Jun.-Prof. Dr. Ing. Priscilla S. Briquez, PhD, Bioengineer

Medical Center – University of Freiburg,
Department of General and Visceral Surgery, Faculty of Medicine,
Breisacher strasse 115a, 79006 Freiburg, Germany
priscilla.briquez@uniklinik-freiburg.de, phone: +49 761 27077574

Current position (since May, 2021)

Tenure-Track Assistant Professor in OncoImmunology, University Hospital of Freiburg

Academic career

June 2021 - current	JuniorProfessor with Tenure-Track in OncoImmunology, Department of General and Visceral Surgery, *Director: Prof. Stefan Fichtner-Feigl*, University Hospital of Freiburg, Freiburg, Germany
2016-2021	Postdoctoral Researcher in Molecular Immunoengineering (Research on Cancer Immunotherapy and COVID), *Advisor: Prof. Jeffrey A. Hubbell & Prof. Melody A. Swartz*, Pritzker School of Molecular Engineering, The University of Chicago, Chicago, USA
2011-2016	PhD in Bioengineering (Regenerative Medicine, Protein Engineering and Biomaterials), *Advisor: Prof. Jeffrey A. Hubbell*, Institute of Bioengineering Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
2009-2011	Master in Bioengineering & Minor in Biomedical Technologies, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
2006-2009	Bachelor in Life Science and Technology, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
2006	General Baccalaureate in Sciences, Thonon-les-Bains (74), France

Awards

- ERC Starting Grant (2023), DRESSCODE n°101116941, European Research Council
- Maria Lastra Postdoctoral Scholar Excellence in Mentoring Award (2019), from the University of Chicago
- EPFL PhD Thesis Prize (2017), rewarding the 2 best PhD thesis of EPFL every year
- IBI-EPFL Future leaders in Bioengineering (2015), rewarding the innovative best research in the Institute of Bioengineering EPFL
- Commune de Chavannes-près-Renens prize (2011), rewarding a student who has made a marked favorable impression by his actions or personality
- Baccalaureate distinction (2006), Excellent with Jury Congratulations (grade 19.07/20)

Professional activities & Collaboration with the Industry

2016-24	Scientist & Co-founder of MorphoGene SA, Morges, Switzerland
2016-17	Collaborator of Mosaic Biosciences Inc., Denver, CO USA
2015-17	Collaborator of Novartis AG, Basel, Switzerland
2013-15	Bertarelli Program in Neuroscience (with Harvard Medical School, MA USA)
2010	Internship at Debio R.P. (DebioPharm Group), Martiny, Switzerland
2003	Internship at LabCatal and LabLabo, Annemasse, France

Ten most important publications *(* *first author(s), **+** Corresponding author(s)*)*

1. Goldberger Z, Hauert S, Chang K, Kurtanich T, Alpar AT, Repond G, Wang Y, Gomes S, Krishnakumar R, Siddarth P, Swartz MA, Hubbell JA**+**, **Briquez PS+**. Membrane-localized neoantigens predict the efficacy of cancer immunotherapy. ***Cell Rep Med. 2023*** Aug 15;4(8):101145. doi: 10.1016/j.xcrm.2023.101145. Epub 2023 Aug 7. PMID: 37552990; PMCID: PMC10439248.
2. **Briquez PS**, Rouhani SJ, Yu J, Pyzer AR, Trujillo J, Dugan HL, Stamper CT, Changrob S, Sperling AI, Wilson PC, Gajewski TF, Hubbell JA, Swartz MA. Severe COVID-19 induces autoantibodies against angiotensin II that correlate with blood pressure dysregulation and disease severity. ***Sci Adv. 2022*** Oct 7;8(40):eabn3777. doi: 10.1126/sciadv.abn3777. Epub 2022 Oct 7. PMID: 36206332; PMCID: PMC9544317.
3. Liu J, Solanki A, White MJV, Hubbell JA**+**, **Briquez PS+**. Therapeutic use of α2-antiplasmin as an antifibrinolytic and hemostatic agent in surgery and regenerative medicine. ***NPJ Regen Med. 2022*** Jun 30;7(1):34. doi: 10.1038/s41536-022-00230-x. PMID: 35773290; PMCID: PMC9246914.
4. Gray LT*, Raczy MM*, **Briquez PS***, Marchell TM*, Alpar AT, […], Swartz MA**+**, Hubbell JA**+**. Generation of potent cellular and humoral immunity against SARS-CoV-2 antigens via conjugation to a polymeric glyco-adjuvant. ***Biomaterials. 2021*** Nov;278:121159. doi: 10.1016/j.biomaterials.2021.121159. PMID: 34634664; PMCID: PMC8482845.
5. **Briquez PS+**, Tsai HM, Watkins EA, Hubbell JA**+**. Engineered bridge protein with dual affinity for bone morphogenetic protein-2 and collagen enhances bone regeneration for spinal fusion. ***Sci Adv. 2021*** Jun 11;7(24):eabh4302. doi: 10.1126/sciadv.abh4302. PMID: 34117071; PMCID: PMC8195475.
6. **Briquez PS***, Hauert S*, de Titta A*, Gray LT, Alpar AT, Swartz MA, Hubbell JA**+**. Engineering Targeting Materials for Therapeutic Cancer Vaccines. ***Front Bioeng Biotechnol. 2020*** Feb 11;8:19. doi: 10.3389/fbioe.2020.00019. PMID: 32117911; PMCID: PMC7026271.
7. Ishihara J, Ishihara A, Fukunaga K, Sasaki K, White MJV, **Briquez PS**, Hubbell JA. Laminin heparin-binding peptides bind to several growth factors and enhance diabetic wound healing. ***Nat Commun. 2018*** Jun 4;9(1):2163. doi: 10.1038/s41467-018-04525-w. PMID: 29867149; PMCID: PMC5986797.
8. **Briquez PS***, Lorentz KM*, Larsson HM, Frey P, Hubbell JA**+**. Human Kunitz-type protease inhibitor engineered for enhanced matrix retention extends longevity of fibrin biomaterials. ***Biomaterials. 2017*** Aug;135:1-9. doi: 10.1016/j.biomaterials.2017.04.048. PMID: 28477492; PMCID: PMC5702589.
9. **Briquez PS***, Clegg LE*, Martino MM, Mac Gabhann F**+**, Hubbell JA**+**. Design principles for therapeutic angiogenic materials. ***Nat Rev Mater***. ***2016*** Jan; 1, 15006. doi: 10.1038/natrevmats.2015.6
10. Martino MM*, **Briquez PS***, Güç E, Tortelli F, Kilarski WW, Metzger S, Rice JJ, Kuhn GA, Müller R, Swartz MA, Hubbell JA**+**. Growth factors engineered for super-affinity to the extracellular matrix enhance tissue healing. ***Science. 2014*** Feb 21;343(6173):885-8. doi: 10.1126/science.1247663. PMID: 24558160.

