

CURRICULUM VITAE

Jochen C. Rink

Director

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Birth date: October 18th, 1976

RESEARCH EXPERIENCE

- 2019- **Director**
Max Planck Institute for Biophysical Chemistry in Göttingen, Germany
- 2011 - 2019 **Independent Max Planck Research Group Leader**
Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, Germany
Distinctions: Awarded a Max “Free Floater” position with 2 competitive renewals
- since 2012 **Affiliate**
Centre of Regenerative Therapies CRTD, Dresden, Germany
- 2006 – 2011 **Postdoctoral Research**
Howard Hughes Institute, University of Utah, Salt Lake City, UT, USA

EDUCATION

- 2005 **Ph.D.**
Max Planck Institute for Molecular Cell Biology and Genetics, Dresden, Germany
Grade: *Summa cum laude*
Distinctions: Awarded the Max Planck-Society’s Otto Hahn Medal for outstanding thesis
- 2000 **Bachelor of Arts**
Christ’s College, Cambridge University, Cambridge, UK
Grade: *First Class Honours*
Distinctions: SW Greig-Price for academic excellence in Natural Sciences: 98, 99 and 2000

AWARDS AND FELLOWSHIPS

- 2020 Deutsche Forschungsgemeinschaft award
2020 Behrens-Weise foundation award

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| 2018 | VolkswagenStiftung award |
| 2015 | EMBO Young Investigator award |
| 2015 | ERC Consolidator grant |
| 2011 | Max Planck Research Group |
| 2006 | EMBO Postdoctoral fellowship |
| 2005 | Otto Hahn Medal of the Max Planck Society for outstanding thesis research |

ORGANISATION OF SCIENTIFIC MEETINGS

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| 2018 | Organizer, EMBO workshop on “Size and Shape”, at NCBS in Bangalore, India |
| 2018 | Co-organizer, “3 rd International Planarian Meeting”, Wisconsin, Madison, USA |
| 2018 | Co-organizer, EMBO YIP sectorial meeting on Morphogenesis, Marseille, France |
| 2016 | Organizer, “3 rd European meeting on Planarian Biology”, St. Feliou, Spain |
| 2015 | Co-Organizer, Sino-German frontiers in Science meeting (Humboldt Society), Germany |
| 2014 | Co-Organizer, Sino-German frontiers in Science meeting (Humboldt Society), China |
| 2013 | Organizer, “2 nd European meeting on Planarian Biology”, Dresden, Germany |

SELECTED TALKS AND PRESENTATIONS

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| 02/2019 | “Polarity in planarian regeneration”, 119th Titisee Conference on Development and Regeneration, Titisee, Germany |
| 02/2019 | “Scaling phenomena in planarians”, 1st Rosa Beddington Symposium, The Crick Institute, London, UK |
| 09/2018 | “Metabolic scaling in planarians”. EMBO YIP lecture at EMBO workshop on Size and Shape, NCBS Bangalore, India |
| 07/2018 | “Spearheading comparative genomics in planarians”. 3rd international planarian meeting, Madison, USA |
| 06/2018 | “Molecular and evolutionary mechanisms in planarian regeneration”. EMBO YIP lecture at Euro EvoDevo meeting, Gallway, Ireland |
| 11/2017 | “Pattern self-organization and scaling in planarian regeneration”, Morphogenetic engineering conference, IRB, Barcelona |
| 10/2017 | “Molecular and evolutionary mechanisms in planarian regeneration”, invited seminar at IMP, Vienna, Austria |
| 09/2017 | “Stem cell pluripotency across animal phylogeny”, lecturer, Hydra XIII -Summer School on Stem Cell Biology, Hydra, Greece |
| 08/2017 | “Evolution of regeneration in planarians”, invited talk at Gakushuin University, Tokyo, Japan |

