

PERSONAL DETAILS

Address: Medizinische Hochschule Hannover (MHH)
Department of Orthopaedic Surgery OE 8893
Graded Implants and Regenerative Strategies in the Skeletal System
Stadtfelddamm 34, 30625 Hannover

Date of birth: July 2nd, 1964

Nationality: German

Web sites: www.gradierte-implantate.de/en; www.lbb-mhh.de;

EDUCATION

2007 **Habilitation** (postdoctoral lecturing qualification) and **Venia legendi in Regenerative Medicine**, Hannover Medical School (MHH)

1992 **Doctoral degree** (Dr. rer. nat.), University of Hannover: very good

1989 **Diplom** (graduate degree) in **Biochemistry**, University of Hannover: very good

1983 **Abitur** (university entrance qualification), grade: 1.0

CURRENT POSITIONS

since 2016 **University professor** ‘Graded Implants and Regenerative Strategies in the Skeletal System’ financed by German Research Foundation (DFG) within Research Unit (‘**Research Unit professorship**’ 2016 - 2019: comparable to ‘Heisenberg Professorship’, but with added responsibility for entire research unit), Department of Orthopaedic Surgery, MHH

since 2015 **Spokeswoman, DFG Research Unit FOR 2180** (collaborative research programme) ‘Graded Implants for Tendon-Bone-Junctions’ with 7.7 mio € total funds

since 2015 **Member of NIFE** (Lower Saxony Centre for Biomedical Engineering, Implant Research and Development), joint scientific institution of MHH, Leibniz University Hannover (LUH), University of Veterinary Medicine Hannover

since 2015 **Adjunct professor** (*außerplanmäßige Professorin*), MHH

PREVIOUS POSITIONS

2014 - 2016 **Senior scientist, group leader**, Department of Orthopaedic Surgery, MHH

2009 - 2014 **University professor** ‘Biology of the Locomotor System’ (endowed chair, not tenured), Department of Trauma Surgery, MHH

1993 - 2009 **Postdoctoral and senior scientist positions**, Helmholtz Centre for Infection Research, Braunschweig, and MHH

FELLOWSHIPS AND AWARDS

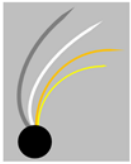
2019 **Advisory Board Member** “Rostock Centre for Interdisciplinary Implant Research ROCINI”

2018 **Nomination for the Ernst Jung Prize for Medicine 2019** by the presidents of MHH, LUH and Technical University of Braunschweig (TU-BS)

since 2016 **Member of Academia Net** (database for excellent female scientists nominated by organizations of repute including DFG and the ERC: www.academianet.de/aufnahmekriterien/)

11/06 **Visiting researcher at Stem Cell Center Lund, Sweden** with Dr. Ulrike Nuber

10/99 - 11/99 **Visiting researcher at K. U. Leuven, Belgium** with Prof. Dr. D. Huylebroeck



- 1998 - 1999 **Research Fellowship** awarded by German Research Foundation HO 2058/1-1
1989 - 1991 **Fellowship for Ph.D. studies** ‘Graduate Advancement Act (GFG) Lower Saxony’
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SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- since 2010 Supervisor or co-supervisor and reviewer of more than 50 dissertations, master’s and bachelor’s theses, 2 postdoctoral lecturing qualifications: MHH, LUH, TU-BS
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TEACHING ACTIVITIES

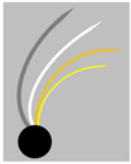
- 2021 Teaching Award (second prize) by MHH biochemistry students
since 2018 ‘Development of Cell Therapeutics’ (lecture series with 15 lecturers, organized by me, for M. Sc. in Biochemistry), MHH, 2 hours weekly, summer semester
since 2016 ‘Introduction to Animal Cell Culture Techniques’: two weeks-lab course for B. Sc. in Life Science, LUH, equivalent to 5 hours weekly, summer semester
since 2014 Guest lectures for engineering students, faculty of mechanical engineering, LUH
since 2009 Lectures for PhD students, PhD programs ‘Regenerative Sciences’ and ‘Hearing’, MHH
since 2007 ‘Adult Stem Cells in Regenerative Medicine’ (lecture for M. Sc. and B. Sc. in Biochemistry, B. Sc. in Biology, B. Sc. in Life Science), MHH, 2 hours weekly, summer + winter semester
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ORGANISATION OF SCIENTIFIC MEETINGS

