

Christoph Binder CV

Personal Data

Date of Birth: 27/03/1973
Place of Birth: Vienna
Nationality: Austria

Education

1991-1997 Medical School, Medical Faculty of the University of Vienna, Austria
March 1997 M.D., University of Vienna, Austria
1997-2002 Graduate Studies in Molecular Pathology, University of California San Diego, USA
September 2002 Ph.D., University of California San Diego, USA
2005 - 2013 Residency in Laboratory Medicine (Clinical Pathology)
November 2012 Board examination, Austrian Chamber of Physicians
September 2013 Certified specialist in Medical and Chemical Laboratory Diagnostics

Career History

2002 - 2005 Postdoctoral Fellow, Dept. of Medicine, University of California San Diego, USA
2005 Habilitation in Vascular Biology, Medical University of Vienna, Austria
2005 - 2009 University Docent, Dept. of Laboratory Medicine, Medical University of Vienna, Austria
2005 - Visiting/Adjunct Assistant Professor of Medicine, Dept. of Medicine, University of California San Diego, USA
2006 - Principal Investigator, Center for Molecular Medicine (CeMM) of the Austrian Academy of Sciences, Vienna, Austria
2009 - Professor of Atherosclerosis Research, Dept. of Laboratory Medicine, Medical University of Vienna, Austria

Awards (5 most important)

1997 Fulbright Scholarship, Austrian J.W. Fulbright Commission
2000 Ph.D. Scholarship, Boehringer Ingelheim Fonds
2003 Young Investigator Award, XIIIth International Symposium on Atherosclerosis, Kyoto, Japan
2003 Postdoctoral Fellowship, American Heart Association
2006 Förderungspreis, Kardinal Innitzer Studienfonds

Invitations to present at conferences (5 most important)

Keystone Symposium 2014, X8: Innate Immunity, Metabolism and Vascular Injury, Whistler, British Columbia, Kanada; 82nd EAS Congress 2014, European Atherosclerosis Society Meeting, Madrid, Spain; AHA 2014, Scientific Sessions of the American Heart Association Scientific Sessions, Chicago, USA; ESC 2013, European Society of Cardiology Congress, Amsterdam, The Netherlands; Gordon Research Conference 2013, Translating the Biology of Atherosclerosis, Stowe, VT, USA;

Peer review activities, editorships, and/or memberships in academic organizations (5 most important)

Editorial Board member of the journal "Arteriosclerosis, Thrombosis, and Vascular Biology";
Ad hoc reviewer for more than 10 Journals, including Thrombosis & Hemostasis;
Arteriosclerosis, Thrombosis, and Vascular Biology; Journal of Lipid Research; Journal of the American College of Cardiology; Circulation Research; Circulation; Journal of Clinical Investigation; Nature Medicine; Nature Immunology;
Referee for the Austrian Science Fund (FWF);
Member of the Ethics Committee of the Medical University of Vienna;
Member of the American Heart Association;

Peer-reviewed and funded research projects (5 most important as responsible PI)

Cellular Mediators linking Inflammation and Thrombosis: Microparticles as modulators of inflammation and thrombosis, FWF, 2014-2017, € 537,000.-

Vaccination in Atherosclerosis, EU, 2013-2017, € 375,000.-

Lipotoxicity: Lipid peroxidation-derived epitopes and macrophages, FWF, 2011-2017, € 630,000.-

Immune Modulation of Cardiovascular Disease, Fondation Leducq, 2006-2012, € 600,000.-

Microparticles and novel therapeutic approaches for thrombosis, FFG, 2008-2011, € 342,000.-

Key international cooperation partners (last 5 years)

Dr. Peter Zipfel, Dept. of Infection Biology, International Leibniz Research School, Germany

Dr. Anna Blom, Dept. of Translational Medicine, Lund University, Sweden

Dr. Joseph L. Witztum, Dept. of Medicine, University of California San Diego, USA

Dr. Ziad Mallat, Division of Cardiovascular Medicine, University of Cambridge, UK

