

CURRICULUM VITAE  
**Daniel J Gorski, Ph.D.**

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### Education and Professional Positions

2026 - present Associate Principal Computational Biologist, Tempus AI, Inc, Chicago, IL, USA  
2023 - 2025 Senior Computational Biologist II, Tempus AI, Inc, Chicago, IL, USA  
2022 – 2023 Group leader, Institute of Pharmacology, University Hospital, Heinrich-Heine-University  
Düsseldorf, Germany  
2016 – 2022 Postdoctoral research scientist, Institute of Pharmacology, University Hospital,  
Heinrich-Heine-University Düsseldorf, Germany (Advisor: Jens W. Fischer)  
2015 Postdoctoral research scientist, Department of Internal Medicine, Rush University  
Medical Center, Chicago, IL, USA (Advisor: Anna Plaas)  
2014 Ph.D., Department of Biochemistry, Rush University Medical Center, Chicago, IL, USA,  
(Advisor: Anna Plaas), Thesis title: *A Role for ADAMTS5 in Regulating the Composition of  
the ECM Niche in Murine Pluripotent Progenitor Cells*  
2009 B.S., Molecular and Cellular Biology, University of Illinois at Urbana-Champaign,  
Champaign, IL, USA

### Memberships in Professional Organizations

2016 - 2025 International Society for Hyaluronan Sciences  
2013 - 2016 Orthopaedic Research Society  
2011 - 2012 Institutional Animal Care and Use Committee, Rush University Medical Center

### Research Grants and Awards

*Applied* Project leader, Research Grants Programme of the German Research Foundation  
(Sachbeihilfe). *Modifiers of hyaluronan matrix after acute myocardial infarction*. Role:  
Co-Principal investigator with Jens W. Fischer. Requested: ~370,000 €, 3-year duration.  
2023 Sub-project leader, CRC1116 Düsseldorf, German Research Foundation *Extracellular  
matrix after acute cardiac ischemia: Mechanisms of hyaluronan (HA)-mediated protection*,  
Role: Co-Principal investigator with Jens W. Fischer. Award: Phase-out financing after the  
2018-2022 funding period (Auslauffinanzierung).  
2021 Young talent project funding, CRC1116 Düsseldorf, German Research Foundation, *Role of  
Versican and CD44 in transcriptomic response and differentiation of cardiac fibroblasts*,  
Role: Investigator, Award: 10,000 €  
2017 - 2019 Young investigator start-up funding, Medical Faculty Research Commission at Heinrich  
Heine University Düsseldorf, *The role of extracellular-hyaluronan binding complexes in  
cardiac fibroblast phenotype and tissue remodeling after acute myocardial infarction* ,  
Role: Investigator, Award: 96,000 €

2013 Travel award, Graduate Student Council, Rush University Medical Center, *ADAMTS5 ablation promotes TGF $\beta$ -1 induced chondrogenic responses in pluripotent progenitor cells and differentiated chondrocytes*, Role: Podium Presenter, Orthopaedic Research Society

### Editorial activities

Invited peer review Diabetes and Vascular Research

Collaborative peer review Basic Research in Cardiology, AJP Heart and Circulatory Physiology

### Publications

ORCID iD: 0000-0001-9734-7008

Original research articles: 13

Reviews: 2

Book chapters: 1

Citations: 750

h-index: 13

i10-index: 14

### In Preparation

1. Petz A\*, **Gorski DJ\***, Pastuschka A\*, Peterburs L, Piroth M, Lautwein T, Prinz A, Gorressen S, Flögel U, Köhrer K, Fischer JW. Receptor of Hyaluronan Mediated Motility (RHAMM) confers protection after acute cardiac ischemia. *In Prep.* (\*equal contribution)
2. Gebert L\*, **Gorski DJ\***, Petz A, Piroth M, Bottermann K, Gorreßen S, Hube T, Pfeifle H, Köhler K, Wight TN, Fischer JW. Knockout of proteoglycan versican in cardiac remodeling after myocardial infarction. *In Prep.* (\*equal contribution)

