

PUBLICATIONS – CLAUDIA GROH

OCTOBER 2025

REVIEWED BOOK CHAPTERS

24. Rössler W, **Groh C** (2012) Plasticity of synaptic microcircuits in the mushroom-body calyx of the honey bee. In: Galizia CG, Eisenhardt D, Giurfa M, editors. Honeybee neurobiology and behavior. Berlin: Springer Verlag, p 141–151

PUBLICATIONS IN PEER-REVIEWED JOURNALS

23. Kraft N, Rössler W, **Groh C** (2025) Neuronal Plasticity in the Mushroom Bodies of Winter Bees Is Retained Despite Substantially Advanced Age, *Developmental Neurobiology* 385(4):p.e23006. doi.org/10.1002/dneu.23006
22. Kraft N, Muenz TS, Reinhard S, Werner C, Sauer M, **Groh C**, Rössler W (2023) Expansion microscopy in honeybee brains for high-resolution neuroanatomical analyses in social insects, *Cell and Tissue Research* 393:489-506. doi.org/10.1007/s004411-023-03803-4
21. Grob R, Tritscher C, Grübel K, Stigloher C, **Groh C**, Fleischmann PN, Rössler W (2021) Johnston's organ and its central projections in *Cataglyphis* desert ants, *Journal of Comparative Neurology* 529:2138-2155. doi.org/10.1002/cne.25077
20. **Groh C**, Rössler W (2020) Analysis of synaptic microcircuits in the mushroom bodies of the honeybee. *Insects* 11:43 (with cover). doi.org/10.3390/insects11010043
19. Gardenne C, **Groh C**, Grübel K, Joschinski J, Krauss J, Krieger J, Rössler W, Anton S (2019) Neuroanatomical correlates of mobility: Sensory brain centres are bigger in winged than in wingless parthenogenetic pea aphid females. *Arthropod Structure and Development* 52:100883. doi.org/10.1016/j.asd.2019.100883
18. Kraft N, Spaethe J, Rössler, W, **Groh C** (2019) Neuronal plasticity in the mushroom-body calyx of bumble bee workers during early adult development. Accepted for publication in *Developmental Neurobiology* 9:287-302. doi.org/10.1002/dneu.22678
17. Cabirol A, Brooks R, **Groh C**, Barron A, Devaud JM (2017) Experience during early adulthood shapes the learning capacities and the number of synaptic boutons in the mushroom bodies of the honey bees (*Apis mellifera*). *Learning & Memory* 24:557-562. doi.org/10.1101/lm.045492.117
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16. Rössler W, Spaethe W, **Groh C** (2017) Pitfalls of using confocal-microscopy based automated quantification of synaptic complexes in honeybee mushroom bodies (*response to Peng and Yang 2016*). *Scientific Reports* 7:9786. doi.org/10.1038/s41598-017-09967-8
 15. Falibene A, Roces F, Rössler W, **Groh C** (2016) Daily thermal fluctuations experienced by pupae via rhythmic nursing behavior increase numbers of mushroom body microglomeruli in the adult ant brain. *Frontiers in Behavioral Neuroscience* 10:73. doi.org/10.3389/fnbeh.2016.00073
 14. Yilmaz A, Lindenberg A, Albert S, Grübel K, Spaethe J, Rössler W, **Groh C** (2016) Age-related and light-induced plasticity in opsin gene expression and in primary and secondary visual centers of the nectar-feeding ant *Camponotus rufipes*. *Developmental Neurobiology* 76:1041-1057 (with cover). doi.org/10.1002/dneu.22374
 13. Muenz TS, **Groh C**, Maisonnasse A, Le Conte Y, Plettner E, Rössler W (2015) Neuronal plasticity in the mushroom body calyx during adult maturation in the honeybee and possible pheromonal influences. *Developmental Neurobiology* 75:1368-1384. doi.org/10.1002/dneu.22290
 12. **Groh C**, Kelber C, Grübel K, Rössler W (2014) Density of mushroom body synaptic complexes limits intraspecies brain miniaturization in highly polymorphic leaf-cutting ant workers. *Proceedings of the Royal Society B* 281:20140432. doi.org/10.1098/rspb.2014.0432
 11. **Groh C**, Lu Z, Meinertzhagen I, Rössler W (2012) Age-related plasticity in the synaptic ultrastructure of neurons in the mushroom body calyx of the adult honeybee *Apis mellifera*. *The Journal of Comparative Neurology* 520:3509-3527. doi.org/10.1002/cne.23102
 10. **Groh C**, Mayer G (2011) Evolution of the arthropod nervous system. *Arthropod Structure and Development* 40:191-192. doi.org/10.1016/j.asd.2011.05.001
 9. **Groh C**, Rössler W (2011) Comparison of microglomerular structures in the mushroom body calyx of neopteran insects. *Arthropod Structure and Development* 40:358-367 (with cover). doi.org/10.1016/j.asd.2010.12.002
 8. **Groh C**, Meinertzhagen IA (2010) Brain plasticity in Diptera and Hymenoptera. *Frontiers in Bioscience* 2:268-288. doi.org/10.2741/s63
 7. Leiss F, **Groh C**, Butcher N, Meinertzhagen IA, Tavosanis G (2009) Synaptic organization in the adult *Drosophila* mushroom body calyx. *The Journal of Comparative Neurology* 517:808-824. doi.org/10.1002/cne.22184
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6. **Groh C**, Rössler W (2008) Caste-specific postembryonic development of primary and secondary olfactory centers in the female honeybee brain. *Arthropod Structure and Development* 37:459-468. doi.org/10.1016/j.asd.2008.04.001
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2. Brockmann A, **Groh C**, Fröhlich B (2003) Wax perception in honeybees: contact is not necessary. *Naturwissenschaften* 90:424-427. doi.org/10.1007/s00114-003-0442-3
1. **Groh C**, Altwein M, Brockmann A, Tautz J (2002) Selective blocking of contact chemosensilla in *Apis mellifera*. *Apidologie* 33:33-40. doi.org/10.1051/apido:2001003

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Doctoral thesis (2006) Environmental influences on the development of the female honeybee brain *Apis mellifera*. University of Würzburg

Diploma thesis (2000) The effect of zinc sulfate on antennal chemoreceptors of the honeybee *Apis mellifera*. University of Würzburg
