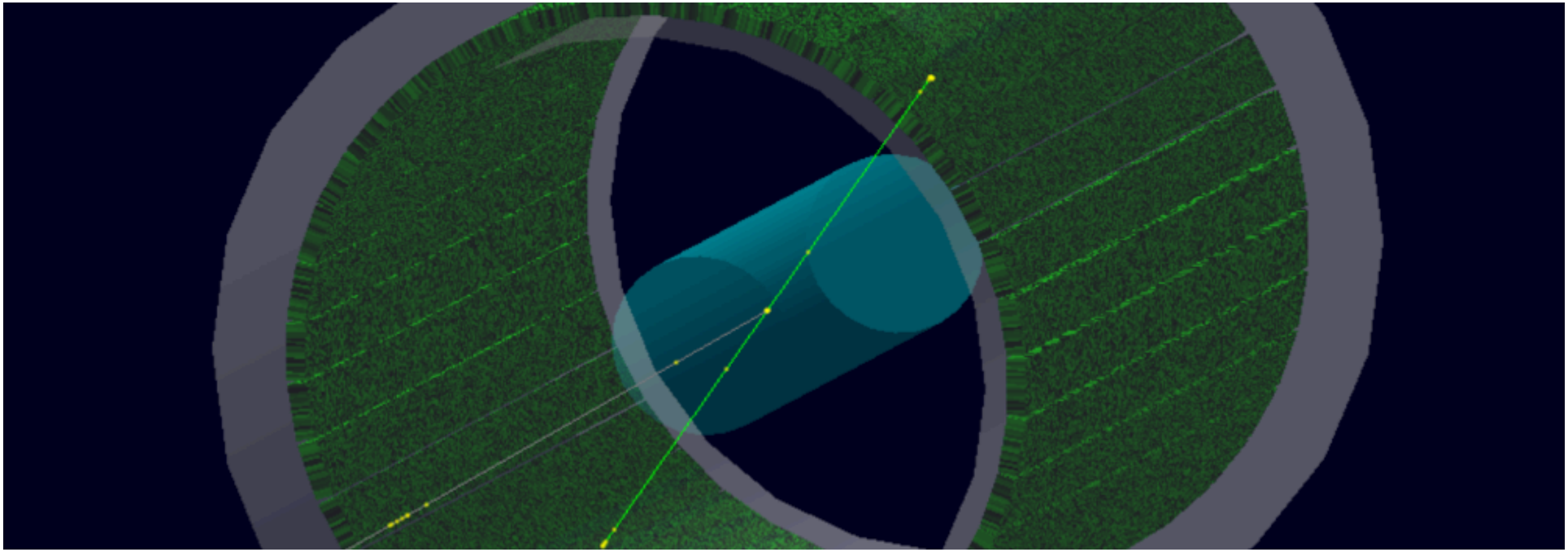
Edinburgh Centre for Biomedical Physics

A virtual centre with a focus on
applying physics to biomedical, clinically relevant problems

Our key mission will be to **facilitate cross-disciplinary research in biomedical physics** at the University, **striving to reduce and eliminate the barriers and challenges** that this type of work faces at different levels.

