Stanford

Izabela Kowalczyk

Postdoctoral Scholar, Developmental Biology

Bio

BIO

Dr. Izabela Kowalczyk is a postdoctoral fellow in the laboratory of Dr. Sarah Bowling, Department of Developmental Biology. She is studying embryonic development, with a focus on heart valve formation and the influence of the maternal environment on this process. Dr. Kowalczyk completed her Ph.D. at the Max-Delbrück-Center for Molecular Medicine in Berlin, under the supervision of Dr. Annette Hammes, where she investigated cell and tissue morphogenesis during early forebrain development. Her work identified novel components of Sonic Hedgehog (SHH) signaling and primary cilia biology, providing new insights into the variable penetrance of holoprosencephaly in mouse models.

INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- MDC PhD Publication Prize, Max-Delbrück-Center for Molecular Medicine in the Helmholtz Association (MDC) (2021)
- Trainee Professional Development Award (TPDA Program), The Society for Neuroscience - SfN Global Connectome (2021)
- Poster presentation award, Berlin Science Postdoc Day (2020)
- LLP-Erasmus Placement Funding, Erasmus, IGBMC Strasbourg, France (2017)
- The Visiting Graduate Research Traineeship Program (BioLAB), The Polish-U.S. Fulbright Commission (2015-2016)

PROFESSIONAL EDUCATION

- Dr. rer. nat., Free University of Berlin/ Max Delbrück Center, Germany , Developmental Biology (2021)
- M.Sc., Wroclaw University of Science and Technology, Poland , Medicinal Chemistry (2017)
- B.S.E., Wroclaw University of Science and Technology, Poland , Biotechnology (2014)

STANFORD ADVISORS

- Sarah Bowling, Postdoctoral Faculty Sponsor

LINKS

- Bowling Lab website: https://www.bowlinglab.org/

Publications

PUBLICATIONS

- **Balancing WNT signalling in early forebrain development: The role of LRP4 as a modulator of LRP6 function** *FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY*

Geng, S., Paul, F., Kowalczyk, I., Raimundo, S., Sporbert, A., Mamo, T., Hammes, A.
2023; 11: 1173688

- **Identification of disease-relevant modulators of the SHH pathway in the developing brain** *DEVELOPMENT*
  Mecklenburg, N., Kowalczyk, I., Witte, F., Goerne, J., Laier, A., Mamo, T. M., Gonschior, H., Lehmann, M., Richter, M., Sporbert, A., Purfuerst, B., Huebner, N., Hammes, et al
  2021; 148 (17)

- **Neural tube closure requires the endocytic receptor Lrp2 and its functional interaction with intracellular scaffolds** *DEVELOPMENT*
  Kowalczyk, I., Lee, C., Schuster, E., Hoeren, J., Trivigno, V., Riedel, L., Gorne, J., Wallingford, J. B., Hammes, A., Feistel, K.
  2021; 148 (2)

- **Myt1 and Myth1l transcription factors limit proliferation in GBM cells by repressing YAP1 expression** *BIOCHIMICA ET BIOPHYSICA ACTA-GENE REGULATORY MECHANISMS*
  Melhuish, T. A., Kowalczyk, I., Manukyan, A., Zhang, Y., Shah, A., Abounader, R., Wotton, D.
  2018; 1861 (11): 983-995

- **Analysis of transcriptional activity by the Myt1 and Myt1l transcription factors** *JOURNAL OF CELLULAR BIOCHEMISTRY*
  Manukyan, A., Kowalczyk, I., Melhuish, T. A., Lemiesz, A., Wotton, D.
  2018; 119 (6): 4644-4655