

Report October – December 2021; Smell & Taste

Peer-reviewed Original Publications

- Dubreuil R, Herrier C, Livach T, Hummel T, Mantel M, Fournel A, Bensafi M (2021) Using a bio-inspired surface resonance plasmon electronic nose for fundamental research on human olfaction. *Sensors Act B: Chem* (in press)
- Georgiopoulos C, Postler M, Rombaux P, Gudziol V, Abolmaali N, Hummel T (2021) Unilateral choanal atresia: indications of long-term olfactory deficits and volumetric brain changes post-surgically. *ORL* (in press)
- Pellegrino R, Mainland JD, Kelly CE, Parker JK, Hummel T (2021) Prevalence and Correlates of Parosmia and Phantosmia among Smell Disorders. *Chem Senses* (in press)
- Hummel T, Thaploo D, Georgiopoulos C, Falkenburger B, Whitcroft KL, Haehner A (2021) Advancement of PD is reflected by white matter changes in olfactory areas – a pilot study. *Medicina* (in press)
- Lötsch J, Hähner A, Schwarz PEH, Tselmin S, Hummel T (2021) Machine Learning Refutes Loss of Smell as a Risk Indicator of Diabetes Mellitus. *J Clin Med* (in press)
- Poessel M, Morys F, Breuer N, Villringer A, Hummel T, Horstmann A (2021) Brain response to food odors is not associated with body mass index and obesity-related metabolic health measures. *Appetite* (in press)
- Zou L, Haehner A, Menzel S, Gunder N, Hummel T (2021) Reliability and validity of a brief version of the Questionnaire of Olfactory Disorders (brief QOD) in patients with olfactory dysfunction. *Rhinology* (in press)
- Chen B, Espin M, Haussmann R, Matthes C, Donix M, Hummel T, Haehner A (2021) The effect of olfactory training on olfaction, cognition, and brain function in patients with mild cognitive impairment. *J Alzh Dis* (in press)
- Mignot C, Schunke A, Sinding C, Hummel T (2021) Olfactory adaptation: recordings from the human olfactory epithelium. *Physiol Behav* (in press)
- Boscolo-Rizzo P, Hummel T, Hopkins C, D’Alessandro A, Menini A, Dibattista M, Tirelli G (2021) Comprehensive chemosensory psychophysical evaluation uncovers overestimation of self-reported gustatory dysfunction in long-COVID: a cross-sectional study *JAMA Otolaryngol* (in press)
- Hernandez AK, Fuchss P, Haehner A, Hummel T (2021) Olfactory function testing before and after anesthesia. *Sci Rep* (in press)
- Loessner L, Matthes C, Haussmann R, Brandt MD, Sauer C, Espin M, Noppes F, Werner A, Linn J, Hummel T, Haehner A, Donix M (2021) Predictors of subjective cognitive deficits in patients with mild cognitive impairment. *Psychogeriatrics* (in press)
- Wang Q, Chen B, Zhong X, Zhou H, Zhang M, Mai N, Wu Z, Chen X, Yang M, Zhang S, Lin G, Hummel T, Ning Y (2021) Neuropsychiatric symptoms mediated the relationship between odor identification and cognition in Alzheimer’s disease spectrum: a structural equation model analysis. *Frontiers Aging Neurosci* 13:732840
- Chen B, Wang Q, Zhong X, Mai N, Zhang M, Zhou H, Haehner A, Chen X, Wu Z, Auber LA, Rao D, Liu W, Zheng J, Lin L, Li N, Chen S, Chen B, Hummel T, Ning Y. 2021. Structural and functional abnormalities of olfactory-related regions in subjective cognitive decline, mild cognitive impairment and Alzheimer’s disease. *Int J Neuropsychopharmacol* (in press)
- Masala C, Cavazzana A, Sanna F, Cecchini MP, Zanini A, Gasperi F, Menghi L, Endrizzi I, Borgogn M5, Drago S, Cantone E, Ciofalo A, Macchi A, Parma V, Piochi M, Pinna I, Torri L, Cabrino G, Ottaviano G, Pendolino AL, Pignatelli A, Pighin F, Bochicchio V, Motta G, Fontana G, Pasquariello B, Cavaliere C, Iacono V, Hummel T (2021) Correlation between olfactory function, age, sex, and cognitive reserve index in the Italian population. *Eur Arch ORL* (in press)
-