### Journal Articles

1. Hube T., Schneckmann R., Darakchieva V., Zardkouhi A., Petz A., Lautwein T., Gorreßen S., **Gorski DJ.**, Bottermann K., Fischer J.W. Cell migration inducing protein alleviates adverse remodeling after ischemia and reperfusion injury by controlling fibroblast activation. *Cardiovascular Research.* (in press).
2. Zabri H, Ucar A, Wang L, Gorressen S, Kretschmer R, **Gorski D**, Lautwein T, Balan M, Lehr S, Heinen A, Gödecke A, Fischer JW, Bottermann K. ATGL From iWAT and BAT Is Crucial for Cardiac Remodeling and Metabolism After Myocardial Ischemia/Reperfusion. *Compr Physiol.* 2026 Feb;16(1):e70106. doi: 10.1002/cph4.70106.
3. Piroth M\*, **Gorski DJ\***, Hundhausen C\*, Petz A, Gorressen S, Semmler D, Zabri H, Hartwig S, Lehr S, Kelm M, Jung C, Fischer JW. Hyaluronan Synthase 3 is Protective After Cardiac Ischemia-Reperfusion by preserving the T cell Response. *Matrix Biol.* 2022 Aug 20:S0945-053X(22)00102-0. doi: 10.1016/j.matbio.2022.08.008. (\*equal contribution)
4. Hartmann F\*, **Gorski DJ\***, Homann S, Newman AC, Owsiany K, Serbulea V, Zhou Y, Bendeck M, Owens GK, Fischer JW. SMC derived hyaluronan modulates vascular SMC-phenotype in murine atherosclerosis. *Circ Res.* 2021 Nov 12;129(11):992-1005. doi: 10.1161/CIRCRESAHA.120.318479. (\*equal contribution)
5. Del Monte-Nieto G\*, Fischer JW\*, **Gorski DJ\***, Harvey RP\*, Kovacic JC. Basic Biology of Extracellular Matrix in the Cardiovascular System, Part 1/4: JACC Focus Seminar. *J Am Coll Cardiol.* 2020 May 5;75(17):2169-2188. doi: 10.1016/j.jacc.2020.03.024. (\*equal contribution)

