

Report October – December 2024; Smell & Taste

Peer-reviewed Original Publications

- Oleszkiewicz A, Pozzer A, Williams J, Hummel T (2024) Ambient air pollution undermines chemosensory sensitivity – a global perspective. *Sci Rep* (in press)
- Plaza-Díaz J, Ruiz-Ojeda FJ, López-Plaza B, Bradimonte-Hernández M, Álvarez-Mercado AI, Arcos-Castellanos L, Feliú-Batlle J, Hummel T, Palma-Milla S, Gil A (2024) Effect of a novel food rich in miraculin on the oral microbiome of malnourished oncologic patients with dysgeusia. *Cancers* (in press)
- Gudziol H, Guntinas-Lichius O, Hummel T (2024) Eine chronische Rhinosinusitis stellte in der Corona Pandemie keinen Risiko- oder Schutzfaktor dar. *HNO* (in press)
- Mastinu M, Püschner A, Gerlach S, Hummel T (2024) Taste and oral somatosensation: Role of PTC bitter sensitivity, gender, and age. *Physiol Behav* (in press)
- Hänsel M, Reichmann H, Haehner A, Schmitz-Peiffer H, Schneider H (2024) Hippocampal dysfunction after autoimmune encephalitis depending on the antibody type. *J Neurol* (in press)
- Drnovsek E, Weitkamp K, Murthy VN, Gurbuz E, Haehner A, Hummel T (2024) Detection of odorants in odor mixtures among healthy people and patients with olfactory dysfunction. *Eur J Neurosci* (in press)
- Responses to the activation of different intranasal trigeminal receptors: Evidence from behavioral, peripheral and central levels
- Mai Y, Flechsig J, Warr J, Hummel T (2024) Responses to the activation of different intranasal trigeminal receptors: Evidence from behavioral, peripheral and central levels. *Behav Brain Res* (in press)
- Álvarez-Mercado AI, López Plaza B, Plaza-Díaz K, Castellanos LA, Ruiz-Ojeda FJ, Brandimonte-Hernández M, Feliú-Batlle J, Hummel T, Milla SP, Gil A (2024) Regular Consumption of a Food Supplement Containing Miraculin Can Contribute to Reduce Biomarkers of Inflammation and Cachexia in Malnourished Patients with Cancer and Taste Disorders: The CLINMIR Pilot Study. *Front Med* (in press)

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

- Pieniak, M., Mahmut, M. K., Hernandez, A. K., Haehner, A., & Hummel, T. (2024, November 18). Can neurodegeneration be predicted based on identification of a single odor: a commentary on Diez et al. (2024). <https://doi.org/10.31219/osf.io/4hxbn>
- Xu X, Juratli JH, Landis BN, Hummel T (2024) Parosmia: Pathophysiology and Management. *Curr Allerg Asthma Rep* (in press)
- Haehner A, Hummel T (2024) Reply: Olfactory dysfunction - a potential biomarker of neurological involvement in Wilson's disease. *Movement Dis Clin Pract* (in press)
- Preprint: E Iannilli, R Fürer, A Welge-Lüssen, T Hummel – 2024 [PDF] [The Neural Basis of Salt Perception: A Focus on Potassium Chloride as a Sodium Alternative](#)
- Lipp C, Laamari L, Bertsch A, Bensafi M, Podlesek D, Hummel T, Brugger J (2024) Devices for the electrical stimulation of the olfactory system: a review. *Biosensors Bioelectronics* (in press)
- Hähner A (2024) Riechstörungen bei neurologischen Erkrankungen. *FORUM* 64: 2-7
- Haehner A, Hummel T (2024) Olfactory Dysfunction: A Potential Biomarker of Neurological Involvement in Wilson's Disease. *Mov Disorders Clin Practice* (in press)

