

## Report January – March 2022; Smell & Taste

### Peer-reviewed Original Publications

- Hernandez AK, Woosch D, Haehner A, Hummel T (2022) Omega-3 supplementation in postviral olfactory dysfunction: a pilot study. *Thinology* (in press)
- Yan X, Joshi A, Zang Y, Assunção F, Fernandes H, Hummel T (2022) The shape of the olfactory bulb predicts olfactory function. *Brain Sci* (in press)
- Han P, Sua T, Chen H, Hummel T (2022) Regional brain morphology of the primary somatosensory cortex (SI) correlates with spicy food consumption and capsaicin sensitivity. *Nutr Neurosci* (in press)
- Pieniak, M., Pisanski, K., Kupczyk, P., Sorokowski, P., Sorokowska, A., Frackowiak, T., and Oleszkiewicz, A. 2022. The impact of food variety on taste identification and preferences: Evidence from the Cook Islands Archipelago. *Food Qual Prefer.* 98:104512.
- Haxel BR, Fischer L, Pade J, Reden J, Hummel T (2022) Nasal polyp load determines the recovery of olfaction after surgery for chronic rhinosinusitis. *Rhinology* (in press)
- Sorokowska A, Chabin D, Hummel T, Karwowski M. 2022. Olfactory perception relates to food neophobia in adolescence. *Nutrition*: 111618.
- Torvik Heian I, Helvik AS, Hummel T, Øie MR, Nordgård S, Bratt M, Moe-Thorstensen W (2022) Measured and self-reported olfactory function in healthy Norwegian adults. *Eur Arch ORL* (in press)
- Hintschich CA, Fischer R, Hummel T, Wenzel JJ, Bohr C, Vielsmeier V (2022) Persisting olfactory dysfunction in post-COVID-19 is associated with gustatory impairment: Results from chemosensitive testing eight months after the acute infection. *PLoS One* (in press)
- Ning Y, Zhang S, Chen B, Zhong X, Zhang M, Wang Q, Zhangying W, Hou L, Rong ZH, Chen X, Liu M, Yang M, Lin G, Hummel T (2022) Interactive Effect Of Neuropsychiatric Symptoms And Cognitive Impairment On Odor Identification In Late-Life Depression. *Front Psychiatry* (in press)
- Masala C, Cavazzana A, Sanna F, Cecchini MP, Zanini A, Gasperi F, Menghi L, Endrizzi I, Borgogno M, 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 (2022) Correlation between olfactory function, age, sex, and cognitive reserve index in the Italian population. *Eur Arch Orl* (in press)
- Darbinjan A, Letzel J, Hummel T (2022) The nasal cycle before and after nasal septoplasty. *Eur Arch ORL* (in press)
- Otte MS, Haehner A, Bork ML, Klusmann JP, Luers JC, Hummel T (2022) Impact of COVID-19 mediated olfactory loss on quality of life. *ORL* (in press)
- Snitz K, Honigstein D, Weissgross R, Ravia1 A, Mishor E, Perl O, Karagach S, Medhanie A, Harel N, Shushan S, Roth Y, Irvani B, Arshamian A, Ernst G, Okamoto M, Poo C, Bonacchi N, Mainen Z, Monteleone E, DinnellaC, Spinelli S, Franklin Mariño-Sánchez F, Ferdenzi C, Smeets M, Touhara K, Bensafi M, Hummel T, Lundström JN, Sobel N (2022) An Olfactory Self-Test Effectively Screens for COVID-19. *Comm Med* (in press)
- Han P Sub T, Hummel T (2022) Human odor exploration behavior is influenced by olfactory function and interest in the sense of smell. *Physiol Behav* (in press)
- Thaploo D, Georgiopoulos C, Haehner A, Hummel T (2022) Subtle differences in brain architecture in patients with congenital anosmia. *Rhinology* (in press)
- Friedrich C, Francke K, Gashaw I, Scheerans C, Klein S, Fels L, Smith JA, Hummel T, Morice A (2022) Safety, Pharmacodynamics, and Pharmacokinetics of P2X3 Receptor Antagonist Eliapixant (BAY 1817080) in Healthy Subjects: Double-Blind, Randomized Study. *Clin Pharmacokin* (in press)
- Fitzek M, Patel PK, Solomon PD, Hangen JH, Lin B, Hummel T, Schwob JE Holbrook EH (2022) Integrated age-related immunohistological changes occur in human olfactory epithelium and olfactory bulb. *J Comp Neurol* (in press)
- Schwartz M, Brignot H, Feron G, Hummel T, Zhu Y, v Koskull D, Heydel JM, Lirussic F, Canon, F Neiers F (2022) Role of human salivary enzymes in bitter taste perception. *Food Cehmistry* (in press)
- Sabiniewicz A, Hoffmann L, Hummel T (2022) Symptoms of depression change with olfactory function. *Sci Rep* (in press)

