Curriculum vitae

Assoc.-Prof. Dr. Jens Hartmann

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Personal Data

Date of birth 14-11-1969, Nürnberg, Germany

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Current Positions, Employment, and Faculty Appointments

Since 2023 **Associate Professor for Apheresis & Extracorporeal Therapies**
University for Continuing Education, Krems, Austria

2018-2023 **Assistant Professor for Apheresis & Extracorporeal Therapies**
University for Continuing Education, Krems, Austria

Since 2001 **Head of Medical Process Engineering,** Center for Biomedical Technology, Danube University Krems, Austria

Since 2025 **Head of the Department for Biomedical Research,** University for Continuing Education Krems, Austria

Education

1999 **Master of Science (Biology),** University of Vienna, Vienna, Austria

1990 **Quality Representative** (ÖVQ)

2007 **Doctoral thesis**, Department of Cell Imaging und Ultrastructure Research, University of Vienna, Vienna, Austria

2008 **Certified Project Manager**

Academic and Professional Career

since 1999 **Research associate**
Danube University Krems, Krems, Austria

1999-2003 **6 weeks research stay,** Polish Academy of Sciences, Warsaw, Poland

2000 - 2001 **Project leader "Tecnet AREA Biotechnologie"** on behalf of the government of Lower Austria

Since 2001 **Head of Medical Process Engineering**, Center for Biomedical Technology, Danube University Krems, Krems, Austria

2018-2023 **Assistant Professorship for Apheresis and Extracorporeal Therapies**, University of Continuing Education Krems, Austria

Since 2023 **Associate Professorship for Apheresis and Extracorporeal Therapies**, University of Continuing Education Krems, Austria

Research Interests

- Antimicrobial peptides, host defense peptides
- Apheresis and extracorporeal blood purification
- Anticoagulation
- Adsorption
- Blood-Material interaction
- Biocompatibility

Awards

2000	Dr. Erwin Pröll Zukunftspreis
2008	Award for the supervised innovation internship within the framework of the programme „Forschung macht Schule“
2015	ESAO Wichtig Research Award for the publication: *Harm S, Falkenhagen D, Hartmann J. Pore size – a key property for selective toxin removal in blood purification. Int J Artif Organs 2014; 37(9): 668 – 678. DOI:10.5301/ijao.5000354.*
2016	Nomination for the Lower Austrian Innovation Award (Karl Ritter von Ghega Preis) for the project “Antimicrobial Peptides and their Application in Blood Purification”

Memberships in Professional Societies

	ESAO	European Society for Artificial Organs
2010-2020	**VBIO**	Verband Biologie, Biowissenschaften und Biomedizin

Peer-Reviewed Articles

W. Strobl, I. Linsberger, J. Hartmann, G. Vogt, M. Schoenhofen, E. Sabrowski, F. Loth and D, Falkenhagen: FPSA-System: Effective in Continuous Removal of Protein bound and High Molecular Weight toxins From Blood. Proceeding of the EMBEC 99, Part I.

D. Falkenhagen, W. Strobl, J. Hartmann, A. Schrefl, I. Linsberger, K-H. Kellner, F. Aussenegg, A. Leitner (2002): Patient Safety Technology for Microadsorbent Systems in Extracorporeal Blood Purification. Artif Organs, 26 (2): 84-90.

M. Brandl, J. Hartmann, T. Posnicek, F. R. Aussenegg, A. Leitner, D. Falkenhagen (2005): Detection of Fluorescently Labeled Microparticles in Blood. Blood Purif, 23 (3), 181-189.

J. Hartmann, C. Schildböck, M. Brandl, D. Falkenhagen (2005): Particle Leakage in Extracorporeal Blood Purification Systems Based on Microparticle Suspensions. Blood Purif, 23 (4): 282-286.

Falkenhagen D., Brandl M., Hartmann J., Kellner K.H., Linsberger I., Posnicek T., and Weber V. (2006) Fluidized bed adsorbent systems for extracorporeal liver support. Ther Apher Dial, 10 (2): 154-159.

M. Brandl, J. Hartmann, D. Falkenhagen (2006): New Methods for Haemoglobin Detection in a Microparticle - Plasma Suspension. Int J Artif Organs, 29 (11): 1092-1100.

Weber V., Hartmann J., Linsberger I., and Falkenhagen D. (2007): Efficient adsorption of tumor necrosis factor with an in vitro set-up of the Microspheres-Based Detoxification System. Blood Purif, 25 (2), 169-174.

