



Research Profile

To study how genomes are organised and distributed as cells divide, my lab integrates bottom-up reconstitution biochemistry with mechanistic cell biology, structural biology, and single-molecule biophysics. We aim to contribute to our molecular understanding of the protein machinery that prevents and processes DNA damage during anaphase.

Research Positions

- 2023 - Group Leader, Max Perutz Laboratories, Vienna Biocenter, Austria
Assistant Professor (tenure-track), Dept. of Biochemistry and Cell Biology, University of Vienna, Austria
- 2015 - 2023 Postdoc at the Max Planck Institute (MPI) of Molecular Physiology, Dortmund, Germany
Reconstitution of the kinetochore-microtubule interface, advisor: Andrea Musacchio
- 2009 - 2014 PhD student at the Research Institute of Molecular Pathology (IMP), Vienna, Austria
Reconstitution of the human cohesin complex, advisor: Jan-Michael Peters

Education

- 2009 - 2013 PhD, University of Vienna, Austria (*1.0*)
- 2003 - 2009 MSc Molecular Life Sciences, University Nijmegen, the Netherlands (*cum laude*)

Funding

- 2025 - 2029 Austrian Science Fund, Protein-DNA transactions on Anaphase DNA bridges, PAT1893225
- 2023 - 2029 Tenure-track start-up package University of Vienna

Mentoring

- current team 3 PhD students, 4 MSc students
- 2023 -2025 Supervision of 1 MSc thesis, 3 BSc theses, 5 rotations / summer internships

Key Publications | link to Google Scholar [here](#) | I make my work available as preprints since 2016

@corresponding author, * equal contribution

- 2025 CIP2A is required for mitotic recruitment of the SLX1/XPF/MUS81 tri-nuclease complex to replication stress-induced DNA lesions to maintain genome integrity; L de Haan, SJ Dijt, AG López, P Martzios, D Ruan, FJ Bakker, M Everts, H Warner, FN Mol, HR de Boer, B van de Kooij, PJ Huis in 't Veld®, R Vlijm®, MATM van Vugt®; *Nature Communications*; *accepted*
- 2023 Stable kinetochore-microtubule attachment requires loop-dependent Ndc80-Ndc80 binding; S Polley, H Müschenborn, M Terbeck, A De Antoni, IR Vetter, M Dogterom, A Musacchio® VA Volkov® PJ Huis in 't Veld®; *The EMBO Journal*; 42:e112504
- 2022 Reconstitution and use of highly active human CDK1:Cyclin-B:CKS1 complexes; PJ Huis in 't Veld®, S Wohlgemuth, C Koerner, F Mueller, P Janning, A Musacchio® *Protein Science*; 31(2):528-537
- 2019 Molecular determinants of the Ska-Ndc80 interaction and influence on microtubule tracking and force-coupling PJ Huis in 't Veld®, VA Volkov®, ID Stender, A Musacchio®, M Dogterom®; *eLife* 8, e49539
- 2018 Multivalency of NDC80 in the outer kinetochore to track shortening microtubules and generate forces VA Volkov®, PJ Huis in 't Veld®, M Dogterom® A Musacchio®; *eLife* 7:e36764
- 2016 Molecular basis of outer kinetochore assembly on CENP-T; PJ Huis in 't Veld®*, S Jeganathan®, A Petrovic, P Singh, J John, V Krenn, F Weissmann, T Bange, A Musacchio®; *eLife*; 5:e21007
- 2016 Topology and structure of an engineered human cohesin complex bound to Pds5; MT Hons®, PJ Huis in 't Veld®*, J Kaesler, P Rombaut, A Schleiffer, F Herzog, H Stark°, JM Peters®; *Nature Communications*; 7(12523)
- 2014 Characterization of a DNA exit gate in the human cohesin complex; PJ Huis in 't Veld, F Herzog, R Ladurner, IF Davidson, S Piric, E Kreidl, V Bhaskara, R Aebersold, JM Peters®; *Science*; 346(6212):968-972