- Haehner A, Marquardt B, Kardashi R, de With K, Rößler S, Landis BN, Welge-Luessen A, Hummel T. (2022) SARS-CoV-2 Leads to Significantly More Severe Olfactory Loss than Other Seasonal Cold Viruses. *Life* 12:461

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

- Speth MM, Speth US, Sedaghat AR, Hummel T (2022) Riech- und Schmeckstörungen. *HNO*: (in press)
- Mahmut MK, Klockow M, Rosbach M, Haehner A, Hummel T (2022) Reactions received by smell loss patients after revealing their dysfunction. *Rhinology* (in press)
- Schriever VA, Gellrich J, Hummel T (2022) Comment on Parisi et al. *Pediatr Allerg Immunol* (in press)  
**DOI:** 10.1111/pai.13750
- Sekine R, Hähner A, Laudien M, Mori E, Hummel T (2022) Ratings of trigeminal stimulation in patients with olfactory loss. *Rhinology* (in press)
- Nakahara K, Chikazoe J, Hummel T, Roefs A, Yamaguchi M, eds. (2022). *Neuroscience of Eating: From Physiology to Pathology*. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88974-636-1
- Juratli JH, Joshi A, Füssel S, Hummel T (2022) Gendered Differences in Relative ACE2 Expression in the Nasal Epithelium. *Rhinology* (in press)
- Trecca EMC, Cassano M, Longo F, Petrone P, Miani C, Hummel T, Gelardi M (2022) Results from psychophysical tests of smell and taste during the course of SARS-CoV-2 infection: a review. *Acta Otorhinolaryngologica Ital* 42 (suppl 1): S 20-S35
- Hummel T, Croy I, Georgiopoulos C, Haehner A (2022) Olfactory disorders and consequences. In: Voilley A, Salles C, Guichard E, Etievant P, Sykes R (eds) *Flavor: From food to behaviors, wellbeing and health* - Woodhead Publishing.
- Patel ZM, Holbrook EH, Turner JH, Adappa ND, Albers MW, Altundag A, Appenzeller S, Costanzo RM, Croy I, Davis GE, 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, Miwa T, Moberg PJ, Mueller CA, Nigwekar SU, O'Brien EK, Paunescu TG, Pellegrino R, Philpott C, Pinto JM, Reiter ER, Roalf DR, Rowan NR, Schlosser RJ, Schwob J, Seiden AM, Smith TL, Soler ZM, Sowerby L, Tan BK, Thamboo A, Wrobel B, Yan CH. 2022. International consensus statement on allergy and rhinology: Olfaction. *International Forum of Allergy & Rhinology* 12: 327-680.
- Marin C, Hummel T, Liu Z, Mullol J (2022) Chronic Rhinosinusitis and COVID-19. *J Allerg Clin Immunol: In practice* (in press) 10.1016/j.jaip.2022.03.003

## Guests / Personnel

- Prof. [Paolo Boscolo-Rizzo](#) from the Dept. of Otorhinolaryngology at the Trieste University visits from Jan 18-20
- On March 17 and 18 2022 Evgenii Glushkov, Arnaud Bertsch and Philippe Renaud visit from [EPFL, Lausanne](#), Moustafa Bensafi from the [Dept. of Neuroscience in Lyon](#), Thierry Livache, Romain Dubreuil and Cyril Herrier from [Aryballe, Grenoble](#), within the context of the ROSE project.

## Grants/Awards

- 2022-2025 Thomas Hummel together with Dietmar Krautwurst: Aufklärung der geruchsrezeptorbezogenen Mechanismen eines "Olfaktorischen Trainings" in anosmischen und normosmischen Individuen. DFG HU441/21-1 220.850 €
- 27th of February 2022: "something's fishy" award to Ken Abrahams for the poster on "Evaluation of Olfaction in Dogs with Sudden Acquired Retinal Degeneration Syndrome (SARDS); Abrahams K, Ward D, Hummel T, Sabiniewicz A" Midwest Veterinary Ophthalmology Society Meeting 2022, Chicago, IL, USA
- 7th of March 2022: Akshita Joshi receives the DGP sponsorship award 2022 for her research entitled "Neural associations between well-being and odor perception"s (2000 €)