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

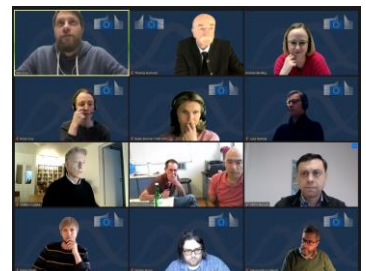
- Patel, ZM, Holbrook, EH, Turner, JH, Adappa, N, Albers, MW, Altundag, A, Appenzeller, S, Costanzo, RM, Croy, I, Davis, G, Dehgani-Mobaraki, P, Doty, RL, Duffy, VB, Goldstein, BJ, Gudis, DA, Haehner, A, Higgins, TS, Hopkins, C, Huart, C, Hummel, T, Jitaroon, K, Kern, RC, Khanwalkar, AR, Kobayashi, M, Kondo, K, Lane, AP, Lechner, M, Leopold, DA, Levy, JM, Marmura, MJ, Mclelland, L, Moberg, PJ, Mueller, CA, Nigwekar, SU, O'Brien, E, Pellegrino, R, Philpott, C, Pinto, JM, Reiter, ER, Roalf, DR, Rowan, NR, Schlosser, RJ, Schwob, J, Seiden, AM, Smith, TL, Soler, ZM, Sowerby, L, Takaki, M, Tan, BK, Thamboo, A, Wrobel, B & Yan, CH (2021) International Consensus Statement in Allergy and Rhinology: Olfaction. Intelnt Forum Allerg Rhinol (in press)
- Hummel T, Podlesek D (2021) Clinical assessment of olfactory function. Chem Senses (in press)
- Speth MM, Speth US, Sedaghat AR, Hummel T (2021) Riech- und Schmeckstörungen. HNO (in press)

Guests / Personnel

- Susanne Menzel, otolaryngologist, TU Dresden, Germany, starts her position on Oct 1st, 2021 –
- Dr. Christoph Oster, Klinische Neuroonkologie, University Clinic Essen visits on Oct 4/5 2021
- Drs. Laura Pardo and Paula Cruz, Hospital de la Santa Creu i Sant Pau, Barcelona, visit from Oct 4 to Oct 7, 2021
- Tomer Green from the Dept of Biochemistry, Food Science and Nutrition, The Hebrew University of Jerusalem, Rehovot, Israel, visits from Oct 11 to Oct 14, 2021
- Agnieszka Sorokowska, PhD, and Dominika Chabin, Dept. of Psychology, Univ. of Wroclaw, Poland, visit from Oct 25-26, 2021
- Tatjana Müller and Thomas Klüpfel visit („MPI für Chemie“, Mainz) on Oct 27 and 28
- Yling Mai, MSc, School of Public Health, Southern Medical University, Dept. of Psychology, Guangzhou, China, starts her 4 year visit on Oct 15, 2021
- [Moustafa Benssafi, PhD, Lyon](#), visits on Nov 5, 2021
- [Jen Roebber, PhD, Research Scientist](#), Cardiff, University Hospital of Wales, visits on Oct 20
- Irina Hychak, M.D., from [Poltava, Ukraine](#), visits from Nov 1 to Nov 9, 2021
- [Katarzyna Resler](#), M.D., Dept. of ORL, Univ. of Wroclaw, visits from Nov 15 to Dec 12, 2021
- [Lena Trost, Ph.D. student](#), Bauhaus-Universität Weimar, visits on the 24th of Nov 2021.
- [Michael Schmuker, Dr. phil. nat.](#), Dept of Biology, Chemistry, Pharmacy, FU Berlin, visits on Nov 25, 2021
- [Prof. Dr. Önder Göktas](#), Berlin, visits on Dec 23, 2021

Grants/Awards


- 2021-2024: Thomas Hummel together with Ilona Croy: Elektrische Stimulation des Saliennetzwerkes mittels olfaktorischer Nervenbahnen. DFG HU441/28-1 212.750 €
- 2021-2025: Thomas Hummel together with Gianaurelio Cuniberti, Ilona Croy and others: „Smart Electronic Olfaction for Body Odor Diagnostics “ HORIZON-EIC-2021-PATHFINDEROPEN-01 101046369 (total volume 2.972.969 €) 327.875 Euro



Thesis

- Jule Reinhard (Dr. med.), Verteidigung am 5.10.2021: Orale Texturempfindung bei Patienten mit Riech- und Schmeckstörung
- Sophie Burghardt (dr. med.), Verteidigung am 26.10.2021: Beeinflussung der Nahrungswahrnehmung und des Essverhaltens durch Riech- und Schmeckstörungen

Courses, Presentations etc.:

