

Curriculum vitae

Name: Tina Pangršič Vilfan
Birth: 28 November 1977
Nationality: Slovene
Family status: married, one son
Address: Föhrenweg 8, 37077 Göttingen, Germany
Institution: Junior Res. Gr. Synaptic physiology of mammalian vestibular hair cells
Institute for Auditory Neuroscience,
University Medical Center Göttingen,
Robert-Koch-Str. 40, 37075 Göttingen, Germany
tel.: +49 (551) 39 22837 or 39 22604
E-Mail: tpangrs@gwdg.de

Education

1996-2000 University of Ljubljana: 1) Biotechnical Faculty, Department of Biology and 2) Academy of Music
06/2000 Diploma in flute, degree: academ. flutist (B.Mus.) and flute teacher
09/2001 B.Sc. in Biology: *Analysis of the phases of increased oxygen consumption in the eye of the blowfly Calliphora erythrocephala – chalky during illumination* (supervisor: Dr. Gregor Zupančič, Assist. Prof.)
2001-2006 University of Ljubljana, Medical School, Ph.D. study of Biomedicine in the lab of Dr. Robert Zorec, Prof.
06/2006 Ph.D. in Medical Sciences: *Electrophysiological properties of cultured rat astrocytes* (supervisor: Dr. Marko Kreft, Prof.)

Fellowships

- Zois foundation stipend – undergraduate research grant (1992-2001)
- Young Scientist Research Grant from the Ministry for science and education, Slovenia (2003-2006)
- Humboldt Research Fellowship (2006-2008)

Prizes and Awards

- Awards at several national competitions in mathematics, logics and flute
- *Jesenkovo priznanje* (best student of the graduation class; 2001)
- *Zlati znak Jozefa Stefana* (Jozef Stefan Golden Emblem Prize; 2009)
- Ernst-Preuss research award (2010) - awarded by Uni. Medical School Göttingen
- ADANO research award (2011) - awarded by German Society of Oto-Rhynolaryngology, Head and Neck Surgery
- *Wissenschaftspreis Niedersachsen* (Science Prize of Lower Saxony; 2013)

Employment

2002-2006	Celica d.o.o, Biomedical Sciences Center, Ljubljana (full- or part-time employment)
2003-2006	Young Researcher in the Lab. of Neuroendocrinology – Molecular Cell Physiology at the Institute of Pathophysiology, Medical School, University of Ljubljana (full-time employment)
2003-2004	Teaching flute at Primary Music School in Ljubljana (part-time employment)
12/2006-2012	Post-doc in the InnerEarLab, Dept. of Otolaryngology, University Medical Center Göttingen
2013-present	Junior research group leader, Group: »Synaptic physiology of mammalian vestibular hair cells«, Dept. of Otolaryngology, University Medical Center Göttingen

Skills

Cell culture isolation and handling, transfection procedures, dissection (rat brain, insect retina, mammalian organ of Corti and vestibular sensory organs, frog hair cell isolation), electrophysiology (patch-clamp pre- and postsynaptic recordings, capacitance measurements, insect ERG), optical methods (calcium imaging, FRET, glutametry, laser confocal scanning imaging, local calcium imaging (hotspots), uncaging), volumetric oxygen consumption measurements (magnetic diver balance), basic molecular techniques, immunocytochemistry, Matlab and Igor programming.

Languages

Native Slovene speaker, fluent in English, good in German, basic knowledge of French.

Organization of Scientific Meetings

2008	Sfax (Tunisia) – International Symposium on Biotechnology (co-organizer of a mini Symposium)
2009	Ljubljana (Slovenia) – FEPS Meeting (organizer of a mini Symposium)
2011	Sölden (Austria) – International Neuroscience Winter Conference (organizer of a Symposium)

Invited conference talks

2008	Ljubljana (Slovenia) – International Meeting Mechanisms of Exocytosis
2010	Maribor (Slovenia) – Partner Symposium on Communicating Physiology
2012	Mainz (Germany) – Annual Meeting of the German Society of Oto-Rhino-Laryngology, Head and Neck Surgery