## Thesis

- Stefanie Zelder, Dr. med. (2022): „Untersuchung der „Contingent Negative Variation“ bei akustischen Reizpaaren unter verschiedenen Bedingungen olfaktorischer Stimulation“
- Verena Anna Englmaier, Dr. med. (2022) „Körpergewicht und chemosensorische Störungen - Untersuchung des Zusammenhangs zwischen Riech- und Schmeckstörungen und dem Körpergewicht“

## Courses, Presentations etc.:

- 25<sup>th</sup> of Feb, 2022: Thomas Hummel presents online at Brain 2022, Hong Kong (<https://www.cu-brain.cuhk.edu.hk/>; **The 18th Asia Pacific Multidisciplinary Meeting for Nervous System Diseases**) on "Olfaction in Aging and Parkinson's Disease"
- 24<sup>th</sup> of Feb, 2022: Thomas Hummel presents online at the CTNR Rostock on "Smelling Better!"

CTNR Lecture Series - 24 Februar 2022, 16:00

**Titel:** Besser riechen!

**Gastredner:** Prof. Dr. med. Th. Hummel  
Strengeopferkassen, Zahnum, Nochen und Schmelken, HEDC klinik der TU Dresden

**Abstract:**  
Der Geruchsinn ist wichtig. Wir reagieren z. B. auf Körpergerüche unserer Mitmenschen - die Nase bestimmt, wen wir "riechen können". Die Wahrnehmung von Zittern und die Nachbereitung von Aromen beim Essen bedeuten Lebensqualität. Und der Geruch beeinflusst auch unser Arbeitsleben: Zum Beispiel sind Kaffeearoma, Backen oder Küche angedingt auf den Geruchsinn angewiesen. Und der Geruchsinn ist wichtig für die Wahrnehmung von Brand, Rauch oder von verdorbenen Nahrungsmitteln. Dem Riechen ist das Leben deutlich ärmert! Im Vortrag wird dargestellt, wie sich Riechstörungen auswirken, welche Formen von Riechstörungen es gibt, und wie Riechstörungen diagnostiziert und behandelt werden können.

Online Teilnahme via **CF Zoom**




## Courses, Presentations, Conferences in Dresden

- 20<sup>th</sup> of January 2022: Prof. [Paolo Boscolo-Rizzo](#) from the Dept. of Otorhinolaryngology at the Trieste University presents on his research in [chemosensory dysfunction in COVID19](#)

- Presentations within the frame of continuous medical education otorhinolaryngologists of Dresden, on Feb 2<sup>nd</sup> 2022, with presentations by Susanne Menzel (*outlook on future therapies of chemosensory dysfunction*), Mandy Cuevas (*therapy of chronic sinusitis with and without nasal polyposis*), and Thomas Hummel (*postviral olfactory loss*), at the Dresdener Kaffee- und Kakaorösterei, Meschwitzstr. 5, 01099 Dresden.



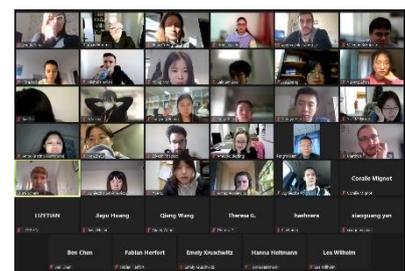
- Online Lab-Meeting on Feb 18, 2022:

Lab meeting on Friday, 18th of February

<https://us02web.zoom.us/j/8289103856?pwd=SHAzL1kwTmcyYm1PdkdzNVNlNUZ6dz09>

Meeting-ID: 828 910 3856 , Code: 1

08:30	Welcome	
08:35	Antonie Bierling	The perceptual space of odors
08:42	Matthias Deller	Genetics of anosmia
08:49	Agnieszka Sorokowska	food neophobia
08:56	Michal Pieniak	Chmoesensory event-relaetd potentials during pregnancy
09:03	Laura Schäfer	Mothers recognize and prefer the body odor of their child – but what about the fathers
09:10	Yue Qui	Do you often sniff yourself or others? Development of the Body Odor Sniffing Questionnaire and a cross-cultural survey in China and the USA
09:17	Agnieszka Sabiniewicz	Olfaction in horses
09:24	Yu Zhong	Do you remember if you have olfactory dreams? A content analysis of LOFTER and a questionnaire survey conducted in China
	Break	
09:47	Coralie Mignot	Adaptation to odors
09:54	Anna Oleszkiewicz	olfaction and pollution
10:01	Divesh Thaploo	ICA approach for analysing olfactory activations
10:08	Yunmeng Zhu	Exploring brain functional connectivity of patients with taste loss
10:15	Pengfei Han	Regional brain morphology of the primary somatosensory cortex correlates with spicy food consumption and capsaicin sensitivity
10:22	Akshita Joshi	Interaction between trigeminal and olfactory systems: an EEG preliminary study
10:29	Vanda Faria	olfactory training in migraine patients
	Break	
11:10	Andrea D'Alessandro	COVID-19-related Smell and Taste Impairment in Italian Regions with Widespread Diffusion of SARS-CoV-2 Omicron Variant
11:17	Constantin Hintschich	How does COVID-19 taste
11:24	Lucy Sekine	Qulaity of parosmia in Argentina, Germany and Japan
11:31	Zetian Li	Retronasal olfactory function in younger and older people
11:38	Yling Mai	Well-being in patients with olfactory dysfunction
11:45	Ben Chen	Odor identification deficit in risk individuals of dementia



