

Funding ID / Grants

2016- 2019	Extension of Research Platform “Rhythms of Life”, University of Vienna 560k EUR (role: network coordinator, 5 applicants)
2016- 2019	Austrian Science Fund FWF #P28970 Project title: “Analyses of inner brain Opsins in the vertebrate CNS”; 345.145 EUR
2015-	Vienna Doctoral School “Cognition, Behaviour and Neuroscience”: https://vds-cobene.univie.ac.at/about/ , 400k Euro (role: deputy speaker and one of five main coordinators, network of about 35 PIs)
2014-2019	ERC-StG2013 “Molecular neurobiology of a moonlight entrained circalunar clock” 1.5 mio EUR #ERC-StG 337011-LUNAR.CLOCK
2012-2016	Research Platform, University of Vienna “Marine Rhythms of Life” 568.825 EUR (role: network coordinator, 5 applicants)
2010-2014	HFSP YIP, 1.35 mio US\$, title: “Characterization of light dependent processes in the marine environment.” #RGY0082/2010 (role: lead applicant/ network coordinator, 4 applicants)
2009-2015	START Prize, Austrian Science Fund FWF: 1.2 mio EUR; Project title: “A Molecular Approach to Lunar Periodicity” #AY0041321
2008-2010	Genoscope, Evry: sequencing of cDNA sequences for <i>Platynereis dumerilii</i> ; (role: co-applicant, co-coordinator)

Academic Prizes/ Awards/ Scholarships

- EMBO-YIP (2015-2018)
- FENS/Kavli Network of Excellence Scholar (2014-2018)
- 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)

Publications

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

Peer-reviewed primary research articles:

H-factor: 22/ researcher ID: F-9642-2011

2262 citations (excluding self citations)

- 26.) Stowers JR, Hofbauer M, Griessner J, Higgins P, Fischer RM, Haubensak W, **Tessmar-Raible K[@]**, Straw AD[@] (2017) Virtual Reality for Freely Moving Animals, *Nature Methods*, Aug 21. doi: 10.1038/nmeth.4399.
- 25.) Dekens MPS[@], Foulkes NS[@] and **Tessmar-Raible, K[@]** (2017) Instrument design and protocol for the study of light controlled processes in aquatic organisms, and its application to examine the effect of infrared light on zebrafish, *PLoS One*, Feb 17;12(2):e0172038. doi: 10.1371/journal.pone.0172038. eCollection 2017.
- 24.) Kaiser TS[@], Poehn B, Szkiba D, Preussner M, Sedlazeck FJ, Zrim A, Neumann T, Nguyen L-T, Betancourt AJ, Hummel T, Vogel H, Dorner S, Heyd F, von Haeseler A, **Tessmar-Raible K[@]** (2016) The genomic basis of circadian and circalunar timing adaptations in a midge. *Nature*, Dec 1;540(7631):69-73., doi: 10.1038/nature20151
- 23.) **The *Strigamia* genome consortium¹** (2014) Prototypical Arthropod Gene Content and Genome Organisation in the Centipede *Strigamia maritima*, *PLoS Biology*, 2014 Nov 25;12(11):e1002005. doi: 10.1371/journal.pbio.1002005, ¹consortium member list is detailed in the paper
- 22.) Bannister, S[@], Antonova, O, Polo, A, Lohs, C, Hallay, N, Valinciute, A, Raible, F[@] and **Tessmar-Raible, K[@]** (2014) TALENs mediate efficient and heritable mutation of endogenous genes in the marine annelid *Platynereis dumerilii*, *Genetics* May;197(1):77-89. doi: 10.1534/genetics.113.161091 (together with the accompanying review chosen to be highlighted as Spotlight, as well as highlighted in the 2014 Spotlight special print booklet, also highlighted as cover image)
- 21.) Backfisch, B; Kozin, VV; Kirchmaier, S; **Tessmar-Raible, K**; Raible, F (2014) Tools for gene-regulatory analyses in the marine annelid *Platynereis dumerilii*, *PLoS One* 2014 Apr 8;9(4):e93076. doi: 10.1371/journal.pone.0093076. eCollection 2014.10.1371/journal.pone.0093076
- 20.) Oliveri,P, Fortunato, AE, Petrone, L, Ishikawa-Fujiwara, T, Kobayashi, Y, Todo, T, Antonova, O, Arboleda, E, Zantke, J, **Tessmar-Raible, K** and Falciatore, A (2014) The Cryptochrome/Photolyase Family in Aquatic Organisms. *Mar Genomics*. 2014 Feb 22. pii: S1874-7787(14)00022-1. doi: 10.1016/j.margen.2014.02.001.
- 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**¹ (2006). The genome of the sea urchin *Strongylocentrotus purpuratus* *Science, Nov 10;314(5801):941-52*, ¹consortium member list 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:

