

CURRICULUM VITAE

Name: Gunde Ziegelberger
Date and place of birth: June 18, 1959 in Villach, Austria
Nationality: Austrian
Family status: married, 2 children

Education and Qualifications:

- 1965 - 1969 Elementary school in Villach
- 1969 - 1977 Classical secondary school in Villach,
high-school examination in June, 1977; Qualification: Very good
- 1977 - 1982 Studies in mathematics, biology and geology
at the Paris Lodron University in Salzburg, Austria; Qualification: Very good
- 1982 Diploma (Mag. rer. nat.) on lichenes as bioindicators in the group
of Prof. Türk at the Institute for Plant Physiology, University Salzburg
"Die Luftqualität im Stadtgebiet von Salzburg anhand der Verbreitung epiphytischer
Flechten"; ("The air pollution in different regions of Salzburg as analysed by the
presence of lichenes"); Qualification: Excellent
- 1982 – 1987 Dissertation (Dr. rer. nat.) on an inherited brittle bone disease in the group
of Prof. Kühn at the Max-Planck-Institut für Biochemie in Martinsried, Germany
Thesis: "Zellbiologische und molekularbiologische Untersuchungen
zur letalen Form der Osteogenesis imperfecta"; ("Cellbiological and molecular studies
on the lethal form of Osteogenesis imperfecta"); Qualification: Excellent

Work Experience:

- 1987 – 2002 Senior Assistant in the group of Prof. Kaissling at the Max-Planck-Institut für
Verhaltensphysiologie, Seewiesen, Germany.
Head of the biochemical laboratory on "odorant reception in insects".

Supervisor of students and postdocs in several diverse biochemical projects, such as
functional studies on odorant binding proteins, pheromone signal transduction
pathways, receptor characterization.

Organizer of the international summer school on "Recent technologies in insect
olfaction".
Reviewer of articles submitted for publication and research proposals.

"Malaria Projects": Initiating research on the olfaction-based host preference of the
malaria mosquito, funded by the WHO. Coordinator of an EU-proposal on "A new way
of disrupting malaria transmission of the mosquito *Anopheles gambiae*"
- April 2002 – present day Consultant for possible health effects due to non-ionizing radiation at the Federal
Office for Radiation Protection, Munich, Germany. Promoting and coordinating
research on the biological effects of recent mobile phone technologies with the aim of
elucidating the influence of weak high frequency electromagnetic fields on humans,
animal models and cells.

LIST OF PUBLICATIONS

PEER-REVIEWED JOURNALS:

1. Ziegelberger G, van den Berg MJ, Kaissling K-E, Klumpp S & Schultz JE (1990) Cyclic GMP levels and guanylate cyclase activity in pheromone-sensitive antennae of the silkmoths *Antheraea polyphemus* and *Bombyx mori*. *J Neurosci* 10, 1217-1225.
2. Van den Berg MJ & Ziegelberger G (1991) On the function of the pheromone binding protein in the olfactory hairs of *Antheraea polyphemus*. *J Insect Physiol* 37, 79-85.
3. Steinbrecht RA, Ozaki M & Ziegelberger G (1992) Immunocytochemical localization of pheromone-binding protein in moth antennae. *Cell Tissue Res* 270, 287-302.
4. Maida R, Steinbrecht RA, Ziegelberger G & Pelosi P (1993) The pheromone binding protein of *Bombyx mori*: purification, characterization and immunocytochemical localization. *Insect Biochem Molec Biol* 23, 243-253.
5. Steinbrecht RA & Ziegelberger G (1993) Immunocytochemical localization of pheromone-binding protein in moth antennal sensilla. In: *Sensory Systems of Arthropods* (Wiese K, Gribakin FG, Popov AV, Renninger G, eds.), Birkhäuser Verlag, Basel, 528-536.
6. Laue M, Steinbrecht RA & Ziegelberger G (1994) Immunocytochemical localization of general odorant binding protein in olfactory sensilla of the silkmoth *Antheraea polyphemus*. *Naturwiss* 81, 178-180.
7. Laue M, Ziegelberger G & Steinbrecht RA (1995) Different odorant-binding proteins of moths are not co-localized in the same sensillum. *Chem Senses* 20, 83-84.
8. Maida R, Ziegelberger G & Kaissling K-E (1995) Esterase activity in the olfactory sensilla of the silkmoth *Antheraea polyphemus*. *NeuroReport* 6, 822-824.
9. Ziegelberger G (1995) Insects: isolation of olfactory sensilla and collection of sensillum lymph. In: *Experimental Cell Biology of Taste and Olfaction* (Spielman AI, Brand JG, eds.), CRC Press, Boca Raton, 33-38.
10. Ziegelberger G (1995) Redox-shift of the pheromone-binding protein in the silkmoth *Antheraea polyphemus*. *Eur J Biochem* 232, 706-711.
11. Steinbrecht RA, Laue M & Ziegelberger G (1995) Immunolocalization of pheromone-binding protein and general odorant-binding protein in olfactory sensilla of the silk moths *Antheraea* and *Bombyx*. *Cell Tissue Res* 282, 203-217.
12. Steinbrecht RA, Laue M & Ziegelberger G (1995) Immunolocalization of insect odorant-binding proteins - a comparative study. *Chem Senses* 20, 109-110.
13. Steinbrecht RA, Laue M, Maida R & Ziegelberger G (1996) Odorant-binding proteins and their role in the perception of plant odours. *Ent exp appl* 80, 15-18.