Hartmann J., Strobl K., Falkenhagen D. (2008): Anticoagulation in combined membrane/adsorption systems. Symposium: Artificial Organ - From in vitro assessment to human therapies. ISSN 0351-3254.

Harm S, Strobl K, Hartmann J, Falkenhagen D: Alginate-Encapsulated Human Hepatoma C3A Cells for use in a Bioartificial Liver Device - the Hybrid-MDS. Int J Art Org, 32, 11, 2009.

Brandl M, Mayer M, Hartmann J, Posnicek T, Fabian C, Falkenhagen D: Theoretical Analysis of Ferromagnetic Microparticles in Streaming Liquid Under the Influence of External Magnetic Forces. J Magn Magn Mater, 322, 2454-2464, 2010.

Brandl M, Strobl K, Hartmann J, Kellner K, Posnicek T, Falkenhagen D: A Target-Orientated Algorithm for Regional Citrate-Calcium Anticoagulation in Extracorporeal Therapies. Blood Purif 2012, 33, 7-20.

Hartmann J, Strobl K, Fichtinger U, Schildböck C, Falkenhagen D (2012): In vitro investigations of citrate clearance with different dialysis filters. Int J Art Org 2012, May; 35(5): 352-9.

Strobl K, Hartmann J, Wallner M, Brandl M, Falkenhagen D (2013). A target-oriented algorithm for citrate-calcium anticoagulation in clinical practice. Blood Purif. 2013;36(2):136-145.

Hartmann J, Beyer R, Harm S. Effective Removal of Estrogens from Drinking Water and Wastewater by Adsorption Technology. Environmental Processes Journal, 2014, Vol 1, Issue 1 (2014): S. 87-94.

Harm S, Falkenhagen D, Hartmann J. Endotoxin Adsorbents in Extracorporeal Blood Purification – Do They Fulfill The Expectations? Int J Art Org, 2014, 37(3): 222-232, DOI:10.5301/ijao.5000304.

Harm S, Falkenhagen D, Hartmann J. Pore size – a key property for selective toxin removal in blood purification. Int J Artif Organs 2014; 37(9): 668 - 678 DOI:10.5301/ijao.5000354.

Harm S, Gruber A, Gabor F, Hartmann J: Adsorption of Selected Antibiotics to Resins in Extracorporeal Blood Purification. Blood Purif 2015; 41(1-3):55-63.

Harm S, Gabor F, Hartmann J.: Characterization of Adsorbents for Cytokine Removal from Blood in an In Vitro Model. Journal of Immunology Research, Vol 2015, Article ID 484736, 11 pages; http://dx.doi.org/10.1155/2015/484736.

Harm S, Gabor F, Hartmann J: Low-Dose Polymyxin: An Option for Therapy of Gram-Negative Sepsis. Innate Immunity, March 2016. DOI: http://doi.org/10.1177/1753425916639120.

Harm S., Hartmann J.: Polymyxin-Coated Nanostructured Materials: An Option for Sepsis Treatment. J Nanomater Mol Nanotechnol 2016, S4. DOI: http://doi.org/10.4172/2324-8777.S4-001.

Strobl K, Harm S, Weber V, Hartmann J: The role of ionized calcium and magnesium in regional citrate anticoagulation and its impact on inflammatory parameters. Int J Artif Organs 2017; 40(1): 15-21, DOI: http://doi.org10.5301/ijao.5000558.

Hartmann J, Harm S: A new integrated technique for the supportive treatment of sepsis. Int J Artif Organs 2017; 40(1): 4-8, DOI: http://doi.org/10.5301/ijao.5000550.

Hartmann J, Harm S: Removal of bile acids by extracorporeal therapies: an in vitro study. Int J Artif Organs, 2017 Sep. DOI: http://doi.org/10.5301/ijao.5000643.

Eichhorn T, Hartmann J, Harm S, Linsberger I, König F, Valicek G, Miestinger G, Hörmann C, Weber V: Clearance of selected cytokines with continuous veno-venous hemodialysis using Ultraflux EMiC2 versus Ultraflux AV1000S. Blood Purif, 2017, 44:260-266.

Harm S, Schildböck C, Hartmann J: Removal of stabilizers from human serum albumin by adsorbents and dialysis used in blood purification. Accepted for publication. PLOS ONE, 2018.

