

## Report July – September 2022; Smell & Taste

### Peer-reviewed Original Publications

- Mai Y, Menzel S, Cuevas M, Hähner A, Hummel T (2022) Well-being in patients with olfactory dysfunction. *Physiol Behav* (in press)
- Gossrau G, Frost M, Klimova A, Koch T, Sabatowski R, Mignot C, Haehner A (2022) Interictal osmophobia is associated with longer migraine disease duration. *J Headache Pain* (in press)
- Krysewski, L.-M.; Power Guerra, N.; Glatzel, A.; Holzmann, C.; Antipova, V.; Schmitt, O.; Yu-Taeger, L.; Nguyen, H.P.; Wree, A.; Witt, M. Differential Cellular Balance of Olfactory and Vomeronasal Epithelia in a Transgenic BACHD Rat Model of Huntington's Disease. *Int. J. Mol. Sci.* 2022, 23, 7625. <https://doi.org/10.3390/ijms23147625>
- Hertel S, Muehlig L, Hannig C, Hummel T (2022) Taste perception in children with different caries activity. *Eur Arch Ped Dent* (in press)
- Haxel B, Hummel T, Fruth K, Lorenz K, Gunder N, Nahrath P, Cuevas M (2022) Real-world effectiveness of biological treatment for severe chronic rhinosinusitis with nasal polyps. *Rhinology* (in press)
- Thaploo D, Joshi A, Georgiopoulos C, Warr J, Hummel T (2022) Tractography indicates lateralized differences between trigeminal and olfactory pathways. *Neuroimage* (in press)
- Sekine R, Menzel S, Hähner A, Mori E, Hummel T (2022) Assessment of postviral qualitative olfactory dysfunction using the short SSParoT in patients with and without parosmia. *Eur Arch Orl* (in press)
- Preprint : Haehner A, Gossrau G, Bock F, Hummel T, Iannilli E (2022) Migraine type-dependent patterns of brain activation after facial and intranasal trigeminal stimulation.
- Li ZL, Hummel T, Zou LQ (2022) Sniffing of body odors and individual significance of olfaction are associated with sexual desire: A cross-cultural study in China, India and the USA. *Arch Sex Behav* (in press)
- Chao YT, Woosch D, Pieniak M, Hummel T (2022) Gender difference in ratings of odor intensity during olfactory training. *J Sens Stud* (in press)
- Han X, Ordouie AA, Schmelz R, Hummel T (2022) Chemosensory functions in patients with inflammatory bowel disease and their association with clinical disease activity. *Nutrients* (in press)
- Oleszkiewicz A, Resler K, Masala C, Landis BN, Hummel T, Sorokowska A (2022) Alterations of gustatory sensitivity and taste liking in individuals with blindness or deafness. *Food Qual Pref* (in press)
- Sobe H, Richter M, Berner R, von der Hagen M, Hähner A, Röder I, Koch T, Sabatowski R, Klimova A, Gossrau G. Functional improvement in children and adolescents with primary headache after an interdisciplinary multimodal therapy program: the DreKiP study. *J Headache Pain* 23, 109 (2022). <https://doi.org/10.1186/s10194-022-01481-1>
- Hintschich CA, Dietz M, Haehner A, Hummel T (2022) Topical administration of mometasone is not helpful in post-COVID-19 olfactory dysfunction. *Life* 12: 1483. <https://doi.org/10.3390/life12101483>
- Podlesek D, Chao YT, Weitkamp F, Schackert G, Hummel T (2022) Trigeminal sensory neuropathy predicts chemosensory dysfunction after skull base surgery. *Op Neurosurg* (in press)
- Oleszkiewicz A, Pettke K, Olze H, Uecker F, Hummel T (2022) Effects of odors on posture. *J Sens Studies* (in press)


