

Daniel Münch

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POSITIONS

CHAMPALIMAUD CENTRE FOR THE UNKNOWN

BEHAVIOR & METABOLISM LAB | DFG RESEARCH FELLOW
April 2017 | Lisbon, Portugal

UNIVERSITY OF KONSTANZ

AG GALIZIA | POST-DOC
2014 - 2017 | Constance, Germany
(Parental leave from 08/15 till 10/15)

PUBLICATIONS

2020

Baden T, Maina MB, Chagas AM, Mohammed YG, Auer TO, Silbering A, von Tobel L, Pertin M, Hartig R, Aleksic J, Akinrinade I, Awadelkareem MA, Koumoundourou A, Jones A, Arieti F, Beale A, Münch D, Salek SC, Yusuf S, Prieto-Godino LL, 2020. **TReND in Africa: Toward a Truly Global (Neuro)science Community** Neuron 0. doi:10.1016/j.neuron.2020.06.026

2019

Münch D, Ezra-Nevo G, Francisco AP, Tastekin I, Ribeiro C, 2020. **Nutrient Homeostasis – Translating Internal States to Behavior** Current Opinion in Neurobiology, Neurobiology of Behavior 60, 67–75. doi:10.1016/j.conb.2019.10.004

2018

Sánchez-Alcañiz JA, Silbering AF, Croset V, Zappia G, Sivasubramaniam AK, Abuin L, Sahai SY, Münch D, Steck K, Auer TO, Cruchet S, Neagu-Maier GL, Sprecher SG, Ribeiro C, Yapici N, Benton R, 2018. **An Expression Atlas of Variant Ionotropic Glutamate Receptors Identifies a Molecular Basis of Carbonation Sensing** Nat. Commun. 9, 4252. doi:10/gfc384

2017

Münch D[‡], Galizia CG 2017. **Take Time: Odor Coding Capacity Across Sensory Neurons Increases Over Time in *Drosophila* J** Comp Physiol A 1–14. doi:10.1007/s00359-017-1209-1 - [‡]corresponding author

Paoli M[†], Münch D[†], Haase A, Skoulakis E, Turin L, Galizia CG, 2017. **Minute Impurities Contribute Significantly to Olfactory Receptor Ligand Studies: tales from Testing the Vibration Theory** eNeuro ENEURO.0070-17.2017. doi:10.1523/ENEURO.0070-17.2017 - [†]co-first authors

2016

Zwaka H, Münch D, Manz G, Menzel R, Rybak J: **The Circuitry of Olfactory Projection Neurons in the Brain of the Honeybee, *Apis mellifera*** Frontiers in Neuroanatomy 10, 90. doi:10.3389/fnana.2016.00090

Silbering AF, Bell R, Münch D, Cruchet S, Gomez-Diaz C, Laudes T, Galizia CG, and Benton R: **IR40a Neurons are not DEET Detectors** Nature 534, E5–E7. doi:10.1038/nature18321

Münch D[‡] and Galizia CG: **DoOR 2.0 - Comprehensive Mapping of *Drosophila melanogaster* Odorant Responses** Scientific Reports. doi:10.1038/srep21841 - [‡]corresponding author

EDUCATION

UNIVERSITY OF KONSTANZ

DR. RER. NAT.
Feb 2014 | Constance, Germany
(family care duties from 2012-2014)
Title: Odor representations in *Drosophila* Receptor Neurons Analyzed by *in vivo* Calcium Imaging | Galizia lab

FREIE UNIVERSITÄT BERLIN

DIPLOMA IN BIOLOGY

Jan 2008 | Berlin, Germany
Title: Intracellular Stainings and 3D Structural Analysis of Olfactory Projection Neurons in the Bee Brain | Menzel lab

TEACHING EXPERIENCE

3RD IBRO SCHOOL ON INSECT NEUROSCIENCE

2014 | University of Dar es Salaam, Tanzania
One week of teaching olfactory coding & calcium imaging at the 3rd IBRO school on insect neuroscience and *Drosophila* neurogenetics, organized by *TReND in Africa*.

