CURRICULUM VITAE

Dr. Samuel Schmidt (Ph.D.)
Roche PostDoc Fellow (RPF) at the Radboud Institute for Molecular Life Sciences (RIMLS)
Radboudumc, Geert Grooteplein 28, 6500 HB Nijmegen, The Netherlands
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EDUCATION

M.Sc., Medical Biochemistry (2007), University Leipzig, Saxony, Germany
Ph.D., Glyco-Cellbiology (2017), Radboud University Medical Center, Nijmegen, The Netherlands
Roche Fellow Postdoctoral Associate (2013-2016), Radboud University Medical Center, Nijmegen, The Netherlands and F. Hoffmann-La Roche Ltd, Basel, Switzerland
KIC Fellow Postdoctoral Associate (2017-), Kavli Institute at Cornell for Nanoscale Science, Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, NY, USA

PROFESSIONAL EXPERIENCE

Roche Fellow Postdoctoral Associate (2013-2016), Department of Biochemistry, Biochemistry of Integrated Systems (BIS), Radboud University Medical Center, Nijmegen, The Netherlands

HONORS AND AWARDS

2017 KIC Postdoctoral Fellowship, Kavli Institute at Cornell for Nanoscale Science, Cornell University, Ithaca, NY, USA
2016 Google Summer of Code (GSC), Web-App: Discovr: "Streamlining Statistical Data Analysis" (together with Kohze, R.), http://bit.ly/29r1Ndc
2014 Radboud University Internationalization Travel Grant, Conference on Matrix Biology
2013 RPF Fellowship, F. Hoffmann-La Roche Ltd, Basel, Switzerland
2010 NCDG Researcher of the Month, Nijmegen Center for Disorders of Glycosylation

PUBLICATIONS

1. **Schmidt, S.,** and Friedl, P. (2010) Interstitial cell migration: integrin-dependent and alternative adhesion mechanisms, *Cell Tissue Res* 339, 83-92.
2. Dommerholt, J.*, **Schmidt, S.***, Temming, R., Hendriks, L. J. A., Rutjes, F. P. J. T., van Hest, J. C. M., Lefeber, D. J., Friedl, P., and van Delft, F. L. (2010) Readily Accessible Bicyclononynes for Bioorthogonal Labeling and Three-Dimensional Imaging of Living Cells, *Angew. Chem Int Ed* 49, 9422-9425. *(*shared 1st authors)* **Cited 255 times and highlighted in:**

    a. Faculty of 1000 Evaluations: http://f1000.com/prime/6000958
    b. Peter Gölitz, Deputy Editors: Neville Compton, Haymo Ross, "Hot Paper", *Angewandte Chemie International Edition* (2010)
    c. "News", *Faculty of Science*, Nov. 10. (2010)
    d. Founded company: Synaffix (http://www.synaffix.com)

3. **Schmidt, S.**, Adjobo-Hermans, M. J., Wallbrecher, R., Verdurmen, W. P., Bovee-Geurts, P. H., van Oostrum, J., Milletti, F., Enderle, T., and Brock, R. (2015) Detecting Cytosolic Peptide Delivery with the GFP Complementation Assay in the Low Micromolar Range, *Angew Chem Int Ed*
4. **Schmidt, S.**, Wallbrecher, R., van Kuppevelt, T. H., and Brock, R. (2015) Methods to Study the Role of the Glycocalyx in the Uptake of Cell-Penetrating Peptides, *Methods Mol Biol* 1324, 123-131.
5. **Schmidt, S.**, Adjobo-Hermans, M.J.W., Kohze, R., Enderle, T., Brock, R., Milletti, F. Identification of short hydrophobic CPPs for cytosolic peptide delivery by rational design, Bioconj Chemistry (2016)
6. Mohamed, M., Ashikov, A., Guillard, M., Robben, J. H., **Schmidt, S.**, van den Heuvel, B., de Brouwer, A. P., Gerardy-Schahn, R., Deen, P. M., Wevers, R. A., Lefeber, D. J., and Morava, E. (2013) Intellectual disability and bleeding diathesis due to deficient CMP-sialic acid transport, *Neurology*.
7. Verdurmen, W. P., Wallbrecher, R., **Schmidt, S.**, Eilander, J., Bovee-Geurts, P., Fanghanel, S., Burck, J., Wadhwani, P., Ulrich, A. S., and Brock, R. (2013) Cell surface clustering of heparan sulfate proteoglycans by amphipathic cell-penetrating peptides does not contribute to uptake, *Journal of controlled release: Official Journal of the Controlled Release Society*.
8. Wallbrecher, R., Verdurmen, W. P., **Schmidt, S.**, Bovee-Geurts, P. H., Broecker, F., Reinhardt, A., van Kuppevelt, T. H., Seeberger, P. H., and Brock, R. (2013) The stoichiometry of peptide-heparan sulfate binding as a determinant of uptake efficiency of cell-penetrating peptides, *Cell Mol Life Sci.*
9. Vallen, M. J., **Schmidt, S.**, Oosterhof, A., Bulten, J., Massuger, L. F., and van Kuppevelt, T. H. (2014) Primary ovarian carcinomas and abdominal metastasis contain 4,6-disulfated chondroitin sulfate rich regions, which provide adhesive properties to tumour cells, *PLoS One* 9, e111806.
10. Favretto, M. E., Wallbrecher, R., **Schmidt, S.**, van de Putte, R., and Brock, R. (2014) Glycosaminoglycans in the cellular uptake of drug delivery vectors - Bystanders or active players?, *Journal of controlled release : official journal of the Controlled Release Society*.

