

- One of four junior faculty members of the PhD Curriculum Committee, VBC PhD programme (2011-)
- Member of the training and education board of the Marine Genomics Europe Network of Excellence (one of seven board members) (2006 – 2008)
- Facility leader for the MFPL fish facility, deputy head of marine facility (2008 –)
(included planning, organisation, set-up and maintenance of both facilities)
- Member, EUROMARINE strategy consortium for marine science advancement in Europe (2010 –)
(Upon my initiative, "Marine rhythms of life and their alterations" is now one of 6 key emerging research fields recommended in the research strategy report of EUROMARINE in the context of Horizon2020.)
- Co-founder of the Vienna Neuroscience Network, a network initiative to strengthen the interaction of especially younger neuroscience researchers (PhD students and post-docs) in the Vienna area (<http://neuro-vienna.net/>)

Invited Seminars

Since 2004, I have presented my work in 25 seminars upon invitation. This excludes presentations on international conferences and graduate schools that are detailed below.

Conference Organization

Organizer (one of five) of the 5th biannual meeting of the Euro Evo Devo Society (2014 in Vienna)

Oral presentations at International Conferences/ international advanced schools

- XIII EBRS congress, Munich (2013)
- 30th anniversary celebration of Boehringer Ingelheim Foundation (2013)
- 12th HFSP Awardees Meeting, Daegu, Korea (2012)
- 105th Annual Meeting German Zoological Society Symposium, Konstanz, Germany (2012)
- Life Science Munich Graduate School, Annual Retreat, Schliersee, Germany (2011)
- HFSP Alumni meeting, Vienna, Austria (2011)
- SFB 488 Symposium "12 years of nervous excitation", Heidelberg, Germany (2011)
- EvolVienna Symposium "Out of the Blue -origins and evolution of cells and regulatory systems in marine species", Vienna, Austria (2011)
- British Society of Developmental Biology Annual Meeting, Warwick, UK (2010)
- 18th CDB Meeting, RIKEN, Kobe, Japan (2009)
- "After Dinner speech", Boehringer Ingelheim Fellow seminar in Hirschegg, Austria (2009)
- NoE Marine Genomics Europe (MGE) International Conference in Faro, Portugal (2008)
- 1st International Conference on Invertebrate Morphology in Copenhagen, Denmark (2008)
- International Sea Urchin Genome Annotation Jamboree at Stazione Zoologica Naples, Italy (2006)
- Yearly Conference of the Society for Research on Biological Rhythms in Sandestin, USA (2006)
- Workshop on Evolving Gene Networks, Roscoff, France (2006)

Academic Prizes and awards

- Austrian Neuroscience Association Otto Loewi Award (2013)
- Member and elected delegate of the Young Academy of the Austrian Academy of Sciences (2012)
- Marine Genomics Europe Outstanding Woman in Marine Biological Sciences Award (2007)
- Robert-Bosch Foundation „Fast Track“ Fellowship (2007)
- Young investigator stipend, 6th meeting, German Neuroscience Society (2004)
- Student participant, 53rd Meeting of Nobel Laureates in Lindau (2003)

- PhD scholarship, Boehringer Ingelheim Foundation (2001 – 2003)
- Scholarship, German National Scholarship Foundation (1996-2001)
- 3rd prize, Germany-wide „Thieme- BIOlogie- Preis“ (1994)

Selected key international research collaborations partners (5 most important)

- Dr. Paola Olivieri, University Collage London, London, UK:
Nanostring analysis of circalunar and circadian clock regulated genes
- Dr. Satchin Panda, Regulatory Biology Laboratory, Salk Institute, USA:
TMTopsin as photoreceptors in vertebrates
- Dr. Herwig Baier, MPI of Neurobiology, Martinsried, Germany:
Function of teleost inner brain photoreceptors
- Dr. Takeshi Todo and Dr. Tomoko Ishikawa, Department of Radiation Biology and Medical Genetics, Osaka University, Japan: *Biochemical and biophysical analyses of Platynereis Cryptochromes*
- Dr. Maurizio Ribera d'Alcala', Department of Ecology and Evolution of Plankton, Stazione Zoologica Anton Dohrn, Naples, Italy: *Irradiation measurements at the natural habitat of Platynereis dumerilii*