SUPERVISION OF A BACHELOR'S THESIS 2008

SUPERVISION OF A MASTER'S THESIS 2009

ADVANCED COURSE IN NEUROBIOLOGY 2008, 2009, 2011, 2013 & 2015
6 weeks, 1-2 students

ANIMAL PHYSIOLOGY COURSE

2009, 2010, 2011, 2014 & 2015
2 weeks, including lecture and hands-on

R INTRODUCTORY LECTURE

2012 - 2015

SKILLS

experienced:

volumetric calcium imaging • confocal microscopy • 2-photon imaging • GC/MS • single neuron staining • intracellular recordings • *Drosophila* • honeybee • R • Python • image registration • data analysis • data visualization • \LaTeX • Linux • Amira • ImageJ • Inkscape • HTML • CSS

basic knowledge:

PHP • MySQL

PUBLICATIONS (CONTINUED)

2014

Strauch M[†], Lüdke A[†], Münch D[†], Laudes T, Galizia CG, Martinelli E, Lavra L, Paolese R, Olivieri A, Catini A, Caouano R and Di Natale C: **More Than Apples and Oranges - Detecting Cancer with a Fruit Fly's Antenna** Scientific Reports. doi:10.1038/srep03576 - [†]*co-first authors*

2013

Strauch M, Mütting C, Broeg MP, Szyszka P, Münch D, Laudes T, Deussen O, Galizia CG and Merhof D: **The Looks of an Odour - Visualising Neural Odour Response Patterns in Real Time** BMC Bioinformatics 14, no. Suppl 19: S6. doi:10.1186/1471-2105-14-S19-S6

Münch D[‡], Schmeichel B, Silbering AF and Galizia CG: **Weaker Ligands Can Dominate an Odor Blend Due to Syntopic Interactions** Chemical Senses 38, no. 4. doi:10.1093/chemse/bjs138 - [‡]*corresponding author*

2010

Galizia CG, Münch D, Strauch M, Nissler A and Ma S: **Integrating Heterogeneous Odor Response Data into a Common Response Model: A DoOR to the Complete Olfactome** Chemical Senses 35, no. 7: 551–63. doi:10.1093/chemse/bjq042

GRANTS & FELLOWSHIPS

- Research Fellowship.
2017 | German Research Foundation, DFG
- Independent Research Start-Up Grant.
2016 | Zukunftskolleg, University of Konstanz
- Flexible Working Conditions for Parents in Science.
2015 | Office for Equal Opportunity, Family Affairs and Diversity, University of Konstanz

ORAL PRESENTATIONS

- Imaging pan-neuronal activity in 3D - Internal state dependent taste processing in the *Drosophila* brain.
2019 | ESITO XVI - European Symposium for Insect Taste and Olfaction, Villasimius, Italy
- Imaging pan-neuronal activity in 3D - Internal state dependent taste processing in the *Drosophila* brain.
2019 | EDRC - European Drosophila Research Conference, Lausanne, Switzerland
- Pan-neuronal imaging internal-state dependent taste processing in the *Drosophila* brain.
2019 | University of Leipzig, Leipzig, Germany
- Olfactory receptors use both time and combinatorial power to encode odors.
2016 | Departmental Seminar, University of Konstanz, Konstanz, Germany
- Das PAL-System als Duftorgel - Automatisierte Stimulusgabe in der Insekten Olfaktorik.
2016 | PAL Anwendertreffen, Bad Dürkheim, Germany
- Odor coding in the peripheral olfactory system of *Drosophila*.
2016 | Champalimaud Neuroscience Programme, Lisbon, Portugal
- Olfactory signaling on the *Drosophila* antenna - Response profiles and individual response dynamics.
2015 | ESITO XIV - European Symposium for Insect Taste and Olfaction, Villasimius, Italy
- Odor coding in *Drosophila* ORNs.
2014 | Cold Spring Harbor Laboratory, NY, USA, Turner Lab
- Early mixture processing in *Drosophila* olfaction.
2013 | ESITO XIII - European Symposium for Insect Taste and Olfaction, Villasimius, Italy

REFEREE

Scientific Reports • J. Agric. Food Chem. • Cell Tissue Res. • French National Research Agency (ANR)

FURTHER EDUCATION

SAFETY ASPECTS IN GENETIC ENGINEERING FOR PROJECT LEADERS (ACCORDING TO THE GENE TECHNOLOGY ACT - § 15 GENTSV)
2015 | University of Konstanz, Germany

INTRODUCTION INTO THE TRACE DSQ GC/MS SYSTEM
2008 | Axel Semrau GmbH & Co, Sprockhövel, Germany

OTHER ACTIVITIES

Volunteer for *TReND in Africa* (project leader IT).

LINKS

ORCID:// 0000-0003-3271-1651
ResearchGate:// Daniel_Muench
GoogleScholar:// xS3v340AAAAJ
Github:// Dahaniel
Twitter:// @Dahaniel
PersonalPage:// muench.bio

LANGUAGES

German	native
English	fluent
Portuguese	basic
French	basic

OTHER INTERESTS

photography • graphic design • web design