

**Curriculum Vitae - James Cleland, PhD**  
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Academic appointments:

- 2022-      Postdoctoral research fellow  
            German Cancer Research Center (DKFZ) & European Molecular Biology Laboratory (EMBL),  
            Heidelberg  
            Advisors: Prof. Duncan Odom and Prof. Edith Heard  
            Topic: Mechanisms of sexual dimorphism in liver physiology and cancer
- 2020-      Postdoctoral research fellow  
2021      Max Planck Institute for Multidisciplinary Sciences, Göttingen  
            Advisor: Dr. Jochen Rink  
            Topic: Comparative analysis of regeneration specificity in planarian flatworms

Education:

- 2020      PhD in Developmental Biology  
            International Max Planck Research School (IMPRS) for Cell, Developmental, and Systems Biology  
            Advisor: Dr. Jochen Rink  
            Date of defence: 24.11.2020
- 2017      Embryology: Concepts and Techniques in Modern Developmental Biology  
            Marine Biological Laboratory, USA
- 2014      BSc in Biomedical Science  
            The University of Queensland (UQ), Australia
- 2013      Education Abroad Program in Molecular and Cell Biology  
            University of California, Berkeley, USA

Peer-reviewed publications and preprints:

1. Cleland JP, Vu HTK, Dickmann JEM, Rozanski A, Werner S, Schuhmann A, Shevchenko A and Rink JC. A comparative analysis of planarian regeneration specificity reveals tissue polarity contributions of the axial cWnt signalling gradient. *bioRxiv*. 2024. *Under review at eLife*.
2. Panten J\*, del Prete S\*, Cleland JP\*, Saunders L, van Riet J, Schneider A, Ginno P, Schneider N, Koch M-L, Gerstung M, Stegle O, Turner J, Heard E and Odom DT. Four-Core Genotypes mice harbour a 3.2MB X-Y translocation that perturbs Tlr7 dosage. *Nature Communications*. 2024.
3. Vila-Farre M, Rozanski A\*, Ivankovic M\*, Cleland JP\*, et al. Evolutionary dynamics of whole-body regeneration across planarian flatworms. *Nature Ecology & Evolution*. 2023.
4. Stückemann T\*, Cleland JP\*, Werner S\*, et al. Antagonistic Self-Organizing Patterning Systems Control Maintenance and Regeneration of the Anteroposterior Axis in Planarians. *Developmental Cell*. 2017.
5. Cleland JP\*, Willis EF\*, Bartlett PF, Vukovic J. Somatic Arc protein expression in hippocampal granule cells is increased in response to environmental change but independent of task-specific learning. *Scientific Reports*. 2017.
6. Maya-Ramos L, Cleland JP, Bressan M, Mikawa T. Induction of the Proepicardium. *Journal of Developmental Biology*. 2013.  
            \*equal contribution.

Manuscripts in preparation:

1. Cleland JP\*, Dugourd A\*, Saunders L\*... Saez-Rodriguez J, Heard E and Odom DT. Gonadal hormones coordinate sex-specific zonation of the mouse liver.
2. van Riet J, Cleland JP, Odom DT, Gerstung M and Saunders L. Sci-rocket: reproducible pipeline for handling single-cell combinatorial indexing experiments.  
            \*equal contribution.

### Selected presentations:

1. Cleland JP et al., 2025. “Heads or tails: how do tiny bits of planarian decide what to regenerate?”. German Society for Cell Biology Focus Workshop on Cell Polarity and Cell Migration. *Talk*.
2. Cleland JP et al., 2024. “Cell type-specific mechanisms of hepatic sexual dimorphism”. Bridging Disciplines: Advancing Sex and Gender-Related Research in Biomedicine. *Talk*.
3. Cleland JP et al., 2023. “Sex matters: does the inactive X protect the female liver from cancer?”. EMBO Workshop on X-chromosome inactivation. *Talk*.
4. Cleland JP et al., 2023. “Sex matters: how does an unhealthy diet affect the male and female liver differently?”. EMBO/EMBL Symposium on the organism and its environment. *Poster*.
5. Cleland JP et al., 2023. “Sex matters: how does hypernutrition differentially shape the liver phenotype of males and females?”. 11th German-Israeli Cancer Research School. *Poster*.

### Selected honours and awards:

1. Poster prize, 11th German-Israeli Cancer Research School, 2023
2. DKFZ Postdoctoral Fellowship, 2021
3. Awarded PhD *summa cum laude*, 2020.
4. Nominated by the Max Planck Society to attend the 70th Lindau Nobel Laureate Meeting, 2019
5. Boehringer Ingelheim Fonds PhD Fellowship, 2016

### Teaching:

- Lecturer; Heidelberg University medical faculty course on gender medicine; May 2024 and May 2025
- Instructor; Heidelberg University MSc Molecular Biosciences; May 2024
- Lecturer; University of Göttingen MSc Developmental, Neural, and Behavioral Biology; Jan 2021
- Instructor; Marine Biological Laboratory Neurobiology course; Jul 2018
- Instructor; MPI-CBG predoctoral course module; Nov-Dec 2016
- Teaching assistant; various undergraduate biomedical courses at UQ; Feb 2012 to Sep 2014

### Mentorship:

#### Current mentees:

- Johann Blakytyn, MSc student, Oct 2024 to present
- Rebecca Schuch, MSc student, Feb 2024 to present

#### Past mentees:

- Maria Vlachonikolou, MSc student, Jul 2023 to Oct 2023
- Korbinian Schelzig, MSc student, Feb 2023 to Sep 2023
- Hong-Yu Lee, MSc student, Aug 2020 to Feb 2021
- David Taborsky, MSc student, Apr 2019 to Sep 2019
- Irene Mota, MSc student, Oct 2016 to Oct 2017

### Popular science publications:

- Loda A\*, Cleland JP\* and Heard EH\*. Chromosomes X et Y: des acteurs clés des inégalités de sexe face aux maladies. *Pour la Science*. Jan 2025 cover article. \*equal contribution.

### Service:

- Co-organiser of “The Genetic and Epigenetic Basis of Sex Bias in Disease” College de France symposium, 2023.
- Co-reviewer for Cell, Nature Communications, Nature Immunology and eLife, 2021-present.
- Member of the Network Gendermedicine Heidelberg, 2022-present.
- PhD student representative of the IMPRS for Cell, Developmental and Systems Biology, 2016-2018.
- Member of the “Science goes to school” outreach initiative, 2015-2017.