14. Ziegelberger G (1996) The multiple role of the pheromone-binding protein in olfactory transduction. In: *Olfaction in Mosquito-Host interactions*, Ciba Foundation Symp 200 (Bock GR, Cardew G, eds.), Wiley & Sons, Chichester, 267-280.
15. Stengl M, Ziegelberger G, Boekhoff I & Krieger J (1999) Perireceptor events and transduction mechanisms in insect olfaction. In: *Insect Olfaction* (Hansson BS, ed.), Springer, Berlin/Tokyo/New York, 49-66.
16. Pophof B, Gebauer T & Ziegelberger G (2000) Decyl-thio-trifluoropropanone, a competitive inhibitor of moth pheromone receptors. *J Comp Physiol A* 186, 315-323.
17. Maida R, Redkozubov A & Ziegelberger G (2000) Identification of PLC β and PKC in pheromone receptor neurons of *Antheraea polyphemus*. *NeuroReport* 11, No.8, 1773-1776.
18. Maida R, Krieger J, Gebauer T, Lange U & Ziegelberger G (2000) Three pheromone-binding proteins in olfactory sensilla of the two silkmoth species *Antheraea polyphemus* and *Antheraea pernyi*. *Eur J Biochem* 267, 2899-2908.
19. Maida R, Ziegelberger G, Kaissling KE (2003) Ligand binding to six recombinant pheromone-binding proteins of *Antheraea polyphemus* and *Antheraea pernyi*. *J Comp Physiol B* 173(7), 565-573.

COMMUNICATIONS AT INTERNATIONAL MEETINGS:

20. Ziegelberger G & Kaissling KE (1988) Cyclic nucleotides in the olfactory system of the moths *Antheraea polyphemus* and *Bombyx mori*. In: *Sense Organs, Proc 16th Göttingen Neurobiology Conf* (Elsner N, Barth FG, eds.), Thieme, Stuttgart-New York, 58.
21. Ziegelberger G (1990) Cyclic nucleotides in the olfactory system of the moths *Antheraea polyphemus* and *Bombyx mori*. In: *Olfaction and Taste 10* (Doving KB, ed.), GCS A/S, Oslo, 85-91.
22. Maida R & Ziegelberger G (1991) A search for pheromone receptors in the male silkmoth *Antheraea polyphemus*. *ESITO II Proceedings*, Rottach-Egern, Germany, 1-5 October, 37.
23. Steinbrecht RA, Ozaki M, Maida R, Keil TA & Ziegelberger G (1991) Immunocytochemistry of pheromone binding protein. In: *Synapse - Transmission - Modulation, Proc 19th Göttingen Neurobiology Conf* (Elsner N, Penzlin H, eds.), Thieme, Stuttgart-New York, 172.
24. Steinbrecht RA & Ziegelberger G (1992) Immunocytochemistry of pheromone-binding protein. *Chem Senses* 17, 882.
25. Steinbrecht RA, Laue M, Zhang SG & Ziegelberger G (1994) Immunocytochemistry of odorant-binding proteins. In: *Olfaction and Taste 11* (Kurihara K, Suzuki N, Ogawa H, eds.), Springer, Tokyo, 804-807.