- 2019 Scientific symposium at the Labvolution fair with program planning, invitation of speakers, own presentation, lab visits in NIFE, 40 participants:
www.labvolution.de/de/rahmenprogramm/biomedizintechnik-und-implantatentwicklung/
2019 Member of program committee for meeting of European Society for Artificial Organs (ESAO), <https://www.esao2019.org/program/#committee>
2018 Member of program committee for meeting of ‘Deutsche Gesellschaft für Biomaterialien’, <https://www.dgbm-kongress.de/index.php?id=15738>
since 2015 Organisation of workshops on biomaterials within NIFE
since 2015 Organization of annual two-day workshops for DFG-FOR 2180 with visiting national and international experts on ‘biomedical implants’, 30 participants each
2010 Co-organizer of a meeting with the European Commission in Brussels: ‘Smart Materials for Biofunctionalized Implants and Engineered Tissue’, 50 participants
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INSTITUTIONAL RESPONSIBILITIES

- since 2019 Member of PhD (Dr. rer. nat.) commission, MHH
since 2019 Member of commission for gender equality, MHH
constantly Member of selection committees for professorships and adjunct professorships
2019 Organization of an important activity during on site-visit of Hannover’s application for Excellence University: “Science in NIFE and the Medical Park Area: In Synergy for Patients”
since 2016 NIFE work safety responsibility
since 2015 Initiator and coordinator of REsearch NEtWork-Mesenchymal Stromal Cells (RENEW-MSC): internal seminars, joint research activities
since 2009 Project leader according to §§ 15 and 17 GenTSV, in charge of S2 area, including this responsibility for several PI-colleagues



REVIEWING ACTIVITIES

since 2013 for DFG (German Research Foundation), regularly (different funding tracks)
since 2009 for the Alexander von Humboldt Foundation, regularly (different funding tracks)
2013, 2014 for University of Missouri, USA: Research Proposal
constantly for manuscripts submitted to scientific journals including EMBO Journal, Nephron, Journal of Neurochemistry, Pharmacology, Stem Cells, Stem Cells and Development, Advanced Drug Delivery Reviews, Cytotherapy (incomplete list)

MENTORING OF YOUNG SCIENTISTS

2021 - 2022 Mentor for 'Ina Pichlmayr Mentoring', MHH (career training for one female scientist)
2015 - 2022 Research Training Group within DFG Research Unit 2180 (20 persons in two funding periods): recruitment of speakers and trainers, giving lectures and practical courses
2016, 2017 Mentor for 'KarriereWegeMentoring', Universities of Rostock and Greifswald
since 2015 Annual Lectures on acquisition of third-party funding, as part of internal mentoring programs at MHH for young female scientists
2011 - 2013 German Academic Scholarship Foundation, scholarship for postgraduate studies to Luisa Schäck (doctoral student in my group): project proposal draft and expert's report
2011 Intramural MHH funding (HiLF) to Dr. Sandra Noack (postdoctoral researcher in my group): project proposal draft and expert's report

TEN SELECTED PUBLICATIONS

*: equal contributions; #: corresponding author

Original research work

1. B. Oelze, K. Elger, P. Schadzek, L. Burmeister, A. Hamm, S. Laggies, V. Seiffart, G. Gross*, **A. Hoffmann*** # (2021):

The inflammatory signalling mediator TAK1 mediates lymphocyte recruitment to lipopolysaccharide-activated murine mesenchymal stem cells through interleukin-6
Mol Cell Biochem;476(10):3655-3670. <https://doi.org/10.1007/s11010-021-04180-8>.

2. Y. Roger*, L. Burmeister*, A. Hamm*, K. Elger*, O. Dittrich-Breiholz, T. Flörkemeier*, **A. Hoffmann*** # (2020):

Heparin Anticoagulant for Human Bone Marrow Does Not Influence In Vitro Performance of Human Mesenchymal Stromal Cells.

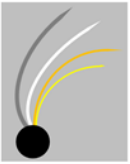
Cells 9 (2020) 1580. <https://doi.org/10.3390/cells9071580> (invited article).

3. Y. Roger, S. Sydow, L. Burmeister, H. Menzel, **A. Hoffmann**# (2020):

Sustained release of TGF- β 3 from polysaccharide nanoparticles induces chondrogenic differentiation of human mesenchymal stromal cells.

Colloids Surf. B Biointerfaces 189:110843. <https://doi.org/10.1016/j.colsurfb.2020.110843>.