6. Twarock S, Reichert C, Bach K, Reiners O, Kretschmer I, **Gorski DJ**, Gorges K, Grandoch M, Fischer JW. Inhibition of the hyaluronan matrix enhances metabolic anticancer therapy by dichloroacetate in vitro and in vivo. *Br J Pharmacol*. 2019 Dec;176(23):4474-4490. doi: 10.1111/bph.14808.
7. Petz A, Grandoch M, **Gorski DJ**, Abrams M, Piroth M, Schneckmann R, Homann S, Müller J, Hartwig S, Lehr S, Yamaguchi Y, Wight TN, Gorressen S, Ding Z, Kötter S, Krüger M, Heinen A, Kelm M, Gödecke A, Flögel U, Fischer JW. Cardiac Hyaluronan Synthesis Is Critically Involved in the Cardiac Macrophage Response and Promotes Healing After Ischemia Reperfusion Injury. *Circ Res*. 2019 May 10;124(10):1433-1447. doi: 10.1161/CIRCRESAHA.118.313285.
8. **Gorski DJ**, Petz A, Reichert C, Twarock S, Grandoch M, Fischer JW. Cardiac fibroblast activation and hyaluronan synthesis in response to hyperglycemia and diet-induced insulin resistance. *Sci Rep*. 2019 Feb 12;9(1):1827. doi: 10.1038/s41598-018-36140-6.
9. Kleeschulte S, Jerrentrup J, **Gorski D**, Schmitt J, Fender AC. Evidence for functional PAR-4 thrombin receptor expression in cardiac fibroblasts and its regulation by high glucose: PAR-4 in cardiac fibroblasts. *Int J Cardiol*. 2018 Feb 1;252:163-166. doi: 10.1016/j.ijcard.2017.10.019.
10. Twarock S, Reichert C, Peters U, **Gorski DJ**, Röck K, Fischer JW. Hyperglycaemia and aberrated insulin signalling stimulate tumour progression via induction of the extracellular matrix component hyaluronan. *Int J Cancer*. 2017 Aug 15;141(4):791-804. doi: 10.1002/ijc.30776.
11. Luo W, Sandy J, Trella K, **Gorski D**, Gao S, Li J, Brounts S, Galante J, Plaas A. Degenerative Suspensory Ligament Desmitis (DSL) in Peruvian Paso Horses Is Characterized by Altered Expression of TGF $\beta$  Signaling Components in Adipose-Derived Stromal Fibroblasts. *PLoS One*. 2016 Nov 30;11(11):e0167069. doi: 10.1371/journal.pone.0167069.
12. **Gorski DJ**, Xiao W, Li J, Luo W, Lauer M, Kisiday J, Plaas A, Sandy J. Deletion of ADAMTS5 does not affect aggrecan or versican degradation but promotes glucose uptake and proteoglycan synthesis in murine adipose derived stromal cells. *Matrix Biol*. 2015 Sep;47:66-84. doi: 10.1016/j.matbio.2015.03.008.
13. Bell R, Li J, **Gorski DJ**, Bartels AK, Shewman EF, Wysocki RW, Cole BJ, Bach BR Jr, Mikecz K, Sandy JD, Plaas AH, Wang VM. Controlled treadmill exercise eliminates chondroid deposits and restores tensile properties in a new murine tendinopathy model. *J Biomech*. 2013 Feb 1;46(3):498-505. doi: 10.1016/j.jbiomech.2012.10.020.
14. Li J, **Gorski DJ**, Anemaet W, Velasco J, Takeuchi J, Sandy JD, Plaas A. Hyaluronan injection in murine osteoarthritis prevents TGF $\beta$  1-induced synovial neovascularization and fibrosis and maintains articular cartilage integrity by a CD44-dependent mechanism. *Arthritis Res Ther*. 2012 Jun 21;14(3):R151. doi: 10.1186/ar3887.
15. Plaas A, Velasco J, **Gorski DJ**, Li J, Cole A, Christopherson K, Sandy JD. The relationship between fibrogenic TGF $\beta$ 1 signaling in the joint and cartilage degradation in post-injury osteoarthritis. *Osteoarthritis Cartilage*. 2011 Sep;19(9):1081-90. doi: 10.1016/j.joca.2011.05.003.

#### Book Chapters

1. Anna Plaas, **Daniel J. Gorski**, Jennifer Velasco, Colton McNicols, Rebecca Bell, Vincent Wang, John Sandy. Extracellular Matrix: Pathobiology and Signaling, 3.2: Aggrecan in skeletal development and regenerative medicine. De Gruyter. 2012.

#### Dissertation

1. **Gorski, Daniel**. *A role for ADAMTS5 in regulating the composition of the ECM niche in murine pluripotent progenitor cells*. 2014. Rush University Medical Center, Ph.D. dissertation.

#### Educational Activities

## Student advisees (co-supervision with Prof. Dr. Jens W. Fischer)

Ph.D. students	Dr. rer. nat. Marco Piroth Institute of Pharmacology and Clinical Pharmacology <i>Role of hyaluronan synthase 3 for healing after cardiac ischemia/reperfusion injury.</i> March 2022
	Theresa Hube Institute of Pharmacology <i>Investigation of the influence of CEMIP (cell migration-inducing and hyaluronan-binding protein) on the cardiac fibroblast response after acute myocardial infarction.</i> October 2024
	Christina Gros Institute for Medical Biometry and Bioinformatics <i>Analysis of scRNA-seq data from cardiovascular research using machine learning.</i> In progress
M.D. students	Luisa Peterburs Institute of Pharmacology <i>Analysis of the cell composition in the heart of Hmmer-overexpressing mice after cardiac ischemia and reperfusion.</i> In progress
	Helen Pfeifle Institute of Pharmacology <i>Investigation of scarring after myocardial infarction in Versican-deficient mice and the detection of matrixfibrocytic markers by immunohistochemical methods.</i> In progress
	Valeria Henke Institute of Pharmacology <i>Cell composition analysis 24 hours after cardiac ischemia and reperfusion in Hmmer-overexpressing mice.</i> In progress