Dr. Ronit Shiri-Sverdlov, Dept. of Genetics and Cell Biology, Maastricht University, The Netherlands

10 most important scientific publications

- Tsiantoulas D, Perkmann T, Afonyushkin T, Mangold A, Prohaska TA, Papac-Milicevic N, Millischer V, Bartel C, Hörkkö S, Boulanger CM, Tsimikas S, Fischer MB, Witztum JL, Lang IM, **Binder CJ**. Circulating microparticles carry oxidation-specific epitopes and are recognized by natural IgM antibodies. *J Lipid Res*. 2015 Feb;56(2):440-8
- Cardilo-Reis L, Gruber S, Schreier SM, Drechsler M, Papac-Milicevic N, Weber C, Wagner O, Stangl H, Soehnlein O, **Binder CJ**. Interleukin-13 protects from atherosclerosis and modulates plaque composition by skewing the macrophage phenotype. *EMBO Mol Med*. 2012 Oct;4(10):1072-86.
- Amir S, Hartvigsen K, Gonen A, Leibundgut G, Que X, Jensen-Jarolim E, Wagner O, Tsimikas S, Witztum JL, **Binder CJ**. Peptide mimotopes of malondialdehyde epitopes for clinical applications in cardiovascular disease. *J Lipid Res*. 2012 Jul;53(7):1316-26
- Weismann D, Hartvigsen K, Lauer N, Bennett KL, Scholl HP, Charbel Issa P, Cano M, Brandstätter H, Tsimikas S, Skerka C, Superti-Furga G, Handa JT, Zipfel PF, Witztum JL, **Binder CJ**. Complement factor H binds malondialdehyde epitopes and protects from oxidative stress. *Nature*. 2011 Oct 5;478(7367):76-81.
- Chou MY, Fogelstrand L, Hartvigsen K, Hansen LF, Woelkers D, Shaw PX, Choi J, Perkmann T, Bäckhed F, Miller YI, Hörkkö S, Corr M, Witztum JL, **Binder CJ**. Oxidation-specific epitopes are dominant targets of innate natural antibodies in mice and humans. *J Clin Invest*. 2009 May;119(5):1335-49.
- Imai Y, Kuba K, Neely GG, Yaghubian-Malhami R, Perkmann T, van Loo G, Ermolaeva M, Veldhuizen R, Leung YH, Wang H, Liu H, Sun Y, Pasparakis M, Kopf M, Mech C, Bavari S, Peiris JS, Slutsky AS, Akira S, Hultqvist M, Holmdahl R, Nicholls J, Jiang C, **Binder CJ**, Penninger JM. Identification of oxidative stress and Toll-like receptor 4 signaling as a key pathway of acute lung injury. *Cell*. 2008 Apr 18;133(2):235-49.
- Chang MK, **Binder CJ**, Miller YI, Subbanagounder G, Silverman GJ, Berliner JA, Witztum JL. Apoptotic cells with oxidation-specific epitopes are immunogenic and proinflammatory. *J Exp Med* 2004 Dec; 200(11):1359-70.
- Binder CJ**, Hartvigsen K, Chang MK, Miller M, Broide D, Palinski W, Curtiss LK, Corr M, Witztum JL. IL-5 links adaptive and natural immunity specific for epitopes of oxidized LDL and protects from atherosclerosis. *J Clin Invest*. 2004 Aug;114(3):427-37.
- Binder CJ**, Hörkkö S, Dewan A, Chang MK, Kieu EP, Goodyear CS, Shaw PX, Palinski W, Witztum JL, Silverman GJ. Pneumococcal vaccination decreases atherosclerotic lesion formation: molecular mimicry between *Streptococcus pneumoniae* and oxidized LDL. *Nat Med*. 2003 Jun;9(6):736-43.
- Binder CJ**, Chang MK, Shaw PX, Miller YI, Hartvigsen K, Dewan A, Witztum JL. Innate and acquired immunity in atherogenesis. *Nat Med*. 2002 Nov;8(11):1218-26.