4. A. Winkel*, Y. Jaimes, C. Melzer, P. Dillschneider, H. Hartwig, M. Stiesch, J. von der Ohe, S.



Strauss, P.M. Vogt, A. Hamm*, L. Burmeister*, Y. Roger*, K. Elger*, T. Floerkemeier, E.M. Weissinger, O. Pogozhykh, T. Müller, A. Selich, M. Rothe, S. Petri, U. Köhl, R. Hass, **A. Hoffmann**[#] (2020):

Cell culture media notably influence properties of human mesenchymal stroma/stem-like cells from different tissues.

Cytotherapy 22:653–668. <https://doi.org/10.1016/j.jcyt.2020.07.005>.

5. R. Weist*, T. Flörkemeier, Y. Roger*, S. Noack*, A. Franke, K. Schwanke, R. Zweigerdt, U. Martin, E. Willbold*, **A. Hoffmann***[#] (2018):

Differential Expression of Cholinergic System Components in Human Induced Pluripotent Stem Cells, Bone Marrow-Derived Multipotent Stromal Cells, and Induced Pluripotent Stem Cell-Derived Multipotent Stromal Cells.

Stem Cells Dev 27:166–183. <https://doi.org/10.1089/scd.2017.0162>.

Review articles

6. A. Lavrentieva*, **A. Hoffmann***, C. Lee-Thedieck* (2020):

Limited Potential or Unfavorable Manipulations? Strategies Toward Efficient Mesenchymal Stem/Stromal Cell Applications.

Front. Cell Dev. Biol 8:316. <https://doi.org/10.3389/fcell.2020.00316>.

7. **A. Hoffmann**[#], T. Floerkemeier, C. Melzer, R. Hass (2017):

Comparison of in vitro-cultivation of human mesenchymal stroma/stem cells derived from bone marrow and umbilical cord.

J Tissue Eng Regen Med 11:2565–2581. <https://doi.org/10.1002/term.2153>.

The following 3 publications #8 to #10 are my most important publications in the last 5 years which testify to my activities in research fields beyond MSCs, including cancer.

8. N. Friese, M.B. Gierschner, P. Schadzek, Y. Roger, **A. Hoffmann**[#] (2020):

Regeneration of damaged tendon-bone junctions (Entheses)—TAK1 as a potential node factor.

Int J. Mol Sci 21:1–21. <https://doi.org/10.3390/ijms21155177>.

9. V. Scheper, J. Schwieger, A. Hamm, T. Lenarz, **A. Hoffmann** (2019):

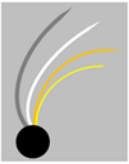
BDNF-overexpressing human mesenchymal stem cells mediate increased neuronal protection in vitro.

J Neurosci Res 97:1414-1429. <https://onlinelibrary.wiley.com/doi/full/10.1002/jnr.24488>.

10. S.E. Niehus, A.B. Aldrige, **A. Hoffmann**, L. Wiehlmann, T. Tamura, D.D.H. Tran (2019):

Myc/Max dependent intronic long antisense noncoding RNA, EVA1A-AS, suppresses the expression of Myc/Max dependent anti-proliferating gene EVA1A in a U2 dependent manner.

Sci Rep;9(1):17319. <https://doi.org/doi:10.1038/s41598-019-53944-2>.



About my logo

This may reflect my generalist life motto

Enjoying almost all classes that were given in school

Resulting in a university entrance qualification grade 1.0

Studying biochemistry in Hannover – a multidisciplinary programme, merging botany, zoology, physics, chemistry, biology and medicine; all in one

Citing a colleague: “I did not find the box where to put you in”.

This may reflect scientific topics that I addressed in my career up to the present day:

Kidney / proteinuria

Cerebrospinal fluid / blood-brain barrier

Heart / cardiac allograft vasculopathy

Ear and musculoskeletal system / stem cells

This may also reflect approaches using human mesenchymal stem/stromal cells, my current focus of research:

Stem cell mechanisms

Stem cell differentiation into bone and cartilage cells

Stem cell differentiation into nerve cells for improved hearing

Stem cells as a tool for targeted modification of cell behaviour

This may reflect aspects of my character:

Dedicated

Inter- and transdisciplinary

Integrative

Supportive

Finally, you may interpret the logo as a **stylish cockatiel's feather tuft and head** representing all the colours of its feathers:

“Die Bunten, die Weißen und die Grauen - eine Geschichte mit Happy End.“

Published in WP (Wellensittich-Papageien)-Magazin, Arndt-Verlag, Nr. 4/ 2011, Nr. 5/2011

January 3, 2022

Andrea Hoffmann