host Disease-Associated Endothelial Activation in vitro Is Prevented by Defibrotide. *Front Immunol.* 2019 Oct 9;10:2339. doi: 10.3389/fimmu.2019.02339. PMID: 31649666; PMCID: PMC6794443.

Riesner K, Shi Y, Jacobi A, Kräter M, Kalupa M, McGeary A, Mertlitz S, Cordes S, Schrezenmeier JF, Mengwasser J, Westphal S, Perez-Hernandez D, Schmitt C, Dittmar G, Guck J, Penack O. Initiation of acute graft-versus-host disease by angiogenesis. *Blood.* 2017 Apr 6;129(14):2021-2032. doi: 10.1182/blood-2016-08-736314. Epub 2017 Jan 17. PMID: 28096092.

Mertlitz S, Shi Y, Kalupa M, Grötzinger C, Mengwasser J, **Riesner K**, Cordes S, Elezkurtaj S, Penack O. Lymphangiogenesis is a feature of acute GVHD, and VEGFR-3 inhibition protects against experimental GVHD. *Blood.* 2017 Mar 30;129(13):1865-1875. doi: 10.1182/blood-2016-08-734210. Epub 2017 Jan 17. PMID: 28096093.

Mengwasser J, Babes L, Cordes S, Mertlitz S, **Riesner K**, Shi Y, McGeary A, Kalupa M, Reinheckel T, Penack O. Cathepsin E Deficiency Ameliorates Graft-versus-Host Disease and Modifies Dendritic Cell Motility. *Front Immunol.* 2017 Mar 1;8:203. doi: 10.3389/fimmu.2017.00203. PMID: 28298913; PMCID: PMC5331043.

Leonhardt F, Grundmann S, Behe M, Bluhm F, Dumont RA, Braun F, Fani M,

Riesner K, Prinz G, Hechinger AK, Gerlach UV, Dierbach H, Penack O, Schmitt-Gräff A, Finke J, Weber WA, Zeiser R. Inflammatory neovascularization during graft-versus-host disease is regulated by α v integrin and miR-100. *Blood*. 2013 Apr 25;121(17):3307-18. doi: 10.1182/blood-2012-07-442665. Epub 2013 Jan 17. PMID: 23327924.

Nogai A, Shi Y, Pérez-Hernandez D, Cordes S, Mengwasser J, Mertlitz S, **Riesner K**, Kalupa M, Erdmann JH, Ziebig R, Dittmar G, Penack O. Organ siderosis and hemophagocytosis during acute graft-versus-host disease. *Haematologica*. 2016 Aug;101(8):e344-6. doi: 10.3324/haematol.2016.144519. Epub 2016 May 19. PMID: 27198715; PMCID: PMC4967586.

Riesner K, Kalupa M, Shi Y, Elezkurtaj S, Penack O. A preclinical acute GVHD mouse model based on chemotherapy conditioning and MHC-matched transplantation. *Bone Marrow Transplant*. 2016 Mar;51(3):410-7. doi: 10.1038/bmt.2015.279. Epub 2015 Nov 23. PMID: 26595081.

Lehnen NC, von Mässenhausen A, Kalthoff H, Zhou H, Glowka T, Schütte U, Höller T, **Riesner K**, Boehm D, Merkelbach-Bruse S, Kirfel J, Perner S, Gütgemann I. Fibroblast growth factor receptor 1 gene amplification in pancreatic ductal adenocarcinoma. *Histopathology*. 2013 Aug;63(2):157-66. doi: 10.1111/his.12115. Epub 2013 Jun 28. Erratum in: *Histopathology*. 2013 Dec;63(6):886. PMID: 23808822.

Schildhaus HU, Heukamp LC, Merkelbach-Bruse S, **Riesner K**, Schmitz K, Binot E, Paggen E, Albus K, Schulte W, Ko YD, Schlesinger A, Ansén S, Engel-Riedel W, Brockmann M, Serke M, Gerigk U, Huss S, Göke F, Perner S, Hekmat K, Frank KF, Reiser M, Schnell R, Bos M, Mattonet C, Sos M, Stoelben E, Wolf J, Zander T, Buettner R. Definition of a fluorescence in-situ hybridization score identifies high- and low-level FGFR1 amplification types in squamous cell lung cancer. *Mod Pathol*. 2012 Nov;25(11):1473-80. doi: 10.1038/modpathol.2012.102. Epub 2012 Jun 8. PMID: 22684217; PMCID: PMC4089812.

Körner C, **Riesner K**, Krämer B, Eisenhardt M, Glässner A, Wolter F, Berg T, Müller T, Sauerbruch T, Nattermann J, Spengler U, Nischalke HD. TRAIL receptor 1 (DR4) polymorphisms C626G and A683C are associated with an increased risk for hepatocellular carcinoma (HCC) in HCV-infected patients. *BMC Cancer*. 2012 Mar 8;12:85. doi: 10.1186/1471-2407-12-85. PMID: 22401174; PMCID: PMC3372437.

Körner C, Tolksdorf F, **Riesner K**, Krämer B, Schulte D, Nattermann J, Rockstroh JK, Spengler U. Hepatitis C coinfection enhances sensitization of CD4(+) T-cells towards Fas-induced apoptosis in viraemic and HAART-controlled HIV-1-positive patients. *Antivir Ther*. 2011;16(7):1047-55. doi: 10.3851/IMP1882. PMID: 22024520.