Publications

Key: * **equal contribution** @ **corresponding author**

Peer-reviewed articles:

- 19.) Zantke, J; Ishikawa, T; Arboleda, E; Lohs, C; Schipany, K; Hallay, N; Straw, A; Todo, T, **Tessmar-Raible, K[@]**, (2013) Circadian and circalunar clock interactions in a marine annelid (2013) *Cell Reports*, Sep 25. doi:pii: S2211-1247(13)00472-5. 10.1016/j.celrep.2013.08.031
- 18.) Veedin Rajan, VB; Fischer, RM; Raible, F and **Tessmar-Raible, K[@]** *(2013) Conditional and specific cell ablation in the marine annelid *Platynereis dumerilii*, *PLoS One*, 8 (9): e75811. doi:10.1371/journal.pone.0075811
- 17.) Döring, C; Gosda, J; **Tessmar-Raible, K**; Hausen, H; Arendt, D and Purschke, G (2013) Evolution of clitellate phaosomes from rhabdomeric photoreceptor cells of polychaetes - a study in the leech *Helobdella robusta* (Annelida, Sedentaria, Clitellata), *Frontiers in Zoology*, Sep 5;10(1):52.
- 16.) Fischer, RM; Kirchmaier, S; Steger, J; Bloch, S; Panda, S; **Tessmar-Raible, K[@]** (2013) Co-expression of VAL- and TMT-opsins uncovers ancient photosensory inter- and motorneurons in the vertebrate brain. *PLOS Biology* (11), e1001585, doi: 10.1371/journal.pbio.1001585
- 15.) Backfisch, B; Veedin-Rajan, VB; Fischer, RM; Lohs,C; Arboleda,E; **Tessmar-Raible, K**; Raible, F. (2013) Stable transgenesis in the marine annelid *Platynereis dumerilii* sheds new light on photoreceptor evolution *PNAS*, Jan 2;110(1):193-8.
- 14.) Tomer, R, Denes, A.S., **Tessmar-Raible, K** and Arendt, D, (2010) [Profiling by Image Registration Reveals Common Origin of Annelid Mushroom Bodies and Vertebrate Pallium](#) *Cell*, Sep 3;142(5):800-9.
- 13.) Dray N*, **Tessmar-Raible K***, Le Gouar M*, Vibert L, Christodoulou F, Schipany K, Guillou A, Zantke J, Snyman H, Béhague J, Vervoort M, Arendt D, Balavoine G. (2010) Hedgehog Signaling Regulates Segment Formation in the Annelid *Platynereis* *Science*. Jul 16;329(5989):339-42. ***equal contribution**
- 12.) Hasse C, Rebscher N, Reiher W, Sobjinski K, Moerschel E, Beck L, **Tessmar-Raible K**, Arendt D, Hassel M. (2010) Three Consecutive Generations of Nephridia Occur During Development of *Platynereis dumerilii* (Annelida, Polychaeta) *Dev Dyn*. Jul;239(7):1967-76.
- 11.) **K. Tessmar-Raible[@]**, F. Raible, K. Guy, M. Rembold, H. Hausen and D.Arendt. (2007) Conserved sensory-neurosecretory cell types in annelid and fish forebrain: Insights into hypothalamus evolution *Cell* (129) 1389-1400
- 10.) **The Sea Urchin Sequencing Consortium*** (2006). The genome of the sea urchin *Strongylocentrotus purpuratus* *Science*, Nov 10;314(5801):941-52, *listing of consortium members is detailed in the paper
- 9.) Raible, F*, **Tessmar-Raible, K.***, Arboleda, E.*, Kaller, T., Bork P., Arendt D. and Arnone M.I. (2006), Opsins and clusters of sensory G-protein-coupled receptors in the sea urchin genome *Dev Biol*. Dec 1;300(1):461-75. ***equal contribution**
- 8.) Raible, F., **Tessmar-Raible, K.**, Osoegawa, K., Wincker, P., Balavoine, G., Ferrier, D., Jubin, C., de Jong, P., Weissenbach, J., Bork, P., Arendt, D. *Science* (2005). Vertebrate-type intron-rich genes in the marine annelid *Platynereis dumerilii* 25;310(5752):1325-6.
- 7.) **Tessmar-Raible K***, Steinmetz PRH*, Snyman H, Hassel M and Arendt, D. (2005). Fluorescent two-color whole mount in situ hybridization in *Platynereis dumerilii* (Polychaeta, Annelida), an emerging marine molecular model for evolution and development *Biotechniques* 39(4):460, 462, 464 ***equal contribution**
- 6.) Arendt, D*, **Tessmar-Raible, K.***, Snyman, H. , Dorresteijn, A.W. and Wittbrodt, J. (2004). Ciliary photoreceptors with a vertebrate-type opsin in an invertebrate brain. *Science* 29;306(5697):869-71. ***equal contribution**