Guests / Personnel / Visitors

- 11.-15.10.2024: Olaf Conrad, visits from the ENT Department at the University of Erlangen
- 20.-29.11.2024: [Wiktorija Jedryczka](#) visit s rom the Dept. of Psychology of Wroclav University
- 28.-29.11.2024: Prof. Agnieszka Sorokowska visits form the Dept. of Psychology of Wroclav University
- 28.11.2024: Lukas Sekinger (student at the University of Mainz) starts his 2 month visit
- 10.12.-11.12.2024: Prof. Frank Möhrle visits from the Dept. of Molecular Physiology of Animals, Univ. of Heidelberg
- 10.12.2024: Paul Velthaus (student of biology) visits from the Dept. of ORL of the Univ. of Jena
- 18.12.2024: Jesus de Rogado Lopez (
- 18.12.-20.12.2024: Dr. Luca Raimondo visits from the Department of Otorhinolaryngology, Univ. of Torino, Italy



Thesis

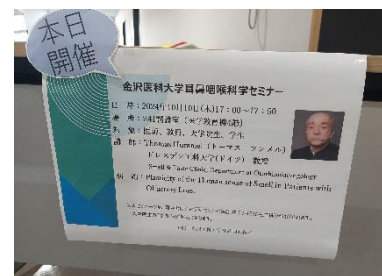
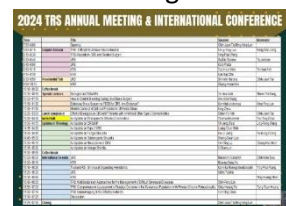
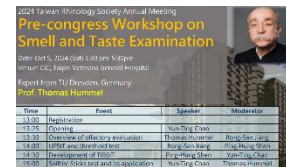
- 10.9.2024: Qiying **Chang** – Verteidigung der Arbeit zum Dr. med.: Wirksamkeit von Akupunktur bei Patienten mit Dysgeusie
- 5.11.2024: Anne **Wolter** – Verteidigung der Arbeit zum Dr. med. dent.: Vergleich psychophysischer Tests zur Erfassung des Riechvermögens
- 5.11.2024: Henriette Friederike Katrin **Hornstein-Schnellhardt** – Verteidigung der Arbeit zum Dr. med. dent.: Unterschiede zwischen mit Wohlbefinden assoziierten und anderen Gerüchen – eine fMRT-Studie
- 5.11.2024: Theresa **Gottschall** – Verteidigung der Arbeit zum Dr. med.: Differenzielle Veränderungen von ortho - und retronasalem Riechvermögen in Abhängigkeit vom Alter
- 19.11.2024: Dorothea **Woosch** - Verteidigung der Arbeit zum Dr. med.: Der Effekt von Omega-3-Fettsäuren auf die Verbesserung der Riechleistung unter Riechtraining
- 19.11.2024: Antonia **Gillmeister** - Verteidigung der Arbeit zum Dr. med.: Riechtraining bei spezifischer Anosmie: Zusammenhang mit dem OR7D4-Genotyp
- 17.12.2024: Melanie **Dietz** - Verteidigung der Arbeit zum Dr. med.: Therapeutisches Ansprechen von Riechtraining, Vitamin A und Mometason bei persistierender Riechstörung
- 17.12.2024: Fabian **Herfort** - Verteidigung der Arbeit zum Dr. med.: Auswirkungen einer endoskopischen Nasennebenhöhlenoperation auf das Riechvermögen bei chronischer Rhinosinusitis.

