

Curriculum vitae

René Weiss, PhD

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Personal Data

Date of birth 08-04-1984, St. Pölten, Austria

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Current Positions, Employment, and Faculty Appointments

since 2013 Research Associate, Department for Health Sciences and Biomedicine

www.donau-uni.ac.at

www.sepsisresearch.at

Education

2004 - 2009 University of Vienna (Molecular Biology), Vienna, Austria

2009 Graduation (Mag.)

2010 - 2013 PhD thesis, Medical University of Vienna (Immunology), Austria

2013 Promotion (PhD)

Academic and Professional Career

2010 - 2013 PhD Student

Surgical Research Laboratories, Medical University of Vienna, Vienna, Austria
(with Prof. Michael Bergmann)

since 2013 Research Associate

Department for Health Sciences and Biomedicine, Danube University Krems,
Krems, Austria (with Prof. Viktoria Weber)

Research Interests

- Extracellular vesicles (characterization and functional studies in inflammation and coagulation)
- Blood-biomaterial interface and blood compatibility
- Pathophysiology of sepsis
- Extracorporeal therapies

Awards

- Poster Award, Conference Frontiers in Regenerative Medicine, Turin, Italy (2015)
- Krems Cooperation Research Award, Krems, Austria (2019)

Memberships in Professional Societies

ASEV Austrian Society for Extracellular Vesicles (Founding Member and Treasurer),
www.asev.at

ISEV International Society for Extracellular Vesicles, www.isev.org

GSEV German Society for Extracellular Vesicles, www.extracellular-vesicles.de

ÖGMBT Austrian Association of Molecular Life Sciences and Biotechnology,
www.oegmbt.at

ESAO European Society for Artificial Organs, www.esao.org

OEGfZ Austrian Society for Cytometry, www.zytometrie.at

Organisation of Conferences

- Symposium Extracellular Vesicles in Inflammation (2015, 2016, 2017, 2018, 2019, 2021)

Peer-Reviewed Articles

Steinberger S, Karuthedom George S, Lauková L, Weiss R, Tripisciano C, Birner-Gruenberger R, Weber V, Allmaier G, Weiss V (2021) A possible role of gas-phase electrophoretic mobility molecular analysis (nES GEMMA) in extracellular vesicle research. *Anal Bioanal Chem.* 2021 Oct 7. Doi: 10.1007/s00216-021-03692-y.

<https://doi.org/10.1007/s00216-021-03692-y>

Karuthedom George S, Lauková L, Weiss R, Semak V, Fendl B, Weiss VU, Steinberger S, Allmaier G, Tripisciano C, Weber V (2021) Comparative analysis of platelet-derived extracellular vesicles using flow cytometry and nanoparticle tracking analysis. *Int J Mol Sci* 2021, 22(8):3839.

<https://doi.org/10.3390/ijms22083839>

Eichhorn T, Linsberger I, Lauková L, Tripisciano C, Fendl B, Weiss R, König F, Valicek G, Miestinger G, Hörmann C, Weber V (2021) Analysis of inflammatory mediator profiles in sepsis patients reveals that extracellular histones are strongly elevated in non-survivors. *Med Inflamm* 2021 Mar 17;2021:8395048.

<https://doi.org/10.1155/2021/8395048>

Fendl B, Weiss R, Eichhorn T, Linsberger I, Afonyushkin T, Puhm F, Binder CJ, Fischer MB, Weber V (2021) Extracellular vesicles are associated with C-reactive protein in sepsis and elicit a pro-inflammatory response in human monocytes. *Sci Rep* 2021, 11, 6996.

<https://doi.org/10.1038/s41598-021-86489-4>

Otahal A, Kramer K, Kuten-Pella O, Weiss R, Stotter C, Lacza Z, Weber V, Nehrer S, De Luna A (2020) Characterisation and chondroprotective effects of extracellular vesicles from plasma- and serum-based autologous blood-derived products for osteoarthritis therapy. *Front Bioeng Biotechnol* 2020, 8:584050.

<https://doi.org/10.3389/fbioe.2020.584050>

Lauková L, Weiss R, Semak V, Weber V (2020) Desialylation of platelet surface glycans enhances platelet adhesion to adsorbent polymers in whole blood lipoprotein apheresis. *Int J Artif Organs* 2020 Nov 3;391398820968849.

<https://doi.org/10.1177/0391398820968849>

Tripisciano C, Weiss R, Karuthedom George S, Fischer MB, Weber V (2020) Extracellular vesicles derived from platelets, red blood cells, and monocyte-like cells differ regarding their ability to induce factor XII-dependent thrombin generation. *Front Cell Dev Biol* 2020 May 5; 8:298.