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

Harm S, Schildböck C, Hartmann J: Cytokine Removal in Extracorporeal Blood Purification: An in vitro Study. Blood Purif. 2019 Sep 11:1-11. doi: http://doi.org/10.1159/000502680.

Harm S, Lohner K, Fichtinger U, Schildböck C, Zottl J, Hartmann J. Blood Compatibility—An Important but Often Forgotten Aspect of the Characterization of Antimicrobial Peptides for Clinical Application. Int J Mol Sci, 2019, 20, 21, http://doi.org/10.3390/ijms20215426.

Kielbassa AM, Leimer MR, Hartmann J, Harm S, Pasztorek M, Ulrich IB. Ex vivo investigation on internal tunnel approach/internal resin infiltration and external nanosilver-modified resin infiltration of proximal caries exceeding into dentin. PLoS ONE, 2020, Jan 28, http://doi.org/10.1371/journal.pone.0228249.

Strobl K, Harm S, Fichtinger U, Schildböck C, Hartmann J: Impact of anion exchange adsorbents on regional citrate anticoagulation. Int J Artif Organs, August 2020, http://doi.org/10.1177/0391398820947733.

Harm S, Schildböck C, Strobl K, Hartmann J: An in vitro study on factors affecting endotoxin neutralization in human plasma using the Limulus amebocyte lysate test. Scientific Reports, 11:4192: https://doi.org/10.1038/s41598-021-83487-4, Nature Publishing Group.

Pilecky M, Harm S, Bauer C, Zottl J, Emprechtinger R, Eichhorn T, Schildböck C, Ecker M, Willheim M, Weber V, Hartmann J: Performance of lateral flow assays for SARS-CoV-2 compared to RT-qPCR. J Infect. 2022 Jan 14; S0163-4453(22)00011-1. doi: http://doi.org/10.1016/j.jinf.2022.01.013.

Schildböck C, Harm S, Hartmann J: In vitro Removal of Protein-Bound Retention Solutes by Extracorporeal Blood Purification Procedures. Blood Purif 2024, doi: https://doi.org/10.1159/000534906.

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Patents and Patent Applications

M. Brandl, J. Hartmann, D. Falkenhagen (2004): Verfahren und Vorrichtung zur Detektion von markierten Mikropartikeln. Österreichische Patentanmeldung AZ 431/2004, Europäisches Patent EP 1 574 259 A1 (2005).

Brandl M, Falkenhagen D, Hartmann J, Strobl K (2007): Verfahren zum Erfassen der Ionenkonzentration bei Citrat-Antikoagulierter Extrakorporaler Blutreinigung. Österreichische Patentanmeldung A 1368/2007. Europäisches Patent EP2200675 A1 30.06.2010.

Falkenhagen D, Hartmann J, Weber V (2010): Sorptionsmittel zum Entfernen proteingebundener Substanzen./Sorbent for Removing Protein-Bound Substances. Patentanmeldung PCT/AT2010/000016. WO Patent WO/2010/083,544. EP Patent 2,389,206. US Patent 2012/0125857 A1.

Falkenhagen D, Harm S, Hartmann J, Weber V (2010): Neuartiges Sorptionsmittel für Endotoxine./Novel Sorbent for Endotoxins. Österreichisches Patent A-1073/2010, Internationale Patentanmeldung PCT/AT2011/000273, 29.12.2011. WO Patent WO/2011/160149.

Brandl M, Falkenhagen D, Hartmann J: Sicherheitseinrichtung für eine extrakorporale Blutbehandlung. Europäische Patentanmeldung 12164284.7-1257. 10.04.2012., Chinesisches Patent Nr. CN 104394902.

Falkenhagen D, Harm S, Hartmann J (2012): Selektives Sorptionsmittel für die extrakorporale Blutreinigung. Europäische Patentanmeldung 12174028.6-1257, 28.06.2012.

Falkenhagen D, Harm S, Hartmann J (2012): Dosierungsanleitung für endotoxinbindende Lipopeptide. Europäische Patentanmeldung 12174285.2-2123, 29.06.2012.

Falkenhagen D, Harm S, Hartmann J: Extrakorporale Perfusionseinrichtung. Europäische Patenteinreichung Nr. 12174028. Japanisches Patent Nr 6092380 (Anmeldung Nr. 2015519091, erteilt 17.02.2017).

Falkenhagen D, Harm S, Hartmann J, Weber V (2016): Sorptionsmittel für Endotoxine/Sorbent for Endotoxins. US Patent Nr. US 9,440,019 B2.