- **Yunmeng Zhu** presents on Oct 12 2021 on “Central processing of gustatory sensations”
- Thomas Hummel presents on Oct 13 2021 on “The sense of smell is elemental” at the [first annual meeting of the Food and Nutrition Network in Aarhus, Denmark](#)
- Thomas Hummel am 15.10.2021 mit einem Vortrag zum „Riechtraining“ beim Gesundheitscampus Göttingen der Fakultät Ingenieurwissenschaften und Gesundheit an der HAWK Hildesheim/Holzwinden/Göttingen gemeinsam mit dem Deutschen Bundesverband für Logopädie e.V.: Symposium zum Thema "Post-/Long-Covid in der logopädischen Therapie“
- Thomas Hummel am 15.10.2021 mit einem Vortrag zum „Covid19 bedingten Geruchs- und Geschmacksverlust“ bei der Akademie der PRIMAVERA LIFE GMBH, Oy-Mittelberg 
- Thomas Hummel presents on Oct 23, 2021 on “postviral olfactory loss” at the 2021 conference of the [Russian Rhinological Society](#), in Yaroslavl, Russia
- Thomas Hummel presents on Oct 22, 2021 on “parosmia” at the Oct 2021 conference of the Centre for Olfactory Research and Applications (CORA) in London, UK
- Thomas Hummel presents on Oct 21, 2021 on „Riechen - Grundlagen & Training mit Düften in der Therapie“ at the annual conference of the [German Pain Society](#) in Mannheim, Germany
- Thomas Hummel presents on Nov 5, 2021 on “Riechstörungen bei entzündlichen Veränderungen” at the Dresden Allergiesymposium
- Online conference in Beijing on Dec 17th, 2022

the International Symposium on Olfactory Dysfunction & Covid-19 in Children

17th, Dec, 2021, Berlin time	
Chairperson: Dr. Zhan Xiaojun	
7:00-7:10AM	Welcome (Dr. Wei Yongxiang)
7:10-7:45AM	Olfaction in COVID19 <i>Thomas Hummel, TU Dresden, Dresden, Germany</i>
7:45-8:10AM	Gene Function for Isolated Congenital Anosmia Pedigrees <i>Liu Jia, Children's Hospital Capital Institute of Pediatrics, Beijing, China</i>
8:10-8:35AM	Olfactory, gustatory and chemesthesis dysfunction in long- COVID patients <i>Andrea d' Alessandro, University of Trieste, Trieste, Italy</i>
8:35-8:55AM	Alteration of Gut Microbiota contribute to the dysfunction of olfactory bulb and hippocampal throughout life <i>Wang Shan, Children's Hospital Capital Institute of Pediatrics, Beijing, China</i>
8:55-9:20AM	Olfactory training-an overview of twelve years of research <i>Michal Pieniak, University of Wrocław, Wrocław, Poland</i>
9:20-9:40AM	Application of behavioral and physiological reflex olfactory test in the evaluation of olfactory function in children <i>Zhan Xiaojun, Children's Hospital Capital Institute of Pediatrics, Beijing, China</i>
9:40-10:05AM	Role of pathogens in olfactory dysfunction associated with upper respiratory inflammation <i>Zhanglichuan, Beijing Anzhen Hospital, Capital Medical University, Beijing, China</i>
10:05-10:25AM	Maturation of odour identification ability and related factors in children <i>Rumi Sekine, The Jikei University School of Medicine, Tokyo, Japan</i>
10:25-10:50AM	Radiological measurements of olfactory bulb <i>Yan Xiaoguang, TU Dresden, Dresden, Germany</i>
10:50-11:15AM	Combined uses of CSIT and u-sniff to determine the normal olfactory value of Chinese children <i>Xie Hongbo, Institute of Heart&Lung Vessel Diseases, Beijing, China</i>

Conferences in Dresden

- [Smell and Taste 13](#): Oct 8/9, 2021 - a practical introduction to the physiology and pathophysiology of the chemical senses
Poster presentations:
 - Human olfactory ecology appears to be helpful in the improvement of the sense of smell
Oleszkiewicz A, Heyne L, Cuevas M, Haehner A, Hummel T; Dresden, Germany; ania.oleszkiewicz@gmail.com