Awards

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Conference / presentations:

- 5.10.2024: Thomas Hummel presents during a pre-conference workshop on Smell and Taste Examination at the Department of Otorhinolaryngology, Taipei Veterans General Hospital, on “Overview of olfactory evaluation”
- 6.10.2024: Thomas Hummel presents a keynote talk during the TRS Annual Meeting & International Conference at the Department of Otorhinolaryngology, Taipei Veterans General Hospital, on “An Update on Therapies for Olfactory Dysfunction”
- 8.10.2024: Thomas Hummel presents at the Department of Otorhinolaryngology, Jikei University Tokyo, on “Plasticity of the Human sense of Smell in patients with Olfactory Loss”
- 10.10.2024: Thomas Hummel presents at the Department of Otorhinolaryngology, University of Kanazawa, on “Plasticity of the Human sense of Smell in patients with Olfactory Loss”



- 16.10.2024: Ante Hähner presents in Anklam at the „Berufsverband Deutscher Nervenärzte in Mecklenburg-Vorpommern on the following topics: „Geruchssinn und Schmerz“ and „Riechstörungen in der Neurologie“
- 21.10.2024: Mariano Mastinu presents in New York at the meeting “On Smell, with Chrissi Kelly... and the Columbia CommonScents Team” on “Show me the Flavor – Understanding nuances of taste, flavor & retronasal smell”



- 12.11.2024: Thomas Hummel presents at the “[altered taste symposium](#)” at the **Institut Lyfe Research and Innovation Centre**, Lyon on “Eating without smell and taste”
- 12.11.2024: Mariano Mastinu chairs the session on “Sensory alterations in cancer” at the “[altered taste symposium](#)” at the **Institut Lyfe Research and Innovation Centre**, Lyon



- Presentations on November 27, 2024, at the Florian Mormann lab "Cognitive und Clinical Neurophysiology" of the Dept. of Epileptology at the University Clinic of Bonn:

Coralie Mignot: Intracranial recordings in humans in response to odors

Thomas Hummel: Clinical aspects of neuroplasticity

- Presentations on November 22/23, 2025, at the meeting on "[Olfatto e gusto a 360°](#)" in Torino:

Agnieszka Sabiniewicz: L'utilizzo dei questionari nell'inquadramento dei disturbi olfatto gustativi

Coralie Mignot: Diagnostica elettrofisiologica olfattiva e gustativa

Thomas Hummel: SMELL and TASTE and their role in the human ecosystem

Thomas Hummel: La riabilitazione olfattoria e trigeminale

practical demonstrations: Coralie Mignot and Agnieszka Sabiniewicz

- **27./28.9.2024: Smell and Taste 16** - a practical introduction to the physiology and pathophysiology of the chemical senses



Among others presentations by:

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

Giorgiopoulos, Harris (Lund) - Imaging of olfactory function in olfactory loss

Kelly, Christine (London) - implications of smell loss

Manzini, Ivan - olfactory physiology

Philpott, Carl (Norwich) - Postviral olfactory loss

Konstantinidis, Iordanis (Thessaloniki) –posttraumatic olfactory loss

Landis, Basile (Geneve) - Taste dysfunction

Gellrich, Janine (Dresden) – olfactory loss in children

Welge-Lüssen, Antje (Basel) - surgical therapy

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

Rombaux, Philippe (Brussels) and **Hernandez**, Kristina (Dresden) - trigeminal function

Schwob, Jim (Boston) – neuroregeneration

Whitcroft, Katie – epidemiology, spontaneous recovery

Gane, Simon - Olfactory function in sinonasal disease

Rowan, Nick - frailty and olfactory loss

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

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

Weise, Susanne (Dresden) and **Mignot**, Coralie (Dresden) – implants and transplants

Hernandez, Kristina (Dresden) – trigeminal function

Kim, Kwangsu; **Mignot**, Coralie: chemosensory event-related potentials

Sabiniewicz, Agnieszka; **Pieniak**, Michal: QoL

Mastinu, Mariano: electrogustometry, taste testing

Li, Zetian; **Li**, Shubin: retronasal olfactory testing, olfactory testing

Mai, Yling: investigations of trigeminal sensitivity

Hernandez, Kristina: biopsies from the olfactory epithelium; nasal endoscopy and intranasal volumetry