Teaching Experience

- supervision of lab rotation students in the Neuroscience PhD Program at the University of Göttingen (International Max-Planck School) (6-8 week courses)
- supervision of one PhD student (graduated in May 2013)
- supervision of one Master student (graduated in October 2013)
- Neuroscience Course (Neurophysiology) for students of the Molecular Medicine Program, University of Göttingen (4 hours teaching)
- Practical Course on Physiology of Inner Hair Cell in Göttingen
- Practical Course on Neurophysiology for students of Medicine, University of Göttingen (3 semesters) – including short lectures
- Seminars in Neurophysiology for students of Medicine, University of Göttingen (1 semester)

Other experiences and affiliations

- reviewer for *J Neurosci* and *J Neurophysiol*
- Associate Member of the Göttingen Graduate School for Neurosciences, Biophysics, and Molecular Biology (GGNB) and Developmental, Neural and Behavioral Biology (DNB)

List of original publications

1. Krzan M, Stenovec M, Kreft M, **Pangrsic T**, Grilc S, Haydon PG, Zorec R. (2003) Calcium-dependent exocytosis of atrial natriuretic peptide from astrocytes. *J Neurosci.* **23**, 1580-1583.
2. Zhang Q, **Pangrsic T**, Kreft M, Krzan M, Li N, Sul JY, Halassa M, Van Bockstaele E, Zorec R, Haydon PG. (2004) Fusion-related release of glutamate from astrocytes. *J Biol. Chem.* **279**, 12724-12733.
3. Kreft M, Stenovec M, Rupnik M, Grilc S, Krzan M, Potokar M, **Pangrsic T**, Haydon PG, Zorec R. (2004) Properties of Ca²⁺-dependent exocytosis in cultured astrocytes. *Glia* **46**, 437-445.
4. **Pangrsic T**, Stusek P, Belusic G, Zupancic G. (2005) Light dependence of oxygen consumption by blowfly eyes recorded with a magnetic diver balance. *J Comp. Physiol. A* **191**, 75-84.
5. Potokar M, Kreft M, **Pangrsic T**, Zorec R. (2005) Vesicle mobility studied in cultured astrocytes. *Biochem. Biophys. Res. Commun.* **329**, 678-683.
6. Sikdar SK, Kreft M, **Pangrsic T**, Grilc S, Zorec R. (2005) FM1-43 measurements of local exocytotic events in rat melanotrophs. *FEBS Lett.* **579**, 6575-6580.
7. **Pangrsic T**, Potokar M, Haydon PG, Zorec R, Kreft M. (2006) Astrocyte swelling leads to membrane unfolding, not membrane insertion. *J Neurochem.* **99**, 514-23.
8. Potokar M, Kreft M, Li L, Daniel Andersson J, **Pangrsic T**, Chowdhury HH, Pekny M, Zorec R. (2007) Cytoskeleton and vesicle mobility in astrocytes. *Traffic* **8**, 12-20.
9. **Pangrsic T***, Potokar M*, Stenovec M, Kreft M, Fabbretti E, Nistri A, Pryazhnikov E, Khiroug L, Giniatullin R, Zorec R. (2007) Exocytotic release of ATP from cultured astrocytes. *J Biol. Chem.* **282**, 28749-58.
10. Stenovec M, Kreft M, Grilc S, Potokar M, Kreft ME, **Pangrsic T**, Zorec R. (2007)

Ca²⁺-dependent mobility of vesicles capturing anti-VGLUT1 antibodies. *Exp. Cell Res.* **313**, 3809-18.