- Q-Powders – a quick test for screening retronasal olfactory disorders with tasteless powders
Pieniak M, Oleszkiewicz A, Klockow M, Yoshino A, Haehner A, Hummel T; Dresden, Germany; michal.m.pieniak@gmail.com
- Association between well-being and odor perception
Joshi A, Faria V, Hornstein H, Warr J, Hummel T; Dresden, Germany; joshiakshita93@gmail.com
- Mapping olfactory system using probabilistic tractography
Thaploo D, Joshi A, Georgiopoulos C, Hummel T; Dresden, Germany; taploodivesh4@gmail.com
- Exploring brain functional connectivity of patients with taste loss after taste stimuli - a fMRI study.
Zhu Y, Joshi A, Thaploo D, Hummel T; Dresden, Germany; zhym182@hotmail.com
- Intranasal trigeminal sensitivity to mechanical stimuli is associated with the perception of nasal patency
Yan X, Zhao K, Kim K, Hummel T; Dresden, Germany; xiaoguang.yan@outlook.com
- Gustatory Function in Acute COVID-19 - Results from Home-Based Psychophysical Testing
Hintschich CA, Brosig A, Hummel T, Bohr C, Vielsmeier V; Regensburg, Germany; constantin.hintschich@klinik.uni-regensburg.de
- Olfactory function testing before and after anesthesia
Hernandez AK, Fuchss P, Haehner A, Hummel T; Dresden, Germany; akmhernandezmd@gmail.com
- Central processing of odors and trigeminal stimuli in migraine patients with or without aura
Mignot C, Frost M, Faria V, Hummel T, Gossrau G, Haehner A; Dresden, Germany; coraliemignot.pro@gmail.com
- [Online - December Meeting on "Smell and Taste" supported by the Working Group on Olfaction and Gustation of the German ENT society, 3./4. December 2021 in Marburg](#)
Presentations from the Dresden lab:



Andrea d'Alessandro	Olfactory, gustatory and chemesthesis dysfunction in long-COVID patient
Susanne Menzel	Multicentric study on the course of non-sinusal olfactory dysfunction
Rumi Sekine	Assessment of parosmia using the SSParOT in patients with and without parosmia and healthy controls
Clara Overbeck	Clinical presentation of parosmia
Coralie Mignot	Consequences of gaining olfactory function after life-long anosmia, a case study
Yun-Ting Chao	Sniffing in congenital anosmia
Xiaoguang Yan	The shape of the olfactory bulb predicts olfactory function
Zetian Li	Home test vs. clinical test
Henriette Zimmeck	Age-related olfactory loss - EOG recordings
Akshita Joshi	Neural associations between well-being and odor perception
Michal Pieniak	'Olfactory Training - an overview of twelve years of research'
Anna Hernandez	The effect of Omega 3 fatty acids supplement ingestion in addition to olfactory training
Yumeng Zhu	Gustatory FMRI
Oshin Behl	Migraine in Children: detecting differences in OERPs

- Hummel T, presents on Dec 6, 2021, at the [Firmenich](#) Online Symposium in Honor of Christian Margot “Prevalence and Effects of Olfactory Training in Specific Anosmia”

Firmenich

Symposium in Honor of Christian Margot (via Zoom) Monday 06-Dec-2021

Time	Speakers	Title of talk
15h00	Matt Rogers SNF Chemosensory Sciences, Hirac Shaft Firschein Columbia University, New York, NY – USA	Welcome & Introduction Message
15h10	Marie Christine Braillet University of Lausanne, Switzerland	Age Dependent Appearance of SARS-CoV-2 Entry Sites in Mouse Chemosensory Systems Reflects COVID-19 Anosmia-Specific Symptoms
15h30	Charlie Buser Yale University, New Haven, CT – USA	A Brief History of Olfactory Organs
15h50	Berry Smith University of London – UK	Complex Odour and Simple Pleasures
16h10	Break	
16h20	Morten Kjaergaard University of Oxford – UK	The Pleasure Cycle in the Human Brain
16h40	Ivan Rodriguez University of Geneva, Switzerland	Large Scale Transcriptional Adaptation of Olfactory Neurons to Odorant Receptor Identity and Activity
17h00	Break	
17h10	Thomas Hummel University of Dresden Medical School – Germany	Prevalence and Effects of Olfactory Training in Specific Anosmia
17h30	Matt & Stuart	Thank You Words & Conclusion
18h00	End of Symposium	

What else:

- Thomas Hummel, Coralie Mignot: November 2021, Interview mit pm wissen: [Wie erlangt man verlorenen Geruchssinn zurück?](#)
- Thomas Hummel - Interview mit Natalie Weise, [M94.5](#):
Riechstörungen nach COVID19
- Interview mit Jana Sepher, ZDF: „Warum Weihnachten seinen eigenen Duft hat“
<https://www.zdf.de/nachrichten/panorama/weihnachten-gewuerze-duft-100.html>

