

## Publications

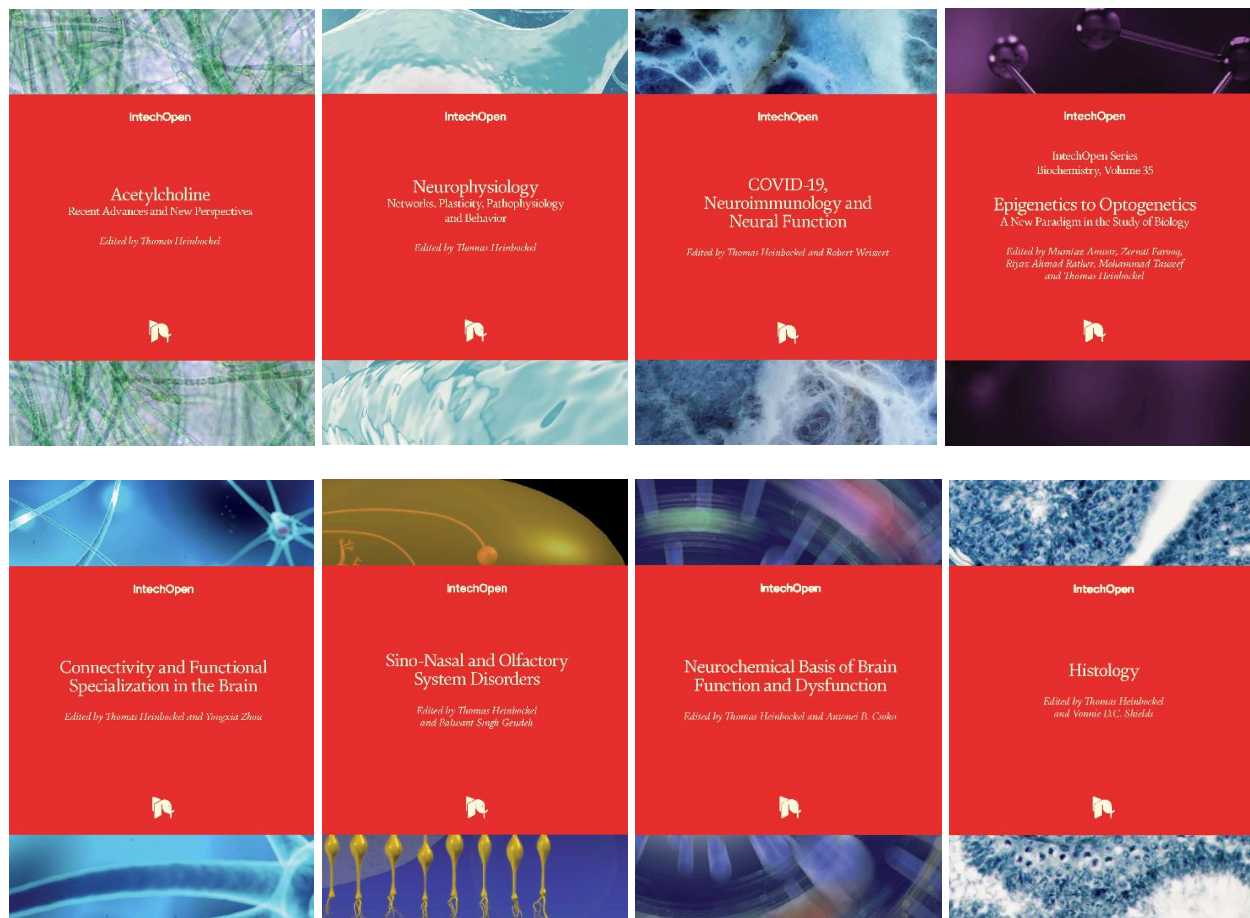
### 1. Books

- Heinbockel T** (ed) (2024) *Learning and Memory – From Molecules and Cells to Mind and Behavior*. ISBN: 978-1-83769-862-2, 978-1-83769-863-9 (e-book). London, United Kingdom: IntechOpen, 124 pp. <http://dx.doi.org/10.5772/intechopen.1000300>. Available at: <https://www.intechopen.com/books/1002527>
- Heinbockel T** (ed) (2023) *Acetylcholine – Recent Advances and New Perspectives*. ISBN: 978-1-80355-598-0, 978-1-80355-599-7 (e-book). London, United Kingdom: IntechOpen, 150 pp. <http://dx.doi.org/10.5772/intechopen.106304>. Available at: <http://www.intechopen.com/books/acetylcholine-recent-advances-and-new-perspectives>
- Heinbockel T** (ed) (2022) *Neurophysiology – Networks, Plasticity, Pathophysiology, and Behavior*. ISBN: 978-1-80356-069-4, ISBN: 978-1-80356-069-4, eBook (PDF) ISBN: 978-1-80356-070-0. London, United Kingdom: IntechOpen, 286 pp. Available at: <https://www.intechopen.com/books/11742>
- Heinbockel T**, Weissert R (eds) (2022) *COVID-19, Neuroimmunology and Neural Function*. ISBN: 978-1-80355-031-2, Print ISBN 978-1-80355-030-5, E-Book (PDF) ISBN 978-1-80355-032-9. London, United Kingdom: IntechOpen, 134 pp. <https://doi.org/10.5772/intechopen.95199>  
<http://www.intechopen.com/books/covid-19-neuroimmunology-and-neural-function>
- Anwar M, Farooq Z, Rather RA, Tauseef M, **Heinbockel, T** (eds) (2022) *Epigenetics to Optogenetics - A New Paradigm in the Study of Biology*. ISBN: 978-1-83881-123-5, Print ISBN 978-1-83880-993-5, E-Book (PDF) ISBN 978-1-83881-124-2. London, United Kingdom: IntechOpen, 176 pages. Available at: <https://www.intechopen.com/books/9672>
- Heinbockel T**, Zhou Y (eds) (2021) *Connectivity and Functional Specialization in the Brain*. ISBN 978-1-83962-797-2. London, United Kingdom: IntechOpen, 162 pages. Available at: <http://www.intechopen.com/books/connectivity-and-functional-specialization-in-the-brain>
- Heinbockel T**, Gendeh BS (eds) (2020) *Sino-Nasal and Olfactory System Disorders*. ISBN: 978-1-83880-951-5. London, United Kingdom: IntechOpen, 201 pages. Available at: <https://www.intechopen.com/books/sino-nasal-and-olfactory-system-disorders>
