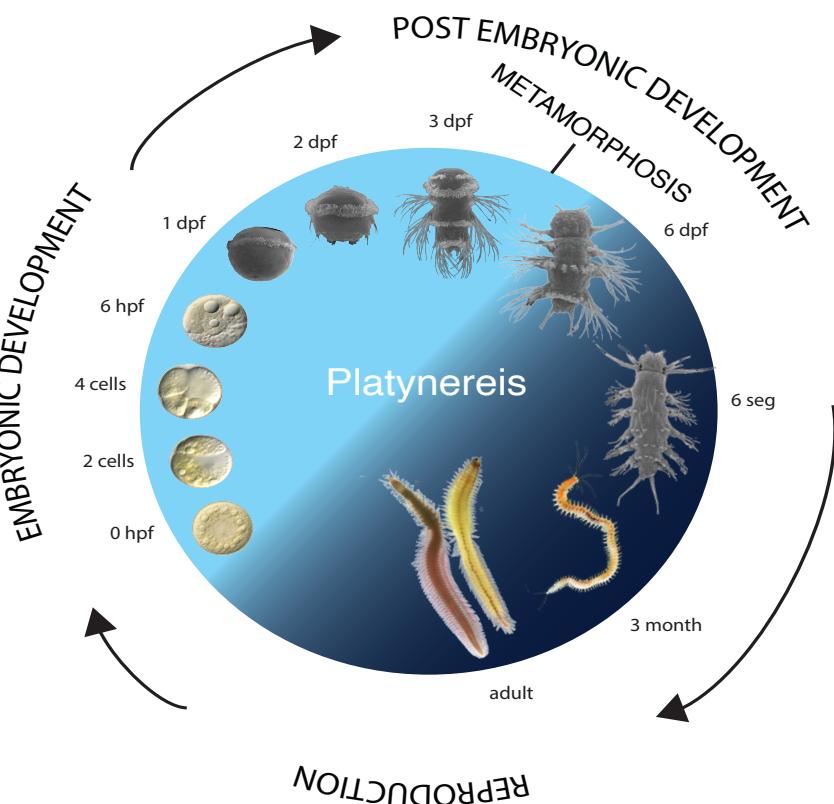




Institute of Cellular and Organismic Biology (ICOB) – Academia Sinica, Taiwan
Post-doctoral positions in Marine Evo-Devo and Evo-Cell at Stephan Q. Schneider's
Laboratory



The Institute of Cellular and Organismic Biology (ICOB; <http://icob.sinica.edu.tw>) is one of the research institutes of Academia Sinica in Taiwan. Researchers at ICOB investigate the basic mechanisms underlying cellular functions and cell-cell interactions that coordinate the growth and development of an organism and its adaptation to an ever-changing environment. Current research at ICOB comprises four focus areas: (1) Cellular dysfunction, (2) Eco-Evo-Devo, (3) Neuroscience, and (4) Stem cell and regenerative biology.

Stephan Q. Schneider's Marine Evo-Devo group is located at ICOB in Taipei with several other Evo Devo research groups. He uses the marine annelid *Platynereis dumerilii* to better understand how developmental and cell biological mechanisms contribute to spiralian embryogenesis and the formation of marine larvae.

Position summaries:

We seek for highly motivated **post-doctoral fellows** to join the **Marine Evo-Devo laboratory** of Stephan Q. Schneider at **ICOB, Taipei in Taiwan**.

Position 1: The post-doc will participate in an internationally collaborative project at ICOB whose goal it is to study **ciliogenesis and ciliome evolution** in marine invertebrates including the **polychaete *Platynereis dumerilii* as a model system**. By using comparative and single cell genomic approaches within spirilians and *Platynereis*, she/he will determine common and novel features of the spiralian ciliome. In addition, she/he will perform functional analysis (such as morpholino injections, and CRISPR/Cas9...) to investigate how distinct ciliary genes contribute to development and organization of multi-ciliated cell types in motile larvae of *Platynereis*. This position will allow the candidate to interact with international research groups to conduct cutting edge research on marine organisms by developing innovative EvoCell approaches that aim to be published in high impact peer reviewed journals.