### Other publications (Chapters, peer-reviewed reviews, letters)

- Avaro V, Hummel T, Calegari F (2022) Scent of stem cells: How can neurogenesis help us smell better? *Front Neurosci* 16:964395
- Gunder N, Dörig P, Witt M, Welge-Lüssen A, Menzel S, Hummel T (2022) Pioneering therapeutic approaches for olfactory disorders: Electrical stimulation, stem cell therapy and transplantation of olfactory epithelium - a narrative review. *HNO* (in press)
- Pieniak M, Oleszkiewicz A, Avaro V, Calegari F, Hummel T (2022) Olfactory Training – thirteen years of research reviewed. *Neurosci Biobehav Rev* (in press)

## Abstracts

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## Guests / Personnel / Visitors

- [Vanessa Castello Branco Pereira](#) from Sao Paulo visits from July 5 to July 7, 2022 (see also [here](#))
- MUDr. Richard Holý, Ph.D., MUDr. Janoušková Wiesnerová, Helen Schulz from the Department of Otorhinolaryngology and Maxillofacial Surgery, Military University Hospital Prague, 3rd Faculty of Medicine, Charles University Prague visits on the 22nd of July 2022 
- Prof. Iordanis Konstantinidis and Dr. Lia Tsakiropoulou, Dept. of ORL, Aristotle University School of Medicine, Thessaloniki, visit on July 28 and 29
- [Mem Mahmut, School of Psychological Sciences, MacQuarrie University, Sydney](#), visits from August 3 to August 5
- [Constantin Hintschich, HNO Klinik, Universität Regensburg](#): visits from August 1 to August 5
- [Lucas Rupp](#), Master student Industrial Design, Kunstuniversität Linz, visits on August 3<sup>rd</sup>
- Afranur Özki, student at the Faculty of Medicine, Bursa Uludag University, starts her 4 week visit on August 1
- Edanur Gurbuz, medical student at the Faculty of medicine Mugla Sitki Kocman University, starts her 4 week visit on August 14, 2022
- Mariano Mastinu, PhD, starts his 2 year postdoc position on September 1<sup>st</sup>, 2022
- Emilia Cancellieri, M.D., Department of Otorhinolaryngology, Università degli Studi di Trieste (TS) Italy, starts her 4 months visit on September 1st 2022
- Jana Slobodova, M.D., Department of Otorhinolaryngology and Head and Neck Surgery, Pardubice Hospital, Cz, starts her 4 months visit on September 1st 2022
- Sept 5-9, 2022: [Dr. Yew KWANG](#) and Dr. Terese LOW from the [Department of ORL, National University Hospital in Singapore](#) visit.
- Sept 15 to Oct 15, 2022: Konstantina Aidinopoulou visits, medical student from Democritus University of Thrace (<https://duth.gr/en>), Alexandroupolis, Greece
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## Grants/Awards

- July 2022: Agnieszka Sabiniewicz and Yling Mai receive the ECRO travel award 2022 of 500 and 300 Euro!
- August 2022: Agnieszka Sabiniewicz receives the AbScent Research Grant on "Favorite odors in olfactory training in older adults" – 10.000 £

## Thesis

## Lab members: Courses, Presentations etc.:

- Thomas Hummel presents on the 1<sup>st</sup> of July 2022 at [„Brain meets Music!“](#) in Rottweil: “Warum ist Riechen wichtig? Was passiert, wenn wir den Geruchssinn verlieren? Wie kann er wieder hergestellt werden?”