<https://doi.org/10.3389/fcell.2020.00298>

Wisgrill L, Lamm C, Thaler J, Berger A, Weiss R, Weber V, Rinoesl H, Hiesmayr MJ, Spittler A, Bernardi M (2020) Influence of hemoadsorption during cardiopulmonary bypass on blood vesicle count and function. *J Transl Med* 2020 May 15; 18(1):202.

<https://doi.org/10.1186/s12967-020-02369-x>

Almeria C, Weiss R, Roy M, Tripisciano C, Kasper C, Weber V, Egger D (2019) Hypoxia conditioned mesenchymal stem cell-derived extracellular vesicles induce increased vascular tube formation in vitro. *Front Bioeng Biotechnol* 2019 Oct 23;7:292.

<https://doi.org/10.3389/fbioe.2019.00292>

Fendl B, Weiss R, Eichhorn T, Spittler A, Fischer MB, Weber V (2019) Storage of human whole blood, but not isolated monocytes, preserves the distribution of monocyte subsets. *Biochem Biophys Res Commun* 517(4):709-714.

<https://doi.org/10.1016/j.bbrc.2019.07.120>

Fendl B, Eichhorn T, Weiss R, Tripisciano C, Spittler A, Fischer MB, Weber V (2018) Differential interaction of platelet-derived extracellular vesicles with circulating immune cells: roles of TAM receptors, CD11b, and phosphatidylserine. *Frontiers in Immunology* 9:2797.

<https://doi.org/10.3389/fimmu.2018.02797>

Gubensek J, Strobl K, Harm S, Weiss R, Eichhorn T, Buturovic-Ponikvar J, Weber V, Hartmann J (2018) Influence of citrate concentration on the activation of blood cells in an in vitro dialysis setup. *PLoS One* 13(6):e0199204.

<https://doi.org/10.1371/journal.pone.0199204>

Weiss R, Gröger M, Rauscher S, Fendl B, Eichhorn T, Fischer MB, Spittler A, Weber V (2018) Differential interaction of platelet-derived extracellular vesicles with leukocyte subsets in human whole blood. *Sci Rep* 8(1):6598.

<https://doi.org/10.1038/s41598-018-25047-x>

Tripisciano C, Weiss R, Eichhorn T, Spittler A, Heuser T, Fischer MB, Weber V (2017) Different potential of extracellular vesicles to support thrombin generation: Contributions of phosphatidylserine, tissue factor, and cellular origin. *Sci Rep* 7(1):6522.

<https://doi.org/10.1038/s41598-017-03262-2>

Weiss R, Eichhorn T, Spittler A, Mičušík M, Fischer MB, Weber V (2017) Release and cellular origin of extracellular vesicles during circulation of whole blood over adsorbent polymers for lipid apheresis. *J Biomed Mater Res B* 105(3):636-646.

<https://doi.org/10.1002/jbm.b.33588>

Weiss R, Fischer MB, Weber V (2017) The impact of citrate concentration on adhesion of platelets and leukocytes to adsorbents in whole blood lipid apheresis. *J Clin Apher* 32(6):375-383.

<https://doi.org/10.1002/jca.21519>

Fendl B, Weiss R, Fischer MB, Spittler A, Weber V (2016) Characterization of extracellular vesicles in whole blood: Influence of pre-analytical parameters and visualization of vesicle-cell interactions using imaging flow cytometry. *Biochem Biophys Res Commun* 478(1):168-173.

<https://doi.org/10.1016/j.bbrc.2016.07.073>

Weiss R, Laengle J, Sachet M, Shurygina AP, Kiselov O, Egorov A, Bergmann M (2015) Interleukin-24 inhibits influenza A virus replication in vitro through induction of toll-like receptor 3 dependent apoptosis. *Antiviral research*, 123:93-104. Epub 2015/09/15.

<https://doi.org/10.1016/j.antiviral.2015.09.005>

Weiss R, Spittler A, Schmitz G, Fischer MB, Weber V (2014) Thrombocyte adhesion and release of extracellular microvesicles correlate with surface roughness of adsorbent polymers for lipid apheresis. *Biomacromolecules*, 15(7):2648-2655.

<https://doi.org/10.1021/bm500492r>

Weiss R, Sachet M, Zinggrebe J, Aschacher T, Krainer M, Hegedus B, Walczak H, Bergmann M (2013) IL-24 sensitizes tumor cells to TLR3-mediated apoptosis. *Cell death and differentiation*, 20(6):823-33. Epub 2013/03/02.

<https://doi.org/10.1038/cdd.2013.15>