- Heinbockel T**, Csoka AB (eds) (2019) *Neurochemical Basis of Brain Function and Dysfunction*. ISBN: 978-1-78985-999-7. London, United Kingdom: IntechOpen, 166 pages. Available at: <https://www.intechopen.com/books/neurochemical-basis-of-brain-function-and-dysfunction>
- Heinbockel T**, Shields VDC (eds) (2019) *Histology*. ISBN: 978-1-78984-971-4. London, United Kingdom: IntechOpen, 135 pages. Available at: <https://www.intechopen.com/books/histology>
- Heinbockel T** (ed) (2018) *Sensory Nervous System*. ISBN: 978-1-78923-359-9. London, United Kingdom: IntechOpen, 160 pages. Available at: <https://www.intechopen.com/books/sensory-nervous-system>

**Heinbockel T (ed) (2017) *Synaptic Plasticity*. ISBN 978-953-51-3234-9. Rijeka, Croatia: IntechOpen, 220 pages. Available at: <https://www.intechopen.com/books/synaptic-plasticity/>**

**Heinbockel T (ed) (2014) *Neurochemistry*. ISBN 978-953-51-1237-2. Rijeka, Croatia: IntechOpen, 414 pages. Available at: <http://www.intechopen.com/books/neurochemistry>**

**Heinbockel T (ed) (2012) *Neuroscience*. ISBN 978-953-51-0617-3. Rijeka, Croatia: IntechOpen, 138 pages. Available at: <http://www.intechopen.com/books/neuroscience>**





## 2. Original Reports

Wang ZJ, Sun L, **Heinbockel T** (2024) Firing patterns of mitral cells and their transformation in the main olfactory bulb. *Brain Sci* 14(7):678; <https://doi.org/10.3390/brainsci14070678>

Koyama S\*, Joseph PV\*, Shields\* VDC\*, **Heinbockel T\***, Adhikari P, Kaur R, Kumar R, Alizadeh R, Bhutani S, Calcinoni O, Mucignat-Caretta C, Chen J, Cooper KW, Das SR, Rohlfs Domínguez P, Guàrdia MD, Klyuchnikova MA, Laktionova TK, Mori E, Namjoo Z, Nguyen H, Özdenler MH, Parsa S, Özdenler Poyraz E, Strub DJ, Taghizadeh-Hesary F, Ueha R and Voznessenskaya VV (2024) Possible roles of phytochemicals with bioactive properties in the prevention and recovery from COVID-19. *Front Nutr* 11:1408248. <https://doi.org/10.3389/fnut.2024.1408248> (\*shared first authorship)

