

Daniel Münch

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POSITIONS

CHAMPALIMAUD CENTRE FOR THE UNKNOWN

| POST-DOCTORAL FELLOW
April 2017 | Lisbon, Portugal

UNIVERSITY OF KONSTANZ | Post-Doc

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

PUBLICATIONS

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

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 authorship)

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

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:

calcium imaging • confocal microscopy
2-photon • GC/MS • single neuron staining
intracellular recording • *Drosophila*
honeybee • R • \LaTeX • Linux • Amira • ImageJ
Inkscape • HTML • CSS
basic knowledge:
PHP • MySQL • Python

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 authorship)

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

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.
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

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