LAST AUTHOR PUBLICATION

11. Kohze, R., Dieteren, C., Koopman, W.J., Brock, R., **Schmidt, S.,** Frapbot: an open-source application for fluorescence recovery after photobleaching data. Cytometry A (*in revision*).

PUBLICATIONS (SUBMITTED)

12. **Schmidt, S.**, Weigelin, B., te Riet, J., Daryab, N., te-Lindert, M., Lelli, B., Rognoni, L., Krause-Vortmeyer, M., Gottschalk, K.E., Kissler, S., Fransen, J., Humphries, M.J., Friedl, P., Glycocalyx-Mediated Integrin-Independent Amoeboid Cell Migration, Nature (*in revision*).

PUBLICATIONS (IN PREPARATION)

13. **Schmidt, S.**, Friedl, P., Quantitative removal of multiple glycan species from live cells.
14. Zuconelli, C., **Schmidt, S.**, Adjobo-Hermans, Manipulation of Orai1 by cationic peptides mediates their direct cytosolic uptake.
15. **Schmidt, S.,** Kohze, R., Brock, R., Endocytic uptake of L- but not D-amino acid cationic cell-penetrating peptides induces a softening of the actin cytoskeleton.
16. Kohze, R., **Schmidt, S.,** Brock, R., A conceptional structural understanding of the interaction of arginine-rich cell-penetrating peptides with glycosaminoglycans.

INVITED SEMINARS

1. **Schmidt S.** "GFP complementation to detect cytosolic delivery." 6th RPF Symposium, Copenhagen, Denmark (2015)
2. **Schmidt S**. "Mechanisms of integrin-independent amoeboid modes of cell migration - role of glycocalyx and physical mechanisms." 38th Annual Scientific Meeting of the Matrix Biology Society of Australia and New Zealand, Queenscliff, Australia (2014)
3. **Schmidt S**. "Glycocalyx-mediated Integrin-independent amoeboid cell migration" Gordon Research Conference / Seminar for Glycobiology, Lucca (Barga), Italy (2014)
4. **Schmidt S**. "Bioorganic Chemistry 2.0 – Presenting new toolboxes for Biology" Technical Forum Evening, Radboudumc, Nijmegen, The Netherlands (2014)

TEACHING ACTIVITIES

1. Radboudumc, RIMLS Molecular Mechanisms of Disease Masterclass, Moleculaire Levenswetenschappen (MLW) and Hogeschool van Arnhem en Nijmegen (HAN), **Practical Mentor,** "Microscopic Imaging" (2008 – Present)
2. Moleculaire Levenswetenschappen (MLW), **Project Supervisor** (2015 – Present)
3. Biomedische Wetenschappen (BW), **Project Supervisor** (2013 – 2014)
4. Hogeschool van Arnhem en Nijmegen (HAN), **Project Supervisor** (2010-2012)
5. Institute for Molecules and Materials, Synthetic Organic Chemistry, **Project Supervisor** (2009-2010)

SERVICE - MANUSCRIPT REVIEW

- Journal of Cell Science, Current Medicinal Chemistry

SERVICE – UNIVERSITY

6. Radboudumc, RIMLS Molecular Mechanisms of Disease Masterclass, Mentor (2012)
7. Radboudumc, Technical Forum Advisor (2010)

ACTIVITIES

- **Vaionex Corporation** – **Co-founder** (2016 – Present) www.vaionex.com
- **Respora** – Social Network, Increase the communication between Scientists within the Institute, Beta-Phase, **Co-founder** (2016 – Present)

- **Electronic Musician** - Sounddesign, Electronic music production (**M**yspace: http://bit.ly/1Qm1cZF **S**oundcloud: http://bit.ly/1oHUrXs) (2003 – Present)
- International Youth Symphony Partner Orchestra Germany – Greece, **Mentor: Woodwind register** (2002)
- Conservatorium Georg-Philipp-Telemann, **Bachelor of Arts (BA),** Advanced studies: Flauto traverso (1st instrument), music history, music notation, Youth symphony orchestra (1999 – 2003)