Menger NS, Tognetti A, Farruggia MC, Mucignat C, Bhutani S, Cooper KW, Rohlfs Domínguez P, **Heinbockel T**, Shields VDC, D'Errico A, Pereda-Loth V, Pierron D, Koyama S, Croijmans I (2024) Giving a Voice to Patients Who Developed Smell Disorders After COVID-19: Cross-Sectional Longitudinal Analysis Using Natural Language Processing of Self-Reports. *Journal of Medical Internet Research Public Health and Surveillance* (JMIR Public Health Surveill) 10:e47064. <https://publichealth.jmir.org/2024/1/e47064/> <https://doi.org/10.2196/47064>

Koyama S, Shields VDC, **Heinbockel T**, Joseph PV, Adhikari P, Kaur R, Kumar R, Alizadeh R, Bhutani S, Calcinoni O, Mucignat-Caretta C, Chen J, Cooper KW, Das S, Dominguez PR, Guardia MD, Klyuchnikova MA, Laktionova TK, Mori E, Namjoo Z, Nguyen H, Ozdenler MH, Parsa S, Poyraz EO, Strub DJ, Taghizadeh-Hesary F, Ueha R, Voznessenskaya VV (2024) Possible roles of phytochemicals with bioactive properties in the prevention and recovery from COVID-19. *medRxiv* 2024.01.29.24301882. <https://doi.org/10.1101/2024.01.29.24301882>

Menger NS, Tognetti A, Farruggia MC, Mucignat C, Bhutani S, Cooper KW, Rohlfs Dominguez P, **Heinbockel T**, Shields V, D'Errico A, Pereda-Loth V, Pierron D, Koyama S, Croijmans I (2023) Giving a voice to adults with COVID-19: An analysis of the open-ended comments from smell longhaulers and non-longhaulers. *medRxiv* 2023.03.07.23286910. <https://doi.org/10.1101/2023.03.07.23286910>

Alhazzaa R, McKinley R, Getachew B, Tizabi Y, **Heinbockel T**, Csoka AB (2023) Epigenetic changes induced by high glucose in human pancreatic beta cells. *Journal of Diabetes Research*, vol. 2023, Article ID 9947294, 15 pages, 2023. <https://doi.org/10.1155/2023/9947294>

Gerkin RC, Ohla K, Veldhuizen MG, Joseph PV, Kelly CE, Bakke AJ, Steele KE, Farruggia MC, Pellegrino R, Pepino MY, Bouysset C, Soler GM, Pereda-Loth V, Dibattista M, Cooper KW, Croijmans I, Di Pizio A, Ozdener MH, Fjaeldstad AW, Lin C, Sandell MA, Singh PB, Brindha VE, Olsson SB, Saraiva LR, Ahuja G, Alwashahi MK, Bhutani S, D'Errico A, Fornazieri MA, Golebiowski J, Hwang LD, Öztürk L, Roura E, Spinelli S, Whitcroft KL, Faraji F, Fischmeister FP, **Heinbockel T**, Hsieh JW, Huart C, Konstantinidis I, Menini A, Morini G, Olofsson JK, Philpott CM, Pierron D, Shields VDC, Voznessenskaya VV, Albayay J, Altundag A, Bensafi M, Bock MA, Calcinoni O, Fredborg W, Laudamiel C, Lim J, Lundström JN, Macchi A, Meyer P, Moein ST, Santamaría E, Sengupta D, Dominguez PR, Yanik H, Hummel T, Hayes JE, Reed DR, Niv MY, Munger SD, Parma V; GCCR Group Author (2021) Recent smell loss is the best predictor of COVID-19 among individuals with recent respiratory symptoms. *Chem Senses* 46:1-12. <https://doi.org/10.1093/chemse/bjaa081>

Shields VDC, May M, Heinbockel TK, **Heinbockel T** (2020) The nose knows: exposing elementary students to insects and the sense of smell. *Annal Behav Neurosci*, 3(1): 306-313. <https://doi.org/10.18314/abne.v3i1.2026>.

