
Tobias Brüggmann

Juniorprof. Dr. med., 7.9.1984

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Education & Scientific Degrees

- 2005-2012 State examination (Medicine), University of Bonn, Germany
- 2008-2013 MD (Physiology), University of Bonn with Prof. Dr. P. Sasse, Germany
- 10/2013 PhD (Pharmacology), University of Bonn with Prof. Dr. P. Sasse, Germany

Research Experience

- 2013-2017 Post-Doctoral Fellow, Institute of Physiology I, University of Bonn, Germany
(2 months parental leave)
- 2017-2018 Research Group Leader, Institute of Physiology I, University of Bonn,
Germany (3 months parental leave)
- 12/2018 Juniorprofessor (W1), Institute for Cardiovascular Physiology, University of
Göttingen, Germany (2 months parental leave)

Honors & Awards

- 10/2010 **Bonfor-award**, BONFOR-Symposium, Bonn
- 06/2011 Attendance at **61st Lindau Nobel Laureate Meeting** and presentation at the
masterclass of **Roger Tsien**, Lindau
- 06/2013 MD thesis with distinction ("**summa cum laude**")
- 09/2016 **Travel award**, 40th Meeting of the European Working Group on Cardiac Cellular
Electrophysiology, Glasgow
- 09/2016 **Best talk** and **best poster award**, International Meeting RTG 1873, Bonn
- 03/2017 **Du Bois-Reymond award**, German Physiological Society, Greifswald
- 01/2018 **Bonfor-award**, BONFOR-Symposium, Bonn

Publications

- 1) **Brueggemann, T.**, Malan, D., Hesse, M., Beiert, T., Fuegemann, C. J., Fleischmann, B. K., Sasse, P. (2010) Optogenetic control of heart muscle in vitro and in vivo. *Nat Methods*, 7(11):897-900.
- 2) Beiert, T., **Brueggemann, T.**, Sasse, P. (2014) Optogenetic activation of g_q signalling modulates pacemaker activity of cardiomyocytes. *Cardiovasc. Res.*, 102(3):507-516.
- 3) Vogt, C. C.,* **Brueggemann, T.**,* Malan, D., Ottersbach, A., Roell, W., Fleischmann, B. K., Sasse, P. (2015) Systemic gene transfer enables optogenetic pacing of mouse hearts. *Cardiovasc. Res.*, 106(2):338-343.
- 4) **Brueggemann, T.**, van Bremen, T., Vogt, C. C., Send, T., Fleischmann, B. K., Sasse, P. (2015) Optogenetic control of contractile function in skeletal muscle. *Nat. Commun.*, 6:7153.
- 5) **Brueggemann, T.**,* Boyle, P. M.,* Vogt, C. C., Karathanos, T. V., Arevalo, H. J., Fleischmann, B. K., Trayanova, N. A., Sasse, P. (2016) Optogenetic defibrillation terminates ventricular arrhythmia in mouse hearts and human simulations. *J. Clin. Invest.*, 126(10):3894-3904.
- 6) van Bremen, T., Send, T., Sasse, P., **Brueggemann, T.** (2017) Spot light on skeletal muscles: Optogenetic stimulation to understand and restore skeletal muscle function. *J. Muscle Res. Cell. Motil.*, 38(3-4):331-337
- 7) Rehnelt, S., Malan, D., Juhasz, K., Wolters, B., Doerr, L., Beckler, M., Kettenhofen, R., Bohlen, H., **Brueggemann, T.**,* Sasse, P.* (2017) Frequency-dependent multi-well cardiotoxicity screening enabled by optogenetic stimulation. *Int. J. Mol. Sci.*, 18(12).
- 8) Lapp, H., **Brueggemann, T.**, Malan, D., Friedrichs, S., Kilgus, C., Heidsieck, A., Sasse, P. (2017) Frequency-dependent drug screening using optogenetic stimulation of human ipsc-derived cardiomyocytes. *Sci. Rep.*, 7(1):9629.
- 9) **Brueggemann, T.**,* Beiert, T.,* Vogt, C. C., Schrickel, J. W., Sasse, P. (2018) Optogenetic termination of atrial fibrillation in mice. *Cardiovasc. Res.*, 114(5):713-723.
- 10) Fehrentz, T., Huber, F. M. E., Hartrampf, N., **Brueggemann, T.**, Frank, J. A., Fine, N. H. F., Malan, D., Danzl, J. G., Tikhonov, D. B., Sumser, M., Sasse, P., Hodson, D. J., Zhorov, B. S., Klocker, N., Trauner, D. (2018) Optical control of I-type Ca^{2+} channels using a diltiazem photoswitch. *Nature Chem. Biol.*, 14(8):764-767.

* equal contribution