

TAIMOOR HASAN QAZI

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RESEARCH EXPERIENCE

- 03.2019-present Postdoctoral fellow
Dept. of Bioengineering, School of Engineering and Applied Sciences
University of Pennsylvania, Philadelphia, USA
Advisor: Dr. Jason A. Burdick
- 01.2017-02.2019 Postdoctoral researcher
Berlin-Brandenburg Center for Regenerative Therapies
Charité Universitätsmedizin Berlin, Germany
Advisor: Dr. Georg N. Duda

EDUCATION

- 01.2013-12.2016 Ph.D. – Medical Biotechnology (*Summa Cum Laude*)
Technische Universität Berlin, Germany
Advisors: Georg N. Duda (Charité), David J. Mooney (Harvard)
- 09.2010-12.2012 M.Sc. – Advanced Materials and Processes
Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
Advisor: Aldo R. Boccaccini
- 09.2006-06.2010 B.S. – Metallurgy and Materials Engineering
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan

AWARDS & HONORS

- 2019-2021 **Research Fellowship** – German Research Foundation (DFG); € 56,722/yr.
- 2017 **Basic Research Prize** – German Society for Orthopedics and Traumatology (DGOU)
- 2017 **Doctoral Dissertation Prize** – German Society for Traumatology (DGU)
- 2017 Co-Chair scientific session ‘Bioengineered Stem Cell Niches’ – TERMIS-EU in Davos
- 2016 **Publication Award** in Regenerative Medicine (country-wide nominations) – Charité Berlin
- 2016 Poster Prize (1st) – Student Symposium on Molecular Medicine, Universität Ulm
- 2016 Poster Prize (3rd) – Myology Summer School, Max Delbrück Center Berlin
- 2015 **Young Investigator Award** – Center for Musculoskeletal Surgery (CMSC), Charité Berlin
- 2010 **Senior Design Project Prize** – Dept. of Materials Science and Engineering, GIK Institute, Pakistan

PUBLICATIONS (Total = 15; *First/Co-first authorship = 10; #Corresponding authorship = 2) [Google Scholar](#)

1. Tytgat L*, Kollert M*, Van Damme L, Thienpont H, Ottevaere H, Duda GN, Geissler S, Dubrue P, Van Vlierberghe S#, **Qazi TH**#. “Evaluation of 3D-printed gelatin-based scaffolds with varying pore size for MSC-based adipose tissue engineering”, **Macromolecular Bioscience**, 1900364, 2020
2. **Qazi TH**, Mooney DJ, Duda GN, Geissler S. “Niche-mimicking interactions in peptide-functionalized 3D hydrogels amplify mesenchymal stromal cell paracrine effects”, **Biomaterials** 230, 119639, 2020
3. **Qazi TH***, Tytgat L*, Dubrue P, Duda GN, Van Vlierberghe S#, Geissler S#. “Extrusion printed scaffolds with varying pore size as modulators of MSC angiogenic paracrine effects”, **ACS Biomaterials Science and Engineering** 5 (10), 5348-5358, 2019

4. Xiang G, Lippens E, Hafeez S, Duda GN, Geissler S, **Qazi TH**[#]. “Oxidized alginate beads for tunable release of osteogenically potent mesenchymal stromal cells”, **Materials Science and Engineering C: Materials for Biological Applications** 104, 109911, 2019
5. **Qazi TH**, Duda GN, Ort MJ, Perka C, Geissler S[#], Winkler T[#]. “Cell therapy to improve regeneration of skeletal muscle injuries”, **Journal of Cachexia, Sarcopenia and Muscle** 10, 501-516, 2019
6. Andrzejewska A, Catar R, Schoon J, **Qazi TH**, Sass FA, Jacobi D, Blankenstein A, Reinke S, Krueger D, Streitz M, Schlickeiser S, Richter S, Souidi N, Beez C, Kamhieh-Milz J, Krueger U, Zemojtel T, Juerchott K, Strunk D, Reinke P, Duda G, Molld G, Geissler S. “Multi-parameter analysis of biobanked human bone marrow stromal cells shows little influence for donor age and mild comorbidities on phenotypic and functional properties”, **Frontiers in Immunology** 10, 2474, 2019
7. Tytgat L, Markovic M, **Qazi TH**, Vagenende M, Bray F, Martins JC, Rolando C, Thienpont H, Ottevaere H, Ovsianikov A, Dubrue P, Van Vlierberghe S. “Photo-crosslinkable recombinant collagen mimics for tissue engineering applications”, **Journal of Materials Chemistry B** 7, 3100-3108, 2019
8. **Qazi TH**, Berkmann JC, Schoon J, Geißler S, Duda GN, Boccaccini AR[#], Lippens E[#]. “Dosage and composition of bioactive glasses differentially regulate angiogenic and osteogenic response of human MSCs”, **Journal of Biomedical Materials Research: Part A** 106 (11), 2827-2837, 2018
9. Berg J, Hiller T, Kissner MS, **Qazi TH**, Duda GN, Hocke AC, Hippenstiel S, Elomaa L, Weinhart M, Fahrenson C, Kurreck J. “Optimization of cell-laden bioinks for 3D bioprinting and efficient infection with influenza A virus”, **Scientific Reports** 8, 13877, 2018
10. **Qazi TH**, Mooney DJ, Duda GN, Geißler S. “Biomaterials that promote cell-cell interactions enhance the paracrine function of MSCs”, **Biomaterials** 140, 103-114, 2017
11. **Qazi TH**, Hafeez S, Schmidt J, Duda GN, Boccaccini AR, Lippens E. “Comparison of the effects of 45S5 and 1393 bioactive glass microparticles on hMSC behavior”, **Journal of Biomedical Materials Research: Part A** 105A, 2772–2782, 2017
12. Pumberger M^{*}, **Qazi TH**^{*}, Ehrentraut MC, Textor M, Kueper J, Stoltenburg-Didinger G, Winkler T, von Roth P, Reinke S, Borselli C, Perka C, Mooney DJ, Duda GN[#], Geißler S[#]. “Synthetic niche to modulate regenerative potential of MSCs and enhance skeletal muscle regeneration”, **Biomaterials** 99, 95-108, 2016
13. **Qazi TH**, Mooney DJ, Pumberger M, Geißler S, Duda GN. “Biomaterials based strategies for skeletal muscle tissue engineering: Existing technologies and future trends”, **Biomaterials** 53, 502-521, 2015
14. **Qazi TH**, Rai R, Boccaccini AR. “Tissue engineering of electrically responsive tissues using polyaniline based polymers: A review”, **Biomaterials** 35, 9068-9086, 2014
15. **Qazi TH**, Rai R, Dippold D, Roether JE, Schubert DW, Rosellini E, Barbani N, Boccaccini AR. “Development and characterization of novel electrically conductive PANI-PGS composites for cardiac tissue engineering applications”, **Acta Biomaterialia** 10, 2434-2445, 2014