Position 2: The post-doc will participate in a collaborative project between 4 research teams at ICOB that aim to **study metamorphosis of 5 marine organisms** that occupy key phylogenetic positions and exhibit different life history strategies: a teleost fish, a cephalochordate, a hemichordate, an echinoderm, and an annelid worm. Transcriptomic profiling of key organs and hormone analysis of several developmental stages of all 5 species will be investigated and compared to each other. The post-doc will be responsible for the part, using **the polychaete *Platynereis dumerilii* as a model system**. She/He will determine if similar transformations of organs occur in terms of cellular processes, with a focus on the intestine (key organ facing changes during metamorphosis). By examining transcriptomic regulation during metamorphosis at both organismic and single-cell level, she/he will search for shared regulatory mechanisms among these distantly related animal models. Lastly, she/he will perform functional analysis (such as pharmacological treatment, CRISPR/cas9...) to test whether these shared regulatory mechanisms are essential for metamorphosis. This position will allow the candidate to interact with very dynamic and international research groups to conduct innovative research on marine organisms that aim to be published in high impact peer reviewed journals.

Working Location:

ICOB, Academia Sinica, No. 128, Sec. 2, Academia Road, Nankang, Taipei 11529, Taiwan

Qualifications:

(Required)

1. PhD in Developmental Biology, Cellular Biology or Evolutionary Biology (or related topics).
2. Knowledge of basic techniques in developmental and molecular biology.
3. Previous experience working with experimental model organisms.
4. Proficiency in oral and written English.
5. Ability to collaborate, share results and communicate with scientists from other fields.

(Preferred)

1. Experience working with marine invertebrate model organisms.
2. Experience working with transcriptomic data and/or phylogenetics.
3. Good knowledge about cilia, or metamorphosis

Starting Date:

Spring/Summer 2022

How to Apply:

Apply by emailing your Submission Documents to: sqschneider [at] gate.sinica.edu.tw
(Please replace [at] with @ before using this email address)

Submission Documents:

- Cover letter summarising research interests, professional experience, and career goals.
- Curriculum vitae.
- Name and contact information of 3 referees, one of which should be a previous employer.

Recent Publications of the lab in this area

- Chou, H.-C., Pruitt, M.M., Bastin, B.R., and Schneider, S.Q. (2016) A transcriptional blueprint for a spiral-cleaving embryo. *BMC Genomics*, 17:552.1-25.
- Chou, H.-C. , Acevedo-Luna, N. , Kuhlman, J.A., and Schneider, S.Q. (2018) PdumBase: A transcriptome database and research tool for *Platynereis dumerilii* and early development of other metazoans. *BMC Genomics*, 19(1):618.
- Bastin, B.R. , and Schneider, S.Q. (2019) Taxon-specific expansion and loss of *tektins* inform metazoan ciliary diversity. *BMC Evolutionary Biology*, 19(1):40. 1-25.
- Wu, L., Hiebert, L.S., Klann, M., Passamaneck, Y., Bastin, B.R., Schneider, S.Q., Martindale, M.Q., Seaver, E.C., Maslakova, S.A., and Lambert, J.D._(2020) Genes with spiralian-specific protein motifs are expressed in spiralian ciliary bands. *Nature Communications*, 11:4171, 1-11
- Özpolat, B.D., Randel, N., Williams, E.A., Bezares-Calderón, L.A., Andreatta, G., Balavoine, G., Ferrier, D.E.K., Gambi, M.C., Gazave, E., Handberg-Thorsager, M., Hardege, J., Hird, C., Hsieh, Y-W., Mutemi, K.N., Schneider, S.Q., Simakov, O., Vervoort, M., Jékely G., Tessmar-Raible, K., Raible, F., Arendt, D. (2021) The nereid on the rise: *Platynereis* as a model system. *EvoDevo* (1):10, 1-22. Review by the *Platynereis* Research Community