- February 2022: Course on fMRI by Akshita Joshi and Divesh Thaploo, 10 participants

Topic	Practical exercise + Homework	Date and Time
MRI basics and designing olfactory task.	Design your own olfactory task and hypothesis.	1 <sup>st</sup> Feb, 2022 17 - 18:30
Pre-processing of data using SPM/FSL.	Using SPM/FSL pre-process the data.	8 <sup>th</sup> Feb, 2022 17 - 18:30
Within subject analysis.	Analyse remaining subjects.	15 <sup>th</sup> Feb, 2022 17 - 18:30
Between subject analysis.	Results interpretation and Region of interest analysis.	23 <sup>rd</sup> Feb, 2022 17 - 18:30

- Presentations within the frame of continuous medical education for otorhinolaryngologists of Dresden, on March 9<sup>th</sup> 2022, also with presentations by Thomas Hummel (*assessment of olfactory function; 15:00-17:45*), at the Dept. of ORL, TU Dresden

#### What else:

- On January 5<sup>th</sup> 2022 Anna Oleszkiewicz is appointed a professorship at the Dept. of Psychology of the University of Wrocław
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#### media:

- December 31<sup>st</sup> 2021: Interview by Thomas Hummel with Nina Himmer, Süddeutsche Zeitung, Nr. 303, p. 31, on "Der Nase nach"

## Der Nase nach

Die Erforschung des Geruchssinns hinkt der von Gehör und Sehvermögen um Jahrzehnte hinterher. Dank Covid könnte sich das nun endlich ändern

#### Süddeutsche Zeitung Nr. 303, Silvester/Neujahr/Sonntag, 31. Dezember 2021/1./2. Januar 2022

- 20.1.: Interview von Thomas Hummel mit Mira Dönges, Radiogruppe Antenne Deutschland, zum Thema „Konsum gerösteter Orangen“
- 1.2.: Interview von Suanne Menzel mit Marion Theis, swr2: Richtiger Riecher – Was sagt uns die Nase? <https://www.swr.de/swr2/leben-und-gesellschaft/richtiger-riecher-was-sagt-uns-die-nase-swr2-forum-2022-02-03-100.html>
- 20.1.: Interview von Thomas Hummel mit Rebekka Endler, Deutschlandfunk Nova – „Geruchssinn – warum er wichtiger ist als wir denken“ [https://srv.deutschlandradio.de/dlf-audiothek-audio-teilen.3265.de.html?mdm:audio\\_id=dira\\_DRW\\_dd604a5f](https://srv.deutschlandradio.de/dlf-audiothek-audio-teilen.3265.de.html?mdm:audio_id=dira_DRW_dd604a5f)



- 4.3.: Interview von Thomas Hummel mit Frank Schuster, ökotest Deutschland, zum Thema „Männerdüfte“ – heft Öko-Test, April 2022, S. 94-95



DIENTAGS | 08.03.2022 | AUDIO

Riechen und Schmecken - unser Expertenrat

VORLESEN

Zu Gast im Studio: Prof. Thomas Hummel vom Interdisziplinären Zentrum für Riechen und Schmecken am Dresdner Uni-Klinikum

- 8.3.: mdr aktuell, 10:00-12:00h : „Riechen und Schmecken - unser Expertenrat“

<https://www.mdr.de/sachsenradio/programm/expertenrat100.html>

- 8.3.: Interview von Thomas Hummel mit Laura Howes von Chemistry & Engineering News zu “olfactory function and olfactory loss”

- 11.3.: report in the stern (März 2022, S. 22-28): “Schnupper mal!” – Constanze Löffler