- Lange Nacht der Museen in Dresden: 2.7.2022: Riechtest! Schmecktests! Nasenendoskopie! Riechzeugnisse!  
Beteiligte: Freya Aden, Anne Becker, Oskar Brosig, Cristina Ressel, Julia Pabst, Belinda Marquardt, Clara Overbeck, Celina Vogel, Susanne Menzel, Coralie Mignot, Katharina Vanselow, Thomas Hummel



- Lange Nacht der Wissenschaft in Dresden: 8.7.2022: Riechtest! Schmecktests! Nasenendoskopie! Riechzeugnisse!  
Beteiligte: Oskar Brosig, Max Schönherr, Elisabeth Hollemann, Fabian Herforth, Luisa Mühlig, Quirina Preusker, Jean-Christoph Gerami-Manesch, Laura Blume, Helena Degkwitz, Thomas Hummel



## Presentations in the lab:

- [Vanessa Castelo Branco Pereira](#) from EXPERIMENTAL PSYCHOLOGY, IP-USP, SÃO PAULO BR presnets on July 7th on « Personalized olfactory training for long lasting olfactory disorders post Covid-19 »
- [Prof. Iordanis Konstantinidis](#), Dept. of ORL, Aristotle University School of Medicine, Thessaloniki, presents on July 29 on “Studies on chemosensory function”
- Mini-symposium on chemosensation:

Thursday, 4<sup>th</sup> of August, 14.00 h (waiting area, house #5, basement) we will have a. Speakers are:

[Mem Mahmut, Sydney](#): Attachment Style and self-reported olfactory ability

[Constantin Hintschich, Regensburg](#): Olfactory function in COVID19

[Anna Oleszkiewicz, Wroclav](#): Taste function in blind people



- Prof. Gaby Badre, Univ. of Gothenborg, presents on „Smell and sleep“: Monday, 14<sup>th</sup> of August 2022



- Posters and Activities at the annual ECRO conference (conference of the European Chemoreception Research Organization) from Aug 31 to Sept 4, Berlin, Germany

Processing of sweet, astringent and pungent oral stimuli in the human brain.

Yunmeng Zhu<sup>1</sup>, Divesh Thaploo<sup>1</sup>, Pengfei Han<sup>2</sup>, Thomas Hummel<sup>1</sup>

<sup>1</sup> Smell and Taste Clinic, Department of Otorhinolaryngology, TU Dresden, Dresden, Germany, <sup>2</sup> Faculty of Psychology, Southwest University, Chongqing, China

Intracranial recordings from the human olfactory cortex in response to pleasant and unpleasant odors. Coralie Mignot<sup>1</sup>, Susanne Menzel<sup>1</sup>, Dino Podlessek<sup>2</sup>, Georg Leonhardt<sup>2</sup>, Moustafa Bensafi<sup>3</sup>, Thomas Hummel<sup>1</sup>

<sup>1</sup> TU Dresden, Smell and Taste Clinic, Department of Otorhinolaryngology, House 5, Basement, Fetscherstr. 74, 01307 Dresden, Germany, <sup>2</sup> TU Dresden, Neurosurgery of University Hospital Carl Gustav Carus, Fetscherstr. 74, 01307 Dresden, Germany, <sup>3</sup> Lyon Neuroscience Research Center, CNRS – INSERM – University Claude Bernard of Lyon, CH Le Vinatier - Bâtiment 462 - Neurocampus, 95 Bd Pinel, 69500 Bron, Lyon, France

Angular Gyrus takes part in the processing of odors associated to well-being- a finding from 2 consecutive neuroimaging studies. Akshita Joshi<sup>1</sup>, Henriette Hornstein<sup>1</sup>, Divesh Thaploo<sup>1</sup>, Vanda Faria<sup>1,2,3</sup>, Jonathan Warr<sup>4</sup>, Thomas Hummel<sup>1</sup>

<sup>1</sup> Smell and Taste Clinic, Department of Otorhinolaryngology, TU Dresden, <sup>2</sup> Department of Psychology, Uppsala University, Uppsala, Sweden, <sup>3</sup> Centre for Pain and the Brain, Department of Anesthesiology, Perioperative and Pain Medicine, Boston Children's Hospital, Harvard Medical School, Boston, MA, USA, <sup>4</sup> Takasago, Paris, France

Molecular odor characteristics and their influence on perception in healthy individuals and subjects with olfactory dysfunction. Maria Rommel<sup>1,2</sup>, Antonie Bierling<sup>2,3,4</sup>, Ilona Croy<sup>3</sup>, Thomas Hummel<sup>1</sup>