- Raible, F^{*@}, Takekata, H and **Tessmar-Raible, K^{*@}** (2017) Front. Neurol. An Overview of Monthly Rhythms and Clocks, 12 May 2017 | <https://doi.org/10.3389/fneur.2017.00189>
- Raible, F^{*@} and **Tessmar-Raible, K.^{*@}** *Platynereis dumerilii* (2014) Quick Guide, *Current Biology*, Aug 4;24(15):R676-7. doi: 10.1016/j.cub.2014.06.032.
- Zantke, J, Bannister, S, Veedin Rajan, VB, Raible, F[@] and **Tessmar-Raible, K[@]** (2014) Genetic and Genomic Tools for the marine annelid *Platynereis dumerilii*. *Genetics* 2014 May; 197(1):19-31. doi: 10.1534/genetics.112.148254 (together with the accompanying primary article chosen to be highlighted as Spotlight, as well as highlighted in the 2014 Spotlight special print booklet, also highlighted as cover image)
- **Tessmar-Raible, K^{*@}**, Raible, F^{*} and Arboleda, E, Another place, another timer: Marine species and the rhythms of life. (2011) *Bioessays*, 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 Photic 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)
- Zantke, J, Oberlerchner, H and **Tessmar-Raible, K[@]** . “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.), 2015 Springer Japan, ISBN 978-4-431-55261-1

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**Journals**

Bioessays, BMC Evolutionary Biology, Cell Reports, Chronobiology International, Current Biology, EvoDevo, Developmental Biology, Developmental Cell, Developmental Dynamics, Frontiers in Zoology, Frontiers in Ecology and Evolution, Genetics, Journal of Comparative Physiology A, Marine Genomics, Neural Development, Neuron, Neuroscience, PLoS One, Proceedings of the Royal Society B, Scientific Reports

Grants

BBSRC, EMBO, NSF, A.v. Humboldt Foundation, French Polar Institute, CSNA Italy, Tiroler Landesstiftung

Additional managerial and advisory responsibilities

- extended directorate of the Austrian Neuroscience Association (2016-)
- VBC PhD programme steering board (2011-) (<http://www.vbcphdprogramme.at>)
- Vice dean of the Vienna Biocenter Summer School (2010 –2015) (<http://www.vbcsummerschool.at/>)
- training and education board of the Marine Genomics Europe Network of Excellence (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 –)
- Initiator of Parents’ representative panel of the VBC Campus Kindergarten
(<http://www.csf.ac.at/facilities/child-care/about-campus-child-care-center/>), one of four parents’ representatives (2009–2013), before this I was one of two scientists involved in setting up the Kindergarten
- 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/>)

Conference/ Symposia Organization

- SAB for 18th ICRP meeting (2018)
- Co-organizer symposium: "Enigmatic clocks: non-circadian biological rhythms" at the ICZ2016, Okinawa, Japan
- Co-organizer symposium: “Time and Light- Novel concepts and models in sensory and chronobiology” (2016), Vienna, Austria
- Co-organizer of the 5th biannual meeting of the Euro Evo-Devo Society (2014), Vienna, Austria

Oral presentations at International Conferences/ international advanced schools (past 5 years- future)

- Salk/Ipsen/Science Symposium on Biological Complexity: Biology of Time, La Jolla, USA (2018)
- Zebrafish Neural Circuits and Behavior, Washington (DC), USA (2017)
- Genome 10K and Genome Science 2017 Conference, Norwich, UK (2017)
- 12th Göttingen Meeting of the German Neuroscience Society, Germany (2017)
- Zebrafish brain conference, Munich, Germany (2016)
- 17th ICRP meeting, Potsdam, Germany (2016)
- biannual SRBR meeting, Florida, USA (2016)
- Summer School “PolarTime” guest speaker, Spiekeroog, Germany (2016)
- 14th ANA meeting, Salzburg, Austria (2015)
- 14th EMBO-YIP meeting, Barcelona, Spain (2015)
- Jacque Monod Conference Roscoff “Marine Ecosystem Biology”, Roscoff, France (2015)
- 16th ICRP meeting, Nagahama, Japan (2014)
- 26th congress of the Society of Light Treatment and Biological Rhythms, Vienna, Austria (2014)
- Brainweek (“Woche des Gehirns”), Basel, Switzerland (2014)
- XIII EBRS congress, Munich, Germany (2013)
- 13th ANA meeting, Vienna, Austria (2013)
- 30th anniversary celebration of Boehringer Ingelheim Foundation, Mainz, Germany (2013)

Student/ post-doc supervision and mentoring:

Post-docs

Enrique Arboleda (2009-2012): currently member of Coral Reef Ecology Faculty, CIEE Research Station Bonaire, Dutch Caribbean

Tobias Kaiser (2010-2016): currently junior group leader, MPI Ploen, Germany

Marcus Dekens (2013-)

Bruno Fontinha (2012-)

Stephanie Bannister (2013-2017), currently application scientist Lexogen GmbH

Prabha Talloij (2015-2016)

Hiroki Takekata (2015-2017), currently post-doc, University of the Ryukyus, Okinawa, Japan

PhD students:

Ruth Fischer (thesis defence November 2013)

Juliane Zantke (thesis defence February 2014), VBC PhD thesis award 2014 for an outstanding PhD thesis at the Vienna Biocenter Campus

Vinoth Babu Veedin Rajan (since 2010-)

Thomas Ayers (since August 2014-)

Birgit Pöhn (since September 2014-)

Theresa Zekoll (since February 2017-)

Diploma students:

Stephan Kirchmaier (exam 2009)

Stefan Keplinger (exam 2010)

Susanne Bloch (exam 2011)

Heinrich Oberlerchner (exam 2013)

Theresa Hammer (exam 2014)

Masters students:

Markus Tondl (exam March 2014)

Sandra Pfluegler (exam November 2014)

Stefan Hajny (exam June 2015, joint supervision)

Florian Reithofer (exam October 2016)

Barbara Rodin (exam scheduled summer 2017)

Eva Scheuringer (exam scheduled end 2017, joint supervision)

multiple extended practical and Bachelor students