- 17.10.2024: ODOFANT online conference

Le mot **O₁D₂O₁F₄A₁N₁T₁**
n'est pas valide au
scrabble

The Odofant meeting - program		
October 17, 2024		
9:00 - 14:05, Berlin/Paris time		
16:00-21:05, Quongqing time		
https://tu-dresden.zoom-x.de/j/6948020500?omn=63835397156		
09:00	Introduction	
	P Han and T Hummel	
Olfactory cognition, perception and dysfunction		
09:07	chair: Julia Pabst	Body odors
09:14	P Han	Basia Zyzelewicz Olfactory training improves odor-specific semantic verbal fluency in older adults, but not in young adults
09:21	Youxuan Zheng:	the effect of olfactory training on depression mice
09:28	Hanani Abdul Manan	Resting-State fMRI and Functional Connectivity in COVID-19-Associated Olfactory Disorders: A Systematic Review
09:35	Zhuofei Zhu	Exploring Embodied Semantics in Chinese Olfactory Metaphors: Evidence from fMRI
09:42	Cagdas Guducu	effects of lemonene on the visual short term
09:49	Yuji Kishimoto	Assessing parosmia patients: a study on the evaluation method using a self-administered odor questionnaire for parosmia
09:56	Susanne Menzel	Olfactory Implants
10:03	Elisabeth Hollemann	Nasal microbiome
10:10	Johanna Flechsig	Responses to the activation of different intranasal trigeminal receptors: Evidence from behavioral, peripheral and central levels
10:17	Alina Nakov	Olfactory stimulation may modulate the sensation of nasal patency
10 min break		
Olfactory sensitivity, treatment of olfactory dysfunction		
10:34	chair: Prem Wungcharoun	Precision Rehabilitation: Tailor-made Olfactory Training for Geriatric Olfactory Dysfunction
10:41	T Hummel	Emely Kruschwitz Specific Anosmia
10:48	Salina Husain	Comparative Study of Olfactory Abilities in Coastal and Urban Populations
10:55	Anna Oleszkiewicz	Odor awareness and the perception of ambient odors across the globe
11:02	Aleksandra Reichert	Determinants of olfactory thresholds around the world
11:09	Angela Marie Racoma Jao	Prevalence of Olfactory Dysfunction Among COVID-19 Patients with Self-Reported Smell Loss Versus Objective Olfactory Tests
11:16	Friederike Weitkamp	Trigeminal sensory neuropathia predicts chemosensory dysfunction after skull base surgery
20 min break		
Olfactory testing, airflow and trigeminal function		
11:45	chair: P Han	Agnieszka Hamerlińska Identification and naming of odors by children
11:52	Kwangsui Kim	Olfactory ERP-Based Classification of Anosmia and Normosmia Using Machine Learning
11:59	Margaux Ysabel B. Abaya	Between Olfactory Function Threshold and Quality of Life Among Adult Filipinos with Perceived Olfactory Dysfunction
12:06	Pauline Hanslik	Trigeminal stimulation of the nasal cavity
12:13	Lina Ren:	Development and validation of an emotion lexicon for spicy flavor experiences
12:20	Darong Chen	Comparison of lexicon and emoji questionnaires for measuring emotional associations elicited by spicy food flavor
12:27	Filip Trnka	Outcomes of Surgery Using Endonasal Transsphenoidal Approach: A Computational Fluid Dynamics Study Based on CT Scans of Patients
12:34	Tin Hernandez	Mucociliary clearance
10 min break		
Olfactory percpeiton, consequences of olfactory loss		
12:51	chair: T Hummel	Yun-Ting Chao Altered white matter architecture in patients with congenital anosmia
12:58	Zhidai Xiao	transcranial alternating current stimulation (tACS) on piriform cortex and OFC
13:05	Shuang Liang:	Olfactory anhedonia in late-life depression: a task fMRI study
13:12	Vanessa Castello Branco Pereira	Olfactory Games and Sensory Enrichment: Intervention Tools in a Pilot Study on Olfactory Therapy
13:19	Akshita Joshi	Longitudinal Investigation of Central Mechanisms in Dysosmia with and without Parosmia
13:26	Divesh Thaploo	Alterations of the Amygdala in post-COVID olfactory dysfunction
13:33	Robert Pellegrino	A nonverbal odor assessment map to inform clinical outcomes
13:40	Shubin Li	Recordings of the electro-olfactogram in response to peasant and unpleasant stimuli
13:47	Marlise Hofer	Side effects of olfactory loss: depression and changes of sexuality