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Parma V, Ohla K, Veldhuizen MG, Niv MY, Kelly CE, Bakke AJ, Cooper KW, Bouysset C, Pirastu N, Dibattista M, Kaur R, Liuzza MT, Pepino MY, Schöpf V, Pereda-Loth V, Olsson SB, Gerkin R C, Domínguez PR, Albayay J, Farruggia MC, Bhutani S, Fjaeldstad AW, Kumar R, Menini A, Bensafi M, Sandell M, Konstantinidis I, Di Pizio A, Genovese F, Öztürk L, Thomas-Danguin T, Frasnelli J, Boesveldt S, Saatci Ö, Saraiva LR, Lin C, Golebiowski J, Hwang LD, Ozdener MH, Guàrdia MD, Laudamiel C, Ritchie M, Havlíček J, Pierron D, Roura E, Navarro M, Nolden AA, Lim J, Whitcroft KL, Colquitt LR, Ferdenzi C, Brindha EV, Altundag A, Macchi A, Nunez-Parra A, Patel ZM, Fiorucci S, Philpott CM, Smith BC, Lundström JN, Mucignat C, Parker JK, van den Brink M, Schmuker M, Fischmeister FPS, **Heinbockel T**, Shields VDC, Faraji F, Santamaría E, Fredborg WEA, Morini G, Olofsson JK, Jalessi M, Karni N, D'Errico A, Alizadeh R, Pellegrino R, Meyer P, Huart C, Chen B, Soler GM, Alwashahi M K, Welge-Lüssen A, Freiherr J, de Groot JHB, Klein H, Okamoto M, Singh PB, Hsieh JW, GCCR Group Author, Reed DR, Hummel T, Munger SD, Hayes JE, Abdulrahman O, Dalton P, Yan CH, Voznessenskaya VV, Chen J, Sell EA, Walsh-Messinger J, Archer NS, Koyama S, Deary V, Roberts SC, Yanik H, Albayrak S, Nováková LM, Croijmans I, Mazal PP, Moein ST, Margulis E, Mignot C, Mariño S, Georgiev D, Kaushik PK, Malnic B, Wang H, Seyed-Allaei S, Yoluk N, Razzaghi-Asl S, Justice JM, Restrepo D (2020) More than smell - COVID-19 is associated with severe impairment of smell, taste, and chemesthesis. *medRxiv* 2020.05.04.20090902; doi: <https://doi.org/10.1101/2020.05.04.20090902>

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- Heinbockel T**, Kaissling K-E (1996) Variability of olfactory receptor neuron responses of female silkworms (*Bombyx mori* L.) to benzoic acid and (+)-linalool. *J Insect Physiol* 42: 565-578

### 3. Reviews, Chapters and Published Lectures

- Kumar D, Khan B, Okcay Y, Önal Sis C, Abdallah A, Murray F, Sharma A, Uemura MT, Taliyan R, **Heinbockel T**, Rahman S, Goyal R (2024) Dynamic endocannabinoid-mediated neuromodulation of retinal circadian circuitry. *Aging Research Reviews* 102401, ISSN 1568-1637, <https://doi.org/10.1016/j.arr.2024.102401>. (<https://www.sciencedirect.com/science/article/pii/S1568163724002198>)
- Heinbockel T** (2024) Cellular processes and synaptic interactions in nuclei of the amygdala. In: *Learning and Memory – From Molecules and Cells to Mind and Behavior*. Thomas Heinbockel (ed). IntechOpen. London, United Kingdom. 18 pp. <https://doi:10.5772/intechopen.1005123> <https://www.intechopen.com/chapters/1186321>
- Koyama S, **Heinbockel T** (2023) Possible use of beta-caryophyllene as an agent to facilitate the recovery from COVID-19-induced tissue and organ damage. In: *Neurobiology and Physiology of the Endocannabinoid System*. Vinood B Patel, Victor R Preedy, Colin R Martin (eds). Academic Press – Elsevier. Hardback ISBN: 9780323908771, eBook ISBN: 9780323908788. Chapter 22, pp 297-308. <https://doi.org/10.1016/B978-0-323-90877-1.00033-4> <https://www.sciencedirect.com/science/article/pii/B9780323908771000334>



Koyama S, Shields VDC, **Heinbockel T** (2023) Precision phytochemicals for COVID-19 induced chemosensory dysfunction. In: *Bioactive compounds against SARS-CoV-2*. Jen-Tsung Chen (ed), CRC Press/Taylor & Francis Group, Boca Raton. ISBN: 9781032347998, eBook ISBN9781003323884. Chapter 20, 12 pp.

<https://www.taylorfrancis.com/chapters/edit/10.1201/9781003323884-20/precision-phytochemicals-covid-19-induced-olfactory-dysfunction-sachiko-koyama-vonnie-shields-thomas-heinbockel?context=ubx&refId=9dd21599-6c27-4ca4-8df7-0194a9bd9ff0>

**Heinbockel T** (2023) Introductory chapter: the neurotransmitter acetylcholine – a young centenarian. In: *Acetylcholine – Recent Advances and New Perspectives*. Heinbockel T (ed). IntechOpen. London, United Kingdom. <https://doi.org/10.5772/intechopen.112480>.  
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