Patents

- Protein-binding peptide isolated from placenta growth factor, WO2014006082A; Hubbell, Martino, **Briquez** (2013) *Issued*
- Lymphangiogenesis for therapeutic immunomodulation, Swartz, Yu, Vokali, Fankhauser, Hirosue, **Briquez**, Hubbell (2016) *Pending*
- Methods and compositions comprising laminin peptides, Hubbell, J. and A. Ishihara, **Briquez** (2017) *Pending*
- Methods and systems for detection and analysis of angiotensin binding antibodies, Swartz, Hubbell, **Briquez** (2021) *Pending*
- Immunotherapeutic methods for treating cancer, Hubbell, **Briquez**, Goldberger, Hauert (2021) *Pending*

Awarded fundings

- ERC Starting Grant (StG), DRESSCODE n°101116941 (2023)
- CRC1425 ScarCare, affiliation as an associated PI (2022)
- AbbVie-Uchicago collaborations (2021), as a co-PI

Previous participation in grant writing

- NIH Grant on Type I Diabetes Complications *(co-written with Prof. Hubbell)*, RFA-DK-14-017 (2015)
- European Research Council (ERC) Advanced grant Cytrix (2013) *(participation in writting with Prof. Hubbell)*

Other scientific activities

Editor and Reviewer:

- Editorial Board of Frontiers in Immunology *(since 2022*, *IF: 7.3)*
- Editorial Board of Advances in Wound Care, *Mary Ann Liebert Inc. (since 2016, IF: 5.2);*
- Guest Editor in Materials, *MDPI*
- Peer-review of research publications in Nature Communication, Advanced Materials, Advances in Wound Care, Frontiers in Developmental Biology, ACS journal
- Peer-review of 1 national grant in Poland (EU)

Teaching activities:

- Lecturer in Cancer Biology, University of Freiburg (since 2023)
- Lecturer in Basic Immunology, University of Freiburg (since 2022)
- Co-lecturer in Engineering and Biology of Tissue Repair (2018-21)
- Guest lecturer in Pharmacology & Pharmacokinetics and in Biomaterials (2015-16)
- Supervision of 19 laboratory students from high-school to PhD levels (since 2013)
- Staff member on Science Festival for kids (2018-19)
- Teaching assistant for 350h (2012-16)

Membership in Scientific Associations: GEFI Immunology Freiburg Association, German Society for Matrix Biology, American Association of Cancer Research (AACR), Tissue Engineering and Regenerative Medicine International Society (TERMIS)

Organization of Scientific Conferences: Gordon Research Conference (GRC) ImmunoEngineering 2024 (Session Chair+Power Hour), TERMIS-EU 2022 (Session co-chair)

Participation to Scientific Conferences: GRC Immunoengineering (2024), SSBRM (Invited speaker: 2022) LS2 Cardiovascular Research Meeting (Invited speaker: 2021), AACR (2019), TERMIS-EU (2014-19), ACS (Invited speaker: 2015), Gordon Research Conference (2015), BMES (2014)

Other: President and Co-founder of Life Science PhD Students Association EPFL (2015-16)