- 5.) DelBene, F., **Tessmar-Raible, K.** and Wittbrodt, J. (2004). Direct interaction of geminin and Six3 in eye development. *Nature* 427(6976):745-9.
- 4.) Lopez-Rios J, **Tessmar K**, Loosli F, Wittbrodt J, Bovolenta P. (2003). Six3 and Six6 activity is modulated by members of the groucho family. *Development* 130(1):185-95.
- 3.) **K.Tessmar**, F.Loosli, J.Wittbrodt (2002). A screen for co-factors of Six3. *Mech Dev.* 117(1-2):103-13.
- 2.) D.Arendt, **K.Tessmar**, M.I.Campos-Baptista, A.Dorresteijn, and J.Wittbrodt (2002). Development of pigment-cup eyes in the polychaete *Platynereis dumerilii* and evolutionary conservation of larval eyes in Bilateria. *Development* 129(5): 1143-54
- 1.) O.Hobert, **K.Tessmar** and G.Ruvkun (1999). The *Caenorhabditis elegans* lim-6 LIM homeobox gene regulates neurite outgrowth and function of particular GABAergic neurons. *Development* 126 (7), 1547- 1562.

Peer-reviewed Reviews/ scientific correspondence:

- **Tessmar-Raible, K*[@]**, Raible, F* and Arboleda, E, Another place, another timer: Marine species and the rhythms of life. (2011) *Bioessays*, 2011 Mar;33(3):165-72 doi: 10.1002/bies.201000096.
- Arendt,D.; Denes, AS; Jekely,G and **Tessmar-Raible, K.** The evolution of nervous system centralization. (2008) *Philos Trans R Soc Lond B Biol Sci. Jan 11* doi: 10.1098/rstb.2007.2242.
- **K. Tessmar-Raible[@]** (2007) The evolution of neurosecretory centers in bilaterian forebrains: Insights from protostomes. *Sem Cell Dev Biol*, Aug;18(4):492-501.
- **Tessmar-Raible K**, Jekely G, Guy K, Raible F, Wittbrodt J, Arendt D. (2005). *Science*. 20;308(5725):1113-1114. response to Fritsch B, Piatigorsky J (2005). Ancestry of Photoc and Mechanic Sensation? *Science* 308(5725):1113-1114.
- **Tessmar-Raible K**, Arendt D. (2005). [New animal models for evolution and development](#). *Genome Biol.* 6(1):303
- **Tessmar-Raible, K.** and Arendt, D. (2003). Emerging systems: between vertebrates and arthropods, the Lophotrochozoa. *Curr Opin Genet Dev.* 13(4):331-40.