BOOK CHAPTER

1. **Qazi TH**, Duda GN. “Endogenous strategies in tissue engineering”, Comprehensive Biomaterials II (editors: Healy K, Hutmacher DW, Grainger DW, Kirkpatrick CJ) Elsevier 2017 329-342

GRANTSMANSHIP (*successful*)

2019-2022	German Research Foundation (DFG) Research Fellowship (€ 170,166)
2017-2018	Einstein Center for Regenerative Therapies Charité Research Grant (€ 10,000)
2016	Travel Grant (Charité) for World Biomaterials Congress (€ 1000)
2014-2015	Berlin-Brandenburg Center for Regenerative Therapies (Charité) Research Grant (€ 20,000)

CONFERENCE CONTRIBUTIONS

TALKS

Oct 2019	Biomedical Engineering Society (BMES) Annual Meeting, Philadelphia, USA
Oct 2018	European Society of Biomaterials (ESB) Annual Conference, Maastricht, Netherlands
Sep 2018	TERMIS World Congress, Kyoto, Japan
May 2016	World Biomaterials Congress, Montreal, Canada
April 2016	Student Symposium on Molecular Medicine, Universität Ulm, Germany
Dec 2015	Student Symposium on Regenerative Therapies, BSRT Berlin, Germany
Sep 2014	European Society of Biomaterials (ESB) Annual Conference, Liverpool, UK

POSTERS

Oct 2019	Immune Modulation and Engineering Symposium at Drexel University, Philadelphia, USA
Sep 2018	TERMIS World Congress, Kyoto, Japan
Sep 2017	Advanced Materials for Biomedical Applications Conference, Ghent, Belgium
June 2017	TERMIS-EU Conference, Davos, Switzerland
June 2016	Myology Summer School at Max-Delbrück Center, Berlin, Germany
May 2015	International Symposium Interface Biology of Implants, Warnemünde, Germany
July 2015	Gordon Research Conference Biomaterials & Tissue Engineering, Girona, Spain
Dec 2013	Student Symposium on Regenerative Therapies, BSRT Berlin, Germany

PEER REVIEW ACTIVITIES (*Ad hoc; ~7/yr.*)

Science Advances / Advanced Functional Materials / ACS Biomaterials Science and Engineering / Acta Biomaterialia / Journal of Materials Chemistry B / Biofabrication / Journal of Biomedical Materials Research: Part A / Materials Letters / Biomedical Materials / Biomacromolecules / Journal of Biomaterials Science: Polymer Edition / Journal of Materials Science: Materials in Medicine / Macromolecular Bioscience

TEACHING & MENTORING ACTIVITIES

Lab Courses:

2019	'Introduction to Tissue Engineering' for BS, MS, and Ph.D. students / University of Pennsylvania
2014/'15/'16	'Introduction to Biomaterials' for Medical Students / Charité Universitätsmedizin Berlin
2014/'15/'16	'Introduction to Cell Culture' for Medical Students / Charité Universitätsmedizin Berlin

Mentoring:

Doctoral Thesis	Georgios Kotsaris (2017-present; Frei Universität Berlin)
Doctoral Thesis	Matthias Kollert (2018-present; Charité Universitätsmedizin Berlin)
Master's Thesis	Gao Xiang (2017-2018; Charité Universitätsmedizin Berlin)
Master's Thesis	Shahzad Hafeez (2015-2017; Charité Universitätsmedizin Berlin)