<sup>1</sup> Smell and Taste Clinic, Department of Otorhinolaryngology, Technische Universität Dresden, Germany, <sup>2</sup> Department of Psychotherapy and Psychosomatic, Faculty of Medicine of the Technische Universität Dresden, Germany, <sup>3</sup> Department of Clinical Psychology, Friedrich-Schiller-Universität, Jena, Germany, <sup>4</sup> Institute for Materials Science, Technische Universität Dresden, Dresden, Germany

Chemosensory functions in patients with inflammatory bowel disease and their association with clinical disease activity. Xingyu Han<sup>1,2</sup>, Ayda-Ayleen Ordouie<sup>1</sup>, Renate Schmelz<sup>3</sup>, Thomas Hummel<sup>1</sup>

<sup>1</sup> Smell and Taste Clinic, Department of Otorhinolaryngology, TU Dresden, Fetscherstrasse 74, 01307 Dresden, Germany, <sup>2</sup> Department of Otolaryngology-Head and Neck Surgery, Beijing Anzhen Hospital, Capital Medical University, No.2 Anzhen Road, Chaoyang District, Beijing, 100029, China, <sup>3</sup> Medical Department I, Gastroenterology, University Hospital, TU Dresden, Fetscherstrasse 74, 01307 Dresden, Germany

Functional connectivity patterns in patients with parosmia. Divesh Thaploo <sup>1</sup>, Akshita Joshi <sup>1</sup>, Eren Yilmaz <sup>2</sup>, Duzgun Yildirim <sup>3</sup>, Aytug Altudag <sup>4</sup>, Thomas Hummel <sup>1</sup>

<sup>1</sup> Smell and Taste clinic, TU Dresden, Germany, <sup>2</sup> Istanbul Gelisim University, Faculty of Health Sciences, Istanbul, Turkiye, <sup>3</sup>Acibadem University, Vocational School of Health Sciences, Department of Medical Imaging, Istanbul, Turkiye, <sup>4</sup> Biruni University, Faculty of Medicine, Department of Otorhinolaryngology, Istanbul, Turkiye

Development of a chemical-perceptual space of olfaction. Antonie Louise Bierling <sup>1,2,3</sup>, Maria Rommel <sup>2,4</sup>, Alexander Croy <sup>5</sup>, Thomas Hummel <sup>4</sup>, Ilona Croy <sup>1</sup>

<sup>1</sup> Department of Clinical Psychology, Friedrich-Schiller-Universität, Jena, Germany, <sup>2</sup> Department of Psychotherapy and Psychosomatic, Faculty of Medicine of the Technische Universität Dresden, Germany, <sup>3</sup> Institute for Materials Science, Technische Universität Dresden, Dresden, Germany, <sup>4</sup> Smell and Taste Clinic, Department of Otorhinolaryngology, Technische Universität Dresden, Germany, <sup>5</sup> Institute of Physical Chemistry, Friedrich-Schiller-Universität, Jena, Germany

A semantic analysis of parosmia identifying underlying semantic factors and determining parosmia severity on the basis of natural language data. Thomas Hörberg <sup>1</sup>, Clara Overbeck <sup>2</sup>, Thomas Hummel <sup>2</sup>, Jonas Olofsson <sup>1</sup>

<sup>1</sup> Sensory-Cognitive Interactive Laboratory, Department of Psychology, Stockholm University, <sup>2</sup> Interdisciplinary Center Smell & Taste, Department of Otorhinolaryngology, Technische Universität Dresden

Self-assessment of olfactory function using the "Sniffin' Sticks". Yiling Mai, Marie Klockow, Antje Haehner, Thomas Hummel

Smell and Taste Clinic, Department of Otorhinolaryngology, Technical University of Dresden, Dresden, Germany

