Stanford



# Christina Gangemi

Postdoctoral Scholar, Developmental Biology

## Bio

### BIO

Dr Christina Gangemi received her undergraduate degree from Monash University (2016) specialising in molecular biology and biochemistry. She became an Undergraduate Research Opportunities Program Scholar (2016) and completed her Honours thesis (2017) at the Australian Regenerative Medicine Institute (ARMI), Monash University. She later joined Professor Harald Janovjak's group at ARMI (2018) as a research assistant before completing her doctorate degree (2019-2023) where she studied optical approaches to promote pancreatic beta cell regeneration. Key achievements from this work include establishing an automated image analysis approach to quantify islet proliferation assays, designing a modular light-emitting diode shelving system for ex vivo and in vitro illumination of primary islets, generating a new assay to test cyclin-dependent kinase 6 (CDK6) function (a known beta cell proliferation driver), and exploring the effects of photoswitchable pdDronpa domains when engineered into CDK6. During her candidature, she was awarded a Juvenile Diabetes Research Foundation Australia PhD Top-Up Scholarship. In 2023 she undertook a Postdoctoral Research Associate role in the Janovjak group at Flinders University and has recently joined Professor Seung Kim's group at Stanford University.

### HONORS AND AWARDS

- JDRF PhD Top-up Scholarship, Juvenile Diabetes Research Foundation (JDRF) Australia (2020-2022)

### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Monash University , Optogenetics and Type 1 diabetes (2023)
- Bachelor of Science (Honours), Monash University , Germline stem cells (2017)
- Bachelor of Arts/Science, Monash University , Biochemistry and Molecular Biology, Theatre (2016)

### STANFORD ADVISORS

- Seung Kim, Postdoctoral Faculty Sponsor

## Publications

### PUBLICATIONS

- **Modular Light-Emitting Diode Shelving Systems for Scalable Optogenetics.** *Methods in molecular biology (Clifton, N.J.)*
  Gangemi, C. G., Janovjak, H.
  2025; 2840: 231-244
- **Optogenetics in Pancreatic Islets: Actuators and Effects** *DIABETES*
  Gangemi, C. G., Janovjak, H.
  2024; 73 (10): 1566-1582

- **CDK6 activity in a recurring convergent kinase network motif.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*
  Gangemi, C. G., Sabapathy, R. T., Janovjak, H.
  2023; 37 (4): e22845

- **GILZ-dependent modulation of mTORC1 regulates spermatogonial maintenance.** *Development (Cambridge, England)*
  La, H. M., Chan, A. L., Legrand, J. M., Rossello, F. J., Gangemi, C. G., Papa, A., Cheng, Q., Morand, E. F., Hobbs, R. M.
  2018; 145 (18)