## Teaching

2022 - 2023	Practical Course: Single-Cell RNA Sequencing Data Analysis. Created and taught a multi-day practical workshop for beginners in scRNA-seq data analysis and R programming for researchers of the Collaborative Research Center 1116 & International Research Training Group 1902. Heinrich Heine University Düsseldorf, Germany
2018 - present	Teaching assistant, Pharmacodynamic ELearning. Corrected online homework submissions, wrote customized feedback to students. Heinrich Heine University Düsseldorf, Germany
2011 - 2014	Laboratory training for orthopaedic fellows, master students and undergraduates. Cell culture and biochemical techniques for the generation of peer-reviewed original research, Rush University Medical Center, Chicago, IL, USA
2010	Teaching assistant, graduate student course GCC-501: "Molecular Biology: Genome to Proteome". Led 1-2 h group and one-on-one review sessions covering lecture material. Rush University Medical Center, Chicago, IL, USA

## Invited Talks

*Modifiers of the hyaluronan matrix after acute myocardial infarction.* Retreat of the SFB1116 “Master switches in cardiac ischemia”. Online, Mar, 2022.

*The role of versican, an extracellular hyaluronan-binding proteoglycan, after acute cardiac ischemia.* Retreat for young scientists of the SFB1116 “Master switches in cardiac ischemia”. Online, Feb. 2021

*The role of versican, an extracellular hyaluronan-binding proteoglycan, after acute cardiac ischemia.* Retreat of the SFB1116 “Master switches in cardiac ischemia”, next generation scientists’ session. Bergisch Gladbach, Jan. 2020.

*The role of versican, an extracellular hyaluronan-binding proteoglycan, after acute cardiac ischemia.* Retreat of the SFB1116 “Master switches in cardiac ischemia”, next generation scientists’ session. Düsseldorf, Oct. 2019.

*Extracellular matrix post cardiac ischemia: Role of hyaluronan synthesis.* Retreat of the SFB1116 “Master switches in cardiac ischemia”. Online, Oct. 2016.

*A Role for ADAMTS5 in Regulating the Composition of the ECM Niche in Murine Multipotent Progenitor Cells.* Cleveland Clinic Lerner Research Institute, Cleveland, OH, May 2015.

*ADAMTS5 ablation promotes TGF $\beta$ -1 induced chondrogenic responses in pluripotent progenitor cells and differentiated chondrocytes.* Orthopaedic Research Society Annual Meeting, San Antonio, TX, Jan. 2013.

## Poster Presentations and Abstracts

*Knockout of proteoglycan versican in cardiac remodeling after myocardial infarction.* 91. Jahrestagung der Deutschen Gesellschaft für Kardiologie, Mannheim, Germany, Apr. 2025.

*Identification of predictive biomarkers of response to ADCs by HTS of highly molecularly characterized panels of patient-derived organoids (PDOs).* American Association for Cancer Research, Chicago, IL, USA, 2025.

*Visium HD combined with deep-learning-based cell segmentation of H&E images yield accurate cell annotation at single-cell resolution.* American Association for Cancer Research, Chicago, IL, USA, 2025.

*Cell Migration Inducing Protein (Cemip) deletion worsens cardiac outcome after cardiac ischemia/reperfusion in mice.* 90. Jahrestagung der Deutschen Gesellschaft für Kardiologie, Mannheim, Germany, Apr. 2024

*Role of adipocyte ATGL in myocardial infarction.* Europhysiology 2022, Copenhagen, Denmark, Sep. 2022.

*Hyaluronan synthase 3 deficiency results in adverse remodeling and decreased cardiac CD4-T-cell abundance after acute ischemia.* Cardiovascular Disease Symposium, Düsseldorf, Germany, 2021.