Retronasal olfaction is relatively less affected in older individuals with subjectively normal olfactory function. Zetian Li, Theresa Gottschall, Antje Haehner, Thomas Hummel

Smell & Taste Clinic, Department of Otorhinolaryngology, Technische Universität Dresden, Dresden, Germany

Odor threshold differs for some but not all odorants between older and younger adults. Agnieszka Sabiniewicz <sup>1,2</sup>, Marnie Brandenburg <sup>2</sup>, Thomas Hummel <sup>2</sup>

<sup>1</sup> Institute of Psychology, University of Wroclaw, Poland, <sup>2</sup> Interdisciplinary Center „Smell & Taste“, TU Dresden, Germany

Symposium: Olfactory plasticity in a clinical context. Chair: Thomas Hummel

- Compensation of sensory loss and effects of olfactory training on chemosensory and cognitive function: Anna Oleszkiewicz
- Exploitation of brain plasticity using olfactory implants and transplants: Susanne Menzel
- Thomas Hummel presents on the 14<sup>th</sup> of September at the Online Conference "World Smell & Taste Day: Enrich Your Senses!" in Manila, The Philippines, on "Parosmia"
- Thomas Hummel presents on the 14<sup>th</sup> of September at the Online Conference "World Taste and Smell Day Webinar" in Beijing, China, on "Parosmia"

- World Smell Day 2022 in Görlitz – [Weltriechtag in Görlitz](#): 18<sup>th</sup> of September 2022

Stadthalle Görlitz, Am Stadtpark 1, 02826 Görlitz

<https://osmodrama.com/events/osmodrama-2022-stadthalle-goerlitz/>

Presentations by

- Prof. Thomas Hummel – Was passiert beim Riechen? Was passiert beim Verlust des Geruchssinns? Was kann man tun?
- Dr. Coralie Mignot – Was passiert beim Riechen im Gehirn?
- Dr. Nadine Gunder – Wie funktionieren Riechimplantate und Riechtransplantate?



- Smell and Taste 14: August 29-August 30

<https://www.uniklinikum-dresden.de/de/das-klinikum/kliniken-polikliniken-institute/hno/forschung/interdisziplinaires-zentrum-fuer-riechen-und-schmecken/neuigkeiten/kongresse/kongressarchiv/smell-and-taste-14-1>

Presentations by

**Croy**, Ilona (Jena) - The social dimension of olfactory loss

**Gellrich**, Janine (Dresden) – acquired olfactory loss in children

**Georgiopoulos**, Harris (Linköping) – MR imaging of the olfactory system

**Haehner**, Antje (Dresden) - Neurodegenerative olfactory loss, aging, idiopathic olf loss, spontaneous recovery

**Hummel**, Thomas (Dresden) - General aspects, olfactory testing

**Konstantinidis**, Iordanis (Thessaloniki) –posttraumatic olfactory loss

**Landis**, Basile (Geneve) - Taste dysfunction

**Lechner**, Matt (London) – Parosmia

**Schlosser**, Rodney (Charleston)

**Welge-Lüssen**, Antje (Basel) - surgical therapy

**Witt**, Martin (Rostock) - Anatomy of the human olfactory system



What else:

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media:

- Thomas Hummel: 15.7.2022 – Interview mit Frau Im Spiegel (Andrea Saggau) zu „Geruchssinn weg- was nun?“
- Thomas Hummel: 21.7.2022 – Interview mit Im Blick Magazin (Brigitte Bonder) zu „Unsere Nase – Das unterschätzte Sinnesorgan“ <https://www.bosch-bkk.de/service/im-blick-magazin/im-blick-online-magazin/gesund-bleiben/geruchssinn.html>



- 8.8.22: Thomas Hummel - Interview mit n-tv: <https://www.n-tv.de/wissen/Der-Geruchssinn-wird-oft-unterschaetzt-article23503337.html>



- 16.8.2022: Thomas Hummel – Interview mit [dlf](#) zum Thema Riechstörungen nach COVID19