COMMUNITY SERVICES & RESPONSIBILITIES

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| 2020 | Member of the “F1000” faculty |
| 2019 | Member of the external advisory board of the journal Development |
| 2019 | Member of external RGL selection committee at Institut Curie, Paris |
| 2018 | Member of the Hcéres international review board of the Jacques Monod Institut, Paris |
| 2014 - | Elected Ombudsperson, Dresden Ph.D. program (DIGS-BB) |

TEACHING AND OUTREACH

- 2020 - 21 Several lectures during the master course core module “Current Developmental Biology”, University of Göttingen
- 2011 - 19 Annual outreach event, “Long night of Science”, MPI-CBG, Dresden, Germany
- 2014 - 18 Various lectures at the RegMed and BioEng master courses in Dresden
- 2013 - 18 Hosting/Supervision of high school students for annual “Jugend Forscht” science competition
- 2011 - 18 Various lectures during the course of DIGS-BB PhD course;
- 2016 - 17 Faculty instructor “Hydra Summer School on Stem Cell Research”; 2017:
- 2015 - 17 Regular participation in the Dresden Science Café
- 2015 - 16 Art project collaboration with Helen Pynor- isolation and culturing of living fibroblasts from dead supermarket chicken breasts
- 2011 Guest Lecturer, seminar “Mathematics of Regeneration” at ZIH, TUD. Organizer: Dr. Lutz Brusch

PUBLICATIONS

Rink Lab, peer-reviewed

1. Basquin, C.; Ershov, D.; Gaudin, N.; Vu, h. T. K.; Louis, B.; Papon, J. F.; Orfila, A. M.; Mansour, S.; [Rink, J. C.](#); Azimzadeh, J.: Emergence of a bilaterally symmetric pattern from chiral components in the planarian epidermis. *Developmental Cell* 51 (4), pp. 516 - 525 (2019)
2. Vu, H. T. K.; Mansour, S.; Kücken, M.; Blasse, C.; Basquin, C.; Azimzadeh, J.; Myers, E. W.; Brusch, L.; [Rink, J. C.](#): Dynamic polarization of the multiciliated planarian epidermis between body plan landmarks. *Developmental Cell* 51 (4), pp. 526 - 542 (2019)
3. Leria, L.; Vila Farre, M.; Solà, E.; Riutort, M.: Outstanding intraindividual genetic diversity in fissiparous planarians (*Dugesia*, Platyhelminthes) with facultative sex. *BMC Evolutionary Biology* 19, 130 (2019)
4. Rozanski, A.; Moon, H.; Brandl, H.; Martín-Durán, J. M.; Grohme, M. A.; Hüttner, K.; Bartscherer, K.; Henry, I.; [Rink, J. C.](#): PlanMine 3.0improvements to a mineable resource of flatworm biology and biodiversity. *Nucleic Acids Research* 47 (D1), pp. D812 - D820 (2019)
5. Thommen A.*, Werner S.*, Frank O.*, Alt N., Richter J., Philipp J., Knittelfelder O., Quek Y., Fahmy K., Shevchenko A., Friedrich BM., Jülicher F., [Rink JC.](#) (2019). Body size-dependent energy storage causes Kleiber’s law scaling in planarians. *eLife*, 8:e38187
6. Ivankovic, M.; Haneckova, R.; Thommen, A.; Grohme, M. A.; Vila-Farre, M.; Werner, S.; Rink, J. C.: Mode systems for regeneration: Planarians. *Development* 146 (17), dev167684 (2019)
7. Rozanski A., Moon H., Brandl H., Martín-Durán JM., Grohme MA., Hüttner K., Bartscherer K, Henry I., [Rink JC.](#) (2019). PlanMine 3.0– improvements to a mineable resource of flatworm biology and biodiversity. *Nucleic Acids Res.*, 47(D1): D812-D820.
8. Weigert M., Schmidt U., Boothe T., Müller A., Dibrov A., Jain A., Wilhelm B., Schmidt D., Broaddus C., Culley S., Rocha-Martins M., Segovia-Miranda F., Norden C., Henriques R., Zerial M., Solimena M., [Rink JC.](#), Tomancak P., Royer L., Jug, Myers EW. (2018). Content Aware Image Restoration: Pushing the Limits of Fluorescence Microscopy. *Nature Methods* 2018; (in press).
9. Liu SY, [Rink JC.](#) 2018. Total RNA Isolation from Planarian Tissues. *Methods Mol Biol.*1774:259-265. doi: 10.1007/978-1-4939-7802-1_6.
10. Grohme MA, Vila-Farré M, [Rink JC.](#) (2018) Small- and Large-Scale High Molecular Weight Genomic DNA Extraction from Planarians. *Methods Mol Biol.* 1774:267-275. doi: 10.1007/978-1-4939-7802-1_7.
11. Simion P., Belkhir K., François C., Veyssier J., [RinkJC.](#) Manuel M., Philippe H., Telford MJ. (2018).

