Computational postdoctoral position:
Functional interpretation of genetic variants associated with cardiovascular disease risk using 3D genomics and single-cell multiomics

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We are recruiting a computational biology postdoc to work on an exciting collaborative project with Prof Helle Jørgensen's lab (Cambridge University).

This project aims to decipher the function of genetic variants associated with cardiovascular disease risk in the control of vascular smooth muscle cell plasticity.

The immediate expectations for this post are:

- Identify identified putative target genes underpinning cardiovascular disease by integrating GWAS data with in-house Capture Hi-C and multiomics data, using and extending our methodologies such CHiCAGO, CHi-C ABC and multiCOGS (Javierre et al., Cell 2016; Cairns et al., Genome Biol, 2016; Freire-Pritchett et al., Nature Prot 2021; Malysheva et al, bioRxiv 2022).

- Use in-house single-cell multiomics data to validate the function of the identified candidate genes in the regulatory networks controlling vascular smooth muscle cell plasticity, capitalising on our previous work with Helle Jørgensen (Dobnikar et al., Nat Comms 2018; Worssam et al., Cardiovasc Res 2022; Lambert et al., bioRxiv 2023).

There will be ample opportunities to take this project further and contribute to other work in our lab focusing on the regulatory logic and variation of enhancers. We would particularly welcome interest in computational methodology development and cis-regulatory network analysis. The candidate will join a friendly and collaborative lab comprised of computational, "wet+dry" and wet-lab researchers and will work closely with members of our and H. Jørgensen's labs.

This post, available immediately, is funded by the British Heart Foundation, with a salary range of £45,593 to £53,334 pa (higher than average for postdocs in London). The position is initially offered for two years, with opportunities for further extension. We will also encourage and support an application for an independent fellowship for eligible and interested candidates.

If you are interested in this opportunity, please contact Dr Mikhail Spivakov (mikhail.spivakov@imperial.ac.uk) for further details on this position and application process.