26. Ziegelberger G (1994) The odorant binding proteins in the silkworm *Antheraea polyphemus*. In: Sensory Transduction, Proc 22nd Göttingen Neurobiology Conf (Elsner N, Breer H, eds.), Thieme, Stuttgart-New York, 86.
27. Maida R, Laue M, Steinbrecht RA & Ziegelberger G (1995) Biochemical and immunocytochemical characterization of odorant-binding proteins in moths. In: Learning and memory, Proc 23rd Göttingen Neurobiology Conf (Elsner N, Menzel R, eds.), Thieme, Stuttgart-New York, 373.
28. Maida R & Ziegelberger G (1995) Heterogeneity of odorant-binding proteins in *Bombyx mori*. In: J. Monod Conference: Chemical communication in vertebrates and invertebrates: nature, neuroregulation and molecular receptors of pheromones (Clement JL, Morgan, eds.), Aussois, France, 10-14 October, 71-72.
29. Proebstl T, Steinbrecht RA, Ziegelberger G, Ziesman J, Kaissling KE, Zwiebel LJ & Kafatos FC (1997) Odorant-binding proteins and host seeking preference in the malaria vector *Anopheles gambiae*. International Society of Chemical Ecology, 14th Annual Meeting, Vancouver, Canada.
30. Maida R, Laue M, Steinbrecht RA & Ziegelberger G (1998) Identification and immunolocalization of transduction proteins. 2nd International Symposium on Insect Pheromones, Wageningen, Netherlands, 30 March - 3 April, 46-48.
31. Maida R & Ziegelberger G (1998) Identification and immunolocalization of transduction proteins. EPSCB Symposium, Turku, Finland, 23-26 August.
32. Ziegelberger G & Maida R (1999) Characterization of a putative pheromone receptor showing affinity to the pheromone binding protein and the main pheromone component of *Antheraea polyphemus*. Chem Senses 24 (1), 125.
33. Hartlieb E, Proebstl T & Ziegelberger G (1999) Odorant-binding proteins in the malaria mosquito *Anopheles gambiae*. In: Göttingen Neurobiology Report 1999 (Elsner N, Eysel U, eds.), Thieme, Stuttgart-New York, 356.
34. Maida R, Proebstl T, Lange U & Ziegelberger G (1999) Pheromone binding proteins from olfactory sensilla of *Antheraea polyphemus*. In: Göttingen Neurobiology Report 1999 (Elsner N, Eysel U, eds.), Thieme, Stuttgart-New York, 357.
35. Maida R, Mameli M, Krieger J, Breer H, Ziegelberger G & Steinbrecht RA (1999) Complex expression pattern of odorant-binding proteins in *Bombyx mori*. In: Göttingen Neurobiology Report 1999 (Elsner N, Eysel U, eds.), Thieme, Stuttgart-New York, 359.
36. Maida R, Mameli M, Krieger J, Breer H, Ziegelberger G & Steinbrecht RA (1999) Expression pattern of four odorant-binding proteins in *Bombyx mori*. Zoology 102, Supplement II, 53.
37. Maida R, Krieger J & Ziegelberger G (2001) Ligand binding studies on six recombinant pheromone-binding proteins of two *Antheraea* silkworm species. In: The Neurosciences at the Turn of the Century, 28th Göttingen Neurobiology Conf 2001 (Elsner N, Kreutzberg GW, eds.), Thieme, Stuttgart-New York, 193.