- A software tool 'CroCo' detects pervasive cross-species contamination in next generation sequencing data. *BMC Biol.* 16(1):28. doi: 10.1186/s12915-018-0486-7.
12. Sluys R., Vila-Farré M., Rink JC, Rasko EJ. (2018). An intriguing, new planarian species from Tasmania, with a discussion on protandry in triclad flatworms (Platyhelminthes, Tricladida). *Acta Zool.* 99(1):1-11.
 13. Grohme M., Schloissnig S., Rozanski A., Pippel M., Young G., Winkler S., Brandl H., Henry I., Dahl A., Powell S., Hiller M., Myers E., Rink JC. (2018). The genome of *S. mediterranea* and the evolution of cellular core mechanisms. *Nature*, 554(7690):56-61.
 14. Hoffmann KB., Voss-Böhme A., Rink JC., and Bruschi L. (2017). A dynamically diluted alignment model reveals the impact of cell turnover on the plasticity of tissue polarity patterns. *J. R. Soc. Interface*, 14: 20170466.
 15. Boothe T., Hilbert L., Heide M., Berninger L., Huttner WB., Zaburdaev V., Vastenhouw NL., Myers E., Drechsel DN., Rink JC. (2017). A tunable refractive index matching medium for live imaging cells, tissues and model organisms. *eLife*, 6:e27240
 16. Stückemann T., Cleland JP., Werner S., Thi-Kim Vu, H., Bayersdorf R., Liu SY., Friedrich B., Jülicher F., Rink JC. (2017). Antagonistic Self-Organizing Patterning Systems Control Maintenance and Regeneration of the Anteroposterior Axis in Planarians. *Dev Cell*, 40(3):248-263.
 17. Levin M., Anavy L., Cole AG., Winter E., Mostov N., Khair S., Senderovich N., Kovalev E., Silver DH., Feder M., Fernandez-Valverde SL., Nakanishi N., Simmons D., Simakov O., Larsson T., Liu SY., Jerafi-Vider A., Yaniv K., Ryan JF., Martindale MQ., Rink JC., Arendt D., Degnan SM., Degnan BM., Hashimshony T., Yanai I. (2016). The mid-developmental transition and the evolution of animal body plans. *Nature*, 531(7596): 637-41.
 18. Brandl H., Moon H., Vila-Farré M., Liu SY., Henry I., Rink JC. (2016). PlanMine - a mineable resource of planarian biology and biodiversity. *Nucleic Acids Res.*, 44(D1):D764-73.
 19. Thi-Kim Vu, H., Rink JC., Sánchez Alvarado A. (2015) Stem cells and fluid flow drive cyst formation in an invertebrate excretory organ. *eLife*. 4. doi: 10.7554/eLife.07405
 20. Werner S., Stückemann T., Amigo MB., Rink JC., Jülicher F., Friedrich B. (2015). Scaling and regeneration of self-organized patterns. *Phys. Rev. Lett.*, 114, 138101.
 21. Werner S., Rink JC., Riedel-Kruse IH., Friedrich BM. (2014). Shape mode analysis exposes movement patterns in biology: flagella and flatworms as case studies. *PLoS One*, Nov 26;9(11):e113083.
 22. Liu SY., Selck C., Friedrich B., Lutz R., Vila-Farré M., Dahl A., Brandl H., Lakshmanaperumal N., Henry I., Rink JC. (2013). Reactivating head regrowth in a regeneration-deficient planarian species. *Nature*, 500(7460):81-4.
 23. Vij S.*, Rink JC.*, Ho HK., Babu D., Eitel M., Narasimhan V., Tiku V., et al. (2012). Evolutionarily ancient association of the FoxJ1 transcription factor with the motile ciliogenic program. *PLoS genetics*, 8(11), e1003019.