11. Stenovec M, Kreft M, Grilc S, **Pangrsic T**, Zorec R. (2008) EAAT2 density at the astrocyte plasma membrane and Ca²⁺-regulated exocytosis. *Mol. Membr. Biol.* **25**, 203-15.
12. **Pangrsic T**, Lasarow L, Reuter K, Takago H, Schwander M, Riedel D, Frank T, Tarantino LM, Bailey JS, Strenzke N, Brose N, Müller U, Reisinger E, Moser T. (2010) Hearing requires otoferlin-dependent efficient replenishment of synaptic vesicles in hair cells. *Nat Neurosci.* **13**, 869-876.
13. Frank T, Rutherford MA, Strenzke N, Neef A, **Pangrsic T**, Khimich D, Fejtova A, Gundelfinger ED, Liberman MC, Harke B, Bryan KE, Lee A, Egner A, Riedel D, Moser T. (2010) Bassoon and the synaptic ribbon organize Ca²⁺ channels and vesicles to add release sites and promote refilling. *Neuron* **68**, 724-38.
14. Nouvian R, Neef J, Bulankina AV, Reisinger E, **Pangrsic T**, Frank T, Sikorra S, Brose N, Binz T, Moser T. (2011) Exocytosis at the hair cell ribbon synapse apparently operates without neuronal SNARE proteins. *Nat Neurosci.* **14**, 411-3.
15. Gregory FD*, Bryan KE*, **Pangrsic T***, Calin-Jageman IE, Moser T, Lee A. (2011) Harmonin inhibits presynaptic Cav1.3 Ca²⁺ channels in mouse inner hair cells. *Nat Neurosci.* **14**, 1109-11.
16. Gregory FD*, **Pangrsic T***, Calin-Jageman IE*, Moser T, Lee A. (2013) Harmonin enhances voltage-dependent facilitation of Cav1.3 channels and synchronous exocytosis in mouse inner hair cells. *J Physiol.* **591**, 3253-69.
17. Neef J, Jung SY, Wong AB, Reuter K, **Pangrsic T**, Chakrabarti R, Kügler S, Lenz C, Nouvian R, Boumi RM, Franke WN, Wichmann C, Moser T. (2013) Modes and regulation of endocytic membrane retrieval in mouse auditory hair cells. *J Neurosci.* **34**, 705-16.
18. Wong AB, Rutherford MA, Gabrielaitis M, **Pangrsic T**, Göttfert F, Frank T, Michanski S, Hell S, Wolf F, Wichmann C, Moser T. (2013) Developmental refinement of hair cell synapses tightens the coupling of Ca²⁺ influx to exocytosis. *EMBO J.* **33**, 247-64.
19. Weiler S, Krinner S, Wong AB, Moser T, **Pangršič T**. (2014) ATP hydrolysis is critically required for function of Cav1.3 channels in cochlear inner hair cells via fueling Ca²⁺ clearance. *J Neurosci.* **34**, 6843-8.
20. Chapochnikov NM, Takago H, Huang CH, **Pangršič T**, Khimich D, Neef J, Auge E, Göttfert F, Hell SW, Wichmann C, Wolf F, Moser T. (2014) Uniquantal Release through a Dynamic Fusion Pore Is a Candidate Mechanism of Hair Cell Exocytosis. *Neuron* **83**, 1389-403.

*equal contribution

List of review articles

1. Kreft M, Potokar M, Stenovec M, **Pangrsic T**, Zorec R. (2009) Regulated exocytosis and vesicle trafficking in astrocytes. *Ann N Y Acad Sci* **1152**, 30-42. Review.
2. Rutherford MA, **Pangrsic T**. (2012) Molecular anatomy and physiology of exocytosis in sensory hair cells. *Cell Calcium* **52**, 327-37. Invited Review.
3. **Pangrsic T***, Reisinger E*, Moser T (2012) Otoferlin: a multi-C2 domain protein essential for hearing. *Trends Neurosci* **35**, 671-680. Review.

Five representative publications

1. **Pangrsic T***, Potokar M*, Stenovec M, Kreft M, Fabbretti E, Nistri A, Pryazhnikov E, Khiroug L, Giniatullin R, Zorec R. (2007) Exocytotic release of ATP from cultured astrocytes. *J Biol. Chem.* **282**, 28749-58.
2. **Pangrsic T**, Lasarow L, Reuter K, Takago H, Schwander M, Riedel D, Frank T, Tarantino LM, Bailey JS, Strenzke N, Brose N, Müller U, Reisinger E, Moser T. (2010) Hearing requires otoferlin-dependent efficient replenishment of synaptic vesicles in hair cells. *Nat Neurosci.* **13**, 869-876.
3. Gregory FD*, Bryan KE*, **Pangrsic T***, Calin-Jageman IE, Moser T, Lee A. (2011) Harmonin inhibits presynaptic Cav1.3 Ca²⁺ channels in mouse inner hair cells. *Nat Neurosci.* **14**, 1109-11.
4. Gregory FD*, **Pangrsic T***, Calin-Jageman IE*, Moser T, Lee A. (2013) Harmonin enhances voltage-dependent facilitation of Cav1.3 channels and synchronous exocytosis in mouse inner hair cells. *J Physiol.* **591**, 3253-69.
5. Weiler S, Krinner S, Wong AB, Moser T, **Pangršič T**. (2014) ATP hydrolysis is critically required for function of Cav1.3 channels in cochlear inner hair cells via fueling Ca²⁺ clearance. *J Neurosci.* **34**, 6843-8.