

London biomedical hub sets its research agenda

Paul Nurse, director of the Francis Crick Institute, tells *Nature* about the centre's scientific strategy.

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Construction is well under way on the Francis Crick Institute. The £650-million (US\$1-billion) biomedical super-laboratory, set to open in 2015, is already looming over St Pancras International railway station in central London.

The institute is tasked with integrating the wishes of six founders: Britain's three biggest biomedical funders, the Medical Research Council (MRC) and the charities Cancer Research UK (CRUK) and the Wellcome Trust; and three universities, University College London, Imperial College London and King's College London.

Until now, the Crick's research plans have been unclear, but today the institute issued a document on its scientific strategy (see [Francis Crick Strategy](#)). The document outlines seven broad research fields, three of them about basic biology, and the remaining four concerning the study of cancer, the immune system, microbial pathogens and the nervous system.

Research plans will become more detailed once research staff is in place. Recruitment is set to begin in earnest in 2015 and will focus on rising stars in biomedical research. *Nature* spoke to the institute's 64-year-old director, Nobel-prizewinning geneticist and cell biologist Paul Nurse, to learn more about the institute's plans.

What were the big challenges in coming up with the Crick Institute's scientific agenda?

The problem was more logistical than anything else. The strategy had to be acceptable to all six founders, so it took quite a lot of toing and froing simply to get everybody on board.

How did you pick the research agenda?

Often people have a rather naive view of research strategies and think it's just a list of things you're going to do. What is crucial is having the mechanisms in place that allow you to deliver something that is interesting and long term. We've identified a series of high-level questions, which cover a wide range of science. What we will do is scan the horizon every year or two to see, within those high-level questions, what the interesting areas are.

Who will work at the Crick?

The quality of the individuals who will be working there is of huge importance, because they're the people who move the needles. There will be a particular focus on recruitment of young researchers as group leaders, whom we will train and give good support, so that they have a whole career stage at the Crick — 10 or 12 years, let's say. Then we will help them to move somewhere else, hopefully in the United Kingdom. So a real major role of the Crick is to actually act as a source of high-quality talent to support biomedical research effort throughout the country.

The MRC and CRUK already have large research centres: the National Institute of Medical Research (NIMR) and the London Research Institute (LRI). How will scientists there fit into the picture?

In the steady state, the Crick Institute will have about 120 research groups, and I'm imagining in the longer term about 80 group leaders will be in the early stages of their career — the 10–12-year period — and about 40 in longer-term positions. In the short and medium term, we will have a merger of the NIMR and the LRI. We have about 70–75 investigators who are in tenure positions there, and we will accept all of them into the Crick Institute. We will move to the new system over the years gradually, as we get new recruits.

How will you handle clinical work and translation?

We won't have clinical facilities but we do have three founders — the universities — that do. A major theme for what we are doing is to pursue multidisciplinary research, by which we mean both clinical research and research connected to the physical sciences: physics,



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Francis Crick Institute director Paul Nurse says hiring top researchers will be the new institute's first priority.

chemistry, maths and so on.

What we're also trying to do is have a culture where the investigator will look beyond the research they're doing, into how it can be used. That will apply to universities but it will also apply to the National Health Service (NHS) and also to the pharmaceutical and biotech industries.

Will Crick have formal relationships with industry and the NHS?

We're still exploring how this works. We are already searching for appointments that will be joint between the Crick and the universities in experimental medicine, deliberately to drive the clinical agenda. With respect to commerce we're having exploratory conversations with companies to see whether we can also have some related arrangements with them as well.

The NIMR has a biosafety-level-4 lab, set up to handle the most dangerous pathogens, and there has been some worry about moving that high-containment facility into central London. What kind of work on pathogens will occur at the Crick?

They have a level-4 lab, but they do not work on level-4 microorganisms. We will not be working on level-4 human pathogens at the St Pancras site.

How long will you be in the director's seat?

Me? I think it depends on my board really. At the moment I'm on a five-year contract, and they have the possibility to renew me for a further five years. I am very keen to see that this is a success, and if I'm the right person to run it, I'll be very happy to do it.

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