Postdoctoral Research

24. Rink JC.*, Thi-Kim Vu, H.*, Sánchez Alvarado A. (2011). The maintenance and regeneration of the planarian excretory system are regulated by EGFR signaling. *Development*, 138(17), 3769–3780.
25. Rink JC.*, Gurley KA.*, Elliott SA., Sánchez Alvarado A. (2009). Planarian Hh signaling regulates regeneration polarity and links Hh pathway evolution to cilia. *Science*, 326(5958), 1406–1410.
26. Gurley KA., Rink JC., Sánchez Alvarado A. (2008). Beta-catenin defines head versus tail identity during planarian regeneration and homeostasis. *Science*, 319(5861), 323–327.
27. Pearson BJ.*, Eisenhoffer GT.*, Gurley KA.*, Rink JC.*, Miller DE., Sánchez Alvarado, A. (2009). Formaldehyde-based whole-mount in situ hybridization method for planarians. *Developmental dynamics* 238(2), 443–450.

PhD Research

28. Tang D., Xiang Y., De Renzis S., Rink JC., Zheng G., Zerial M., Wang Y. (2011). The ubiquitin ligase HACE1 regulates Golgi membrane dynamics during the cell cycle. *Nature communications*, 2, 501.
29. Collinet C., Stöter M., Bradshaw CR., Samusik N., Rink JC., Kenski D., Habermann B., et al. (2010). Systems survey of endocytosis by multiparametric image analysis. *Nature*, 464(7286), 243–249.
30. Del Conte-Zerial P., Bruschi L., Rink JC., Collinet C., Kalaidzidis Y., Zerial M., Deutsch A. (2008). Membrane identity and GTPase cascades regulated by toggle and cut-out switches. *Molecular systems biology*, 4, 206.
31. Rink J., Ghigo E., Kalaidzidis Y., Zerial M. (2005). Rab conversion as a mechanism of progression from early to late endosomes. *Cell*, 122(5), 735–749.

*= shared first authorship

Diploma Research

32. Johannes E., Collings DA., Rink JC., Allen NS. (2001). Cytoplasmic pH dynamics in maize pulvinal cells induced by gravity vector changes. *Plant physiology*, 127(1), 119–130.
33. Collings DA., Carter CN., Rink JC., Scott AC., Wyatt SE., Allen NS. (2000). Plant nuclei can contain extensive grooves and invaginations. *The Plant cell*, 12(12), 2425–2440.

REVIEWS

1. Rink, JC. (2018). Stem cells, patterning and regeneration in planarians- self-organization at the organismal scale. *Methods Mol Biol.* 2018;1774:57-172. doi: 10.1007/978-1-4939-7802-1_2.
2. Vila-Farré M., Rink JC. (2018). The ecology of freshwater planarians. *Methods Mol Biol.* 2018;1774:173-205. doi: 10.1007/978-1-4939-7802-1_3.
3. Werner S., Ti-Kim Vu, H., Rink JC. (2016). Self-organization in development, regeneration and organoids. *Curr Opin Cell Biol.*, 44:102-109.
4. Rink JC. (2012). Stem cell systems and regeneration in planaria. *Development Genes and Evolution.*

BOOKS

1. Rink, JC. (editor) (2018): The planarian model system- methods and techniques. Methods in Molecular Biology series, **Springer, New York.**