*Hyaluronan synthase 3 deficiency results in adverse remodeling and decreased cardiac CD4-T-cell abundance after acute ischemia.* International Society for Hyaluronan Science 13th International Conference, virtual meeting, 2021.

*Hyaluronan synthase 3 deficiency results in adverse remodeling and reduced macrophage and fibroblast abundance after acute cardiac ischemia.* 86. Jahrestagung der Deutschen Gesellschaft für Experimentelle und Klinische Pharmakologie und Toxikologie. Leipzig, Germany, 2020.

*Cardiac Hyaluronan Synthesis Is Critically Involved in the Cardiac Macrophage Response and Promotes Healing After Ischemia Reperfusion Injury.* 85. Jahrestagung der Deutschen Gesellschaft für Kardiologie, Mannheim, Germany, Apr. 2019.

*Cardiac Hyaluronan Synthesis Is Critically Involved in the Cardiac Macrophage Response and Promotes Healing After Ischemia Reperfusion Injury.* Hyaluronan Sciences 12th International Conference of the International Society for Hyaluronan Sciences, Cardiff, Wales, UK, June 2019.

*Hyaluronan synthase 2 deficiency results in poor cardiac healing and reduced macrophage abundance in the heart after ischemia/reperfusion.* 84. Jahrestagung der Deutschen Gesellschaft für Experimentelle und Klinische Pharmakologie und Toxikologie, Göttingen, Germany, 2018.

*Hyaluronan synthase 2 deficiency results in poor cardiac healing and reduced macrophage abundance in the heart after ischemia/reperfusion.* Cardiovascular Disease Symposium, Düsseldorf, Germany, 2018.

*Metabolic flexibility of cardiac fibroblasts exposed to hyperglycemia prevents excessive hyaluronan synthesis.* Cardiovascular Disease Symposium, Düsseldorf, Germany, 2018.

*Hyaluronan synthase 2 deficiency results in poor cardiac healing and reduced macrophage abundance in the heart after ischemia/reperfusion.* 83. Jahrestagung der Deutschen Gesellschaft für Kardiologie. Mannheim, Germany, 2017.

*Hyaluronan synthesis of murine cardiac fibroblasts in response to hyperglycemia.* International Society for Hyaluronan Sciences 11th International Conference, Cleveland, OH, USA, June 2017.

*Hyaluronan-Synthase 2 is required for cardiac repair post ischemia/reperfusion in mice.* 1st International Symposium “Master switches in cardiac ischemia”, CRC1116, Düsseldorf, Germany, 2016.

*Deletion of ADAMTS5 Does Not Affect Aggrecan or Versican Degradation but Promotes Glucose Uptake and Proteoglycan Synthesis in Murine Adipose Derived Stromal Cells.* Rush University Research Forum, Chicago, IL, USA, 2015.

*Prophylactic injection of hyaluronan maintains cartilage integrity and prevents synovial membrane neovascularization and fibrosis in murine knee osteoarthritis.* Orthopaedic Research Society Annual Meeting, San Francisco, CA, USA, Feb. 2012.

*Murine chondrocyte response to retinoic acid is modified by ADAMTS5-Aggrecanase.* Rush University Research Forum, Chicago, IL, USA, 2011.

*Ablation of ADAMTS5 modifies expression of key genes in TGF- $\beta$ 1- signaling and epithelial mesenchymal transition pathways.* Proteoglycans Gordon Conference, Andover, NH, USA, July 2010.

## **Courses and Certifications**

2022 Inferential Statistics, Coursera (online)

2022 Introduction to Data Science in Python, Coursera (online)

2022 Introduction to Git and Github, Coursera (online)

2022 Python for Everybody Specialization (32 w), Coursera (online)

2020 Analysis of single cell RNA-seq data (40 h), Physalia Courses (online)

2020 The Data Scientist’s Toolbox, Coursera (online)

2016 Procedures on animals and euthanasia, FELASA accredited course F048/16, Düsseldorf, Germany

2012 FDA/OECD Good Laboratory Practice Basic Training Workshop by Quality Associates Inc, Chicago, IL, USA