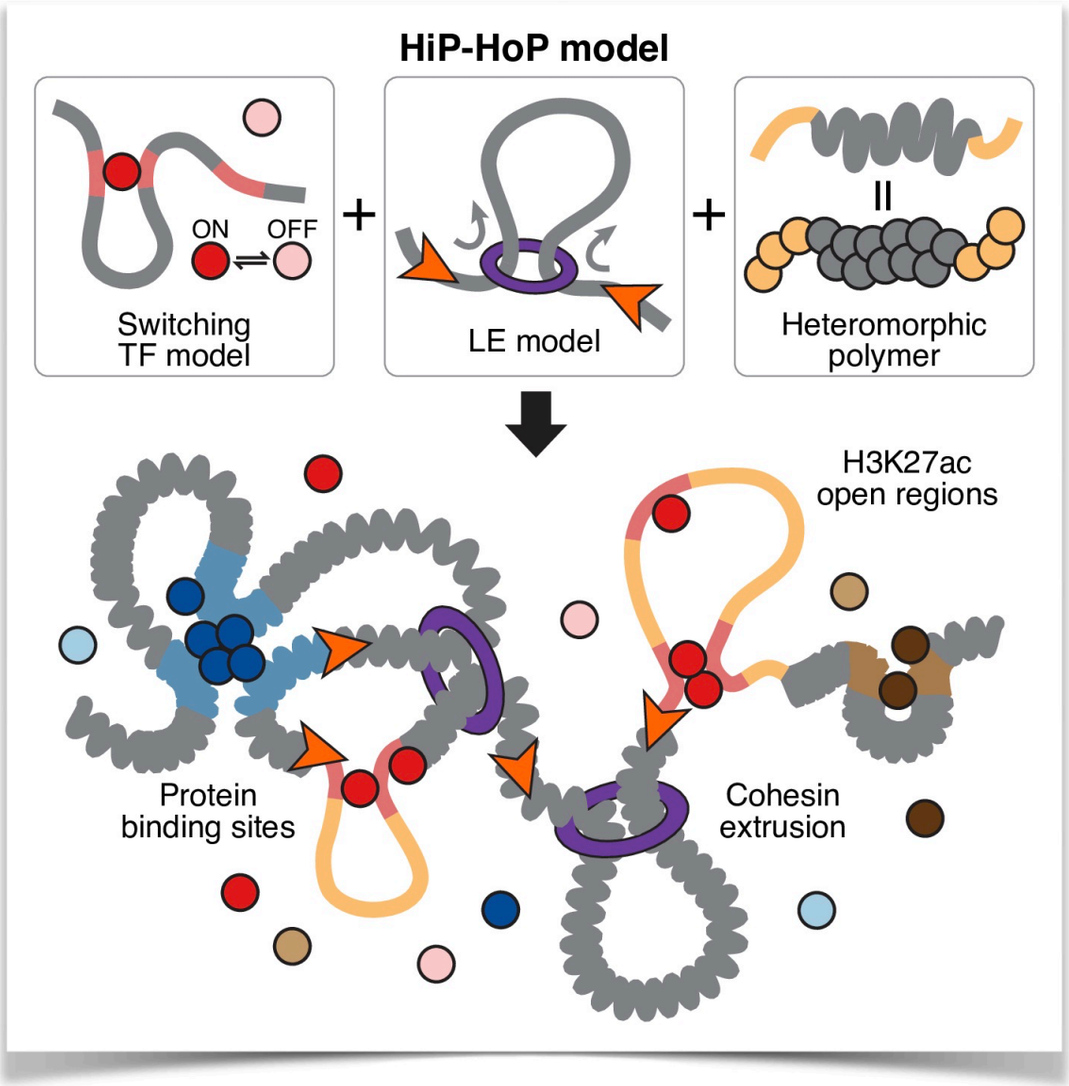
Detectors, imaging and analysis

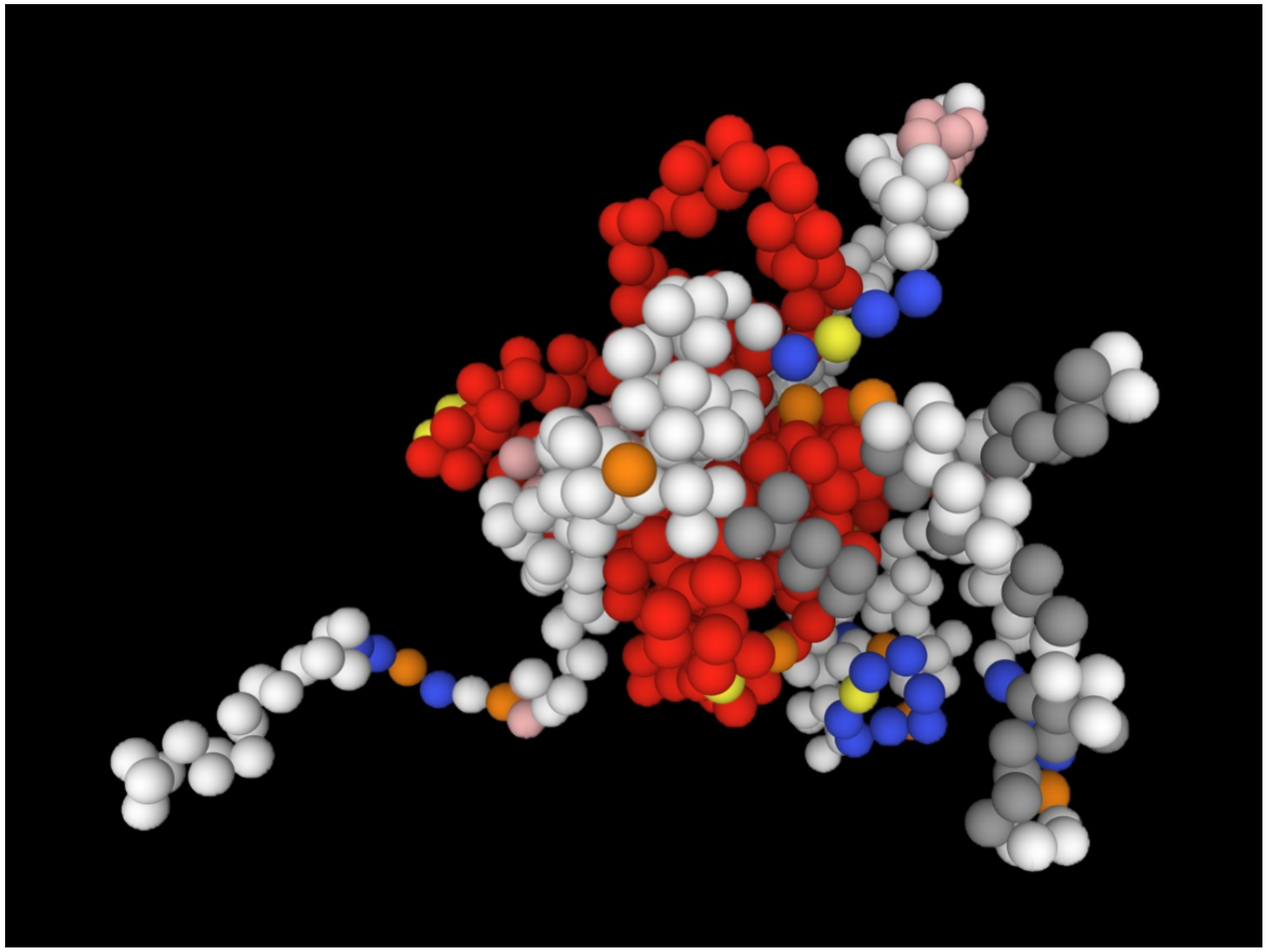


This area involves physicists, clinicians and data scientists at different sites, and focuses on the development of machine learning and data science techniques for medical imaging purposes. One key application area is **full-body PET scans**.

- Catriona Wimberley
  Expertise: Medical physicist at SoPA, with expertise in PET and simulations of PET;
  Interests: PET imaging, machine learning for medical imaging, PET scan simulations, radiotracer physics;
- Ben Wynne
  Expertise: Physicist at SoPA, with expertise in computer simulations, data science, and PET modelling;
  Interests: PET scan simulations, detector physics, machine learning for medical imaging

Molecular mechanisms of disease





This area involves physicists, molecular biologists, clinicians at different sites (SoPA, IGC, Wellcome Trust Centre), and focuses on the development and experimental validation of mechanistic models for cancer and genetic diseases, typically dependent on aberrant **chromatin** and **chromosome 3D structure and function**.

College of Science and Engineering (CSE)

School of Physics and Astronomy (SoPA)

College of Medicine and Veterinary Medicine (CMVM)

Institute for Genetics and Cancer (IGC)
Royal Infirmary (Little France)
Roslin Institute

Edinburgh Centre for Biomedical Physics (ECBP)

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Detectors, Imaging and analysis

Molecular mechanisms of disease

Physics of infection

What will the Centre deliver?

Easier access to information about member expertise and interest
Information about seminar series and workshops in biomedical physics
Help fund interdisciplinary cross-College joint PhD studentships
Promote joint cross-College appointments
Provide a basis for CDT applications and MSc in Biomedical Physics
Help create societal/healthcare impact (e.g., TestEd)

Tentative timeline:

Application to establish a virtual Centre: late 2024
Advertisement talk: January 2025
Biomedical Physics Workshop (Higgs): Apr/May 2025
Start of virtual Centre: Apr/May 2025