



Francis Crick Institute

POSTDOCTORAL RESEARCH FELLOWSHIP

Developmental Signalling Laboratory

A postdoctoral position is available in the laboratory of Dr Caroline Hill at the **Francis Crick Institute** (<http://www.crick.ac.uk/>), which is a world class interdisciplinary biomedical Institute situated in central London.

Work in the Hill lab is focused on understanding how TGF- β signalling pathways function normally in early vertebrate development and in adult untransformed cells, and how these signalling pathways are perturbed in disease, in particular, cancer. We have been exploiting the very powerful combination of early vertebrate developmental systems (zebrafish embryos), together with a variety of tissue culture systems and mouse models, and we use methodologies ranging from developmental and cell biology to computational modelling.

I am looking for a highly motivated postdoc with proven research abilities and an excellent publication record. The project will focus on the question of how the combination of Nodal and Fgf/Erk signalling specifies cell fates, in particular, how it is involved in the decision governing the specification of mesodermal versus endodermal fates. The postdoc will explore this using human 2D and 3D gastruloids and this work will complement other projects in the lab using zebrafish embryos.

For further details about the project and how to apply, please contact:
Dr Caroline Hill (e-mail: caroline.hill@crick.ac.uk)

Recent Hill lab papers

- Wilcockson, S.G., Guglielmi, L., Rodriguez, P.A., Amoyel, M. & Hill, C.S. (2023) An improved Erk biosensor detects oscillatory Erk dynamics driven by mitotic erasure during early development. *Dev Cell* 58, 2802-2818.e5.
- Economou A. D., Guglielmi L., East P., Hill C. S. (2022) Nodal signaling establishes a competency window for stochastic cell fate switching. *Dev Cell* 57, 2604-2622.e5.
- Guglielmi, L., Heliot, C., Kumar, S., Alexandrov, Y., Gori, I., Hill, C. S. (2021). Smad4 controls signaling robustness and morphogenesis by differentially contributing to the Nodal and BMP pathways. *Nat Commun.* 121, 6374.
- van Boxtel, A.L., Economou, A.D., Heliot, C., Hill, C.S. (2018) Long-Range signaling activation and local inhibition separate the mesoderm and endoderm lineages. *Dev Cell* 44, 179-191 e175.