- 6./7.12.2024: **December Meeting on "Smell and Taste"** supported by the Working Group on Olfaction and Gustation of the German ENT society, 6./7. December 2024 in Basel. Oral presentations as follows:

Cindy Ma	Age-associated variations in olfactory habituation
Antje Hähner	Wilson's disease
Emely Kruschwitz	Specific anosmia
Susanne Weise	Improvement of olfactory function following vagal nerve stimulation.
Julia Gebler	Effects of Olfactory Training on Brain Changes in Patients with Post-COVID Olfactory Loss
Natalie Gentsch	qMRT of the olfactory bulb in de-novo Parkinson's disease and REM-sleep disorder
Tin Hernandez	Mucociliary clearance
Thomas Hummel	Cribriform plate foramina count in patients with acquired and congenital anosmia.
Nicolas Mayer	The Olfactory Nerve as a Channel for Electrical Stimulation of the Salience Network
Tanja Krüger	Nasal fractures

- 14.12.2024: Thomas Hummel presents at the conference on "Management of Smell dysfunction" at the Department of Otorhinolaryngology of the Alfaisal University in Riyadh on "Innovations in smell disorders management" and "How to establish smell and taste practice?"
- 20.12.2024. Thomas Hummel presents at the ["2024 - Webinar Rhinology: IFOS WORLD COURSE ON RHINOLOGY"](#) on "Olfactory Diagnostics: Current Tools and Techniques"



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2024 - Webinar Rhinology December 20th

IFOS WORLD COURSE ON RHINOLOGY

Friday December 20th, 2024 from 2pm to 4 pm, Paris Time (GMT + 1Hrs)

Presentations in the lab:

- 6.11.24: Journal Club – Susanne Weise presents on ["Divergent sensory pathways of sneezing and coughing"](#) by Haowu Jiang et al.!
- 7.11.24: Zetian Li presents on "The olfactory receptor neuron"
- 7.11.24: Tin Hernandez presents on „Chronic rhinosinusitis“
- 14.11.24: Shubin Li presents on „Nasal mucus secretion“
- 14.11.24: Yling Mai presents on „Nasal airflow“
- 18.11.24: Journal Club – Zetian Li presents on ["Olfactory navigation in fluctuating environments"](#) by Venky Murthy!
- 12.12.2024: Journal -Club - Lukas Sekinger on "Normative Parameters of Olfactory Bulbs Based on Magnetic Resonance Imaging and Olfactory Function"
- 12.12.2024: Zetian Li presents on "Differences in olfactory systems of humans and mice"
- 19.12.2024: Prof. Jesus de Rogado, Univ. of Extremadura, Spain, presents on "Wrist-worn electronic noses"
- 18.12.2024: Jesus Lozano Rogado Lopez (Dept. Ingeniería Eléctrica, Electrónica y Automática; Escuela de Ingenierías Industriales. Universidad de Extremadura, Badajoz, Spain) presents on "wrist-worn electronic noses"
- 20.12.2024: Dr. Luca Raimondo visits from the Department of Otorhinolaryngology, Univ. of Torino, Italy presents on "Studies on mastcells and the severity of olfactory dysfunction"
- 20.12.24: Tin Hernandez presents on „Skull base and its relation to the nasal cavity“

What else:

Thomas Hummel is listed in the top 10.000 Scientists worldwide!

<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6>

media:

- 12.11.2024: Thomas Hummel gives an interview to Jeff Snyder on “Train your nose, improve your mind”, [Morning Pulse](#)