Book chapters:

- **Tessmar-Raible, K.**; Kaiser, T; Zantke, J. “Mondlicht als natürlicher Zeitgeber für die Meeresfauna.” in „Das Ende der Nacht: Die globale Lichtverschmutzung und ihre Folgen“. Posch, Thomas / Freyhoff, Anja / Uhlmann, Thomas (eds.), Nov. 2009, ISBN-13: 978-3-527-40946-4 - Wiley-VCH, Berlin (2nd edition 2013)
- **Tessmar-Raible, K[@]** ; Raible, F. “Keeping clocks coordinated: Crosstalk between light, circadian and circalunar clocks” in “Annual, Lunar and Tidal Clocks: Patterns and Mechanisms of Nature’s Enigmatic Rhythms”. Numata, Hideharu/ Helm, Barbara (eds.)- Springer Japan, chapter submitted, publication due in 2014.

Editorial activities

“An introduction to Marine Genomics”, Springer Verlag, Cock, J.M.; Tessmar-Raible, K.; Boyen, C.; Viard, F. (Eds.), 1st Edition, 2010, ISBN: 978-90-481-8616-7

Activities as peer reviewer

Activities as Reviewer (since 2008)

- Neural Development
- Bioessays

- PLoS One
- Proceedings of the Royal Society B
- BMC Evolutionary Biology
- Frontiers in Zoology

Teaching

Organisation of – and teaching in – student courses

1 semester hour (SH) = 1 hour/ week during the lecture period (the overall time of a lecture/course/seminar is divided between all participating instructors according to their contribution)

– *summer semester (SS), since 2010:*

“Practical course in developmental biology and molecular neurobiology (# 300115)”; 3SH (semester hours)

“Advanced Course in Developmental Biology” (#300409); 2SH

– 2007: short course on qPCR techniques in marine species at the EMBL in Heidelberg

2 weeks student summer course “Evo-Devo meets Marine Genomics: Comparative functional analysis of gene regulatory networks in marine species” at the SZN in Naples

Teaching in student courses

– *SS, since 2011:* “methodological workshop II AMW-new model systems” (#300161) 0.67 SH

– *WS, since 2009/2010* “Advanced Course Cyto- and Developmental Genetics” (#300104); 0.25 SH

“Advanced course in microbiology and genetics: molecular biology” (#300813); 0.1 SH

– 2008: short course on qPCR techniques in marine species at the EMBL in Heidelberg

– 2006: 2 weeks EMBO/Marie Curie Research Training Network “Molecular approaches to evolution and development“at the SZN in Naples

– 2005: one week lab course for EMBL PhD students, EMBL, Heidelberg

– 2004: one week lab course for EMBL PhD students, EMBL, Heidelberg

– 1996/1997 student assistant in basic zoology course

Teaching in student lectures/ seminars:

– *WS, since 2012:*

Research Report: Projects on light reception, biological rhythms and hormone biology II (#300191), 1 SH

Advanced Lecture in Signal transduction (#300247), 0.25 SH

Lecture Molecular Developmental Biology (#300609), 0.5 SH

– *SS, since 2012:*

Research Report: Projects on light reception, biological rhythms and hormone biology II (#300191), 1 SH

– *SS, since 2011* Basic lecture for BSc students: Model systems in Molecular Biology (#300735); 0.15 SH

– *SS 2011* VBC lecture series on neuroscience (#300338); 0.67 SH (I also initiated and organized this lecture series.)

– *WS, since 2009/2010* Lecture „Principles in Genetics and Developmental Biology“ (#300557); 0.5 SH

– *WS since 2010/ 2011* Seminar Light, hormones and rhythms in plants and animals (#300392); 0.5 SH

– *SS 2009, 2010* “Developmental Biology Seminar” (#300736), 0.4 SH

– *WS 2008/2009; 2009/2010:* “Advanced lecture on Developmental Biology” (#300063), 0.45 SH