‘Nothing in biology makes sense except in the light of evolution’
Theodosius Dobzhansky

Welcome to the School of Life Sciences

This brochure provides an overview of current research activities, thumbnail sketches of four of our key research clusters and our ambitious plans for their future. Our vision is to foster an interactive and creative interdisciplinary environment in which the balance between basic and translational research is optimised to ensure success on an increasingly competitive global stage.

Foreword by Professor Laurence Poot FRSB
Head of School

Four foci of existing research excellence highlighted in this brochure are Neuroscience, Genome Damage and Stability, Drug Discovery and Social Insect Biology. There is already significant interaction both within and between these groupings and by encouraging further interdisciplinary research we hope to generate exciting new discoveries at the interfaces between these programmes.

Interdisciplinarity does not stop at the gates of the School of Life Sciences, and many of our research goals and objectives overlap significantly with those of our colleagues in the School of Psychology, the Brighton and Sussex Medical School, the School of Engineering and Informatics, and the School of Mathematical and Physical Sciences. We share a commitment to ‘science without walls’ that underpins the exceptional Sussex tradition for interdisciplinary cooperation and collaboration.

Finally, I am pleased to report that the University has approved a major infrastructure development programme to support the next phases in the growth of Life Sciences research on campus. Thus we can look forward in the near future to the creation of a Cellular and Molecular Neuroscience Centre in an existing building, which is being extensively refurbished for that purpose, followed by the construction of a new laboratory building over the next three years. This will bring together all strands of Life Sciences research, from Chemistry and Biochemistry, through Genome Stability and Neuroscience, to Evolutionary Biology and Ecology, in a state-of-the-art multidisciplinary environment fit for the research challenges of the twenty-first century.
The big picture

‘Our genomes are our most precious, and most durable, possessions. They are the genetic blueprint that tells cells how to function. Unfortunately our DNA is continually being damaged, for example in skin cells – by sunlight, in our intestinal cells – by carcinogens in food, and in all our cells – simply by existing at body temperature. Luckily our cells have also commenced, including a major strategic investment within the school of Life Sciences. The Translational Drug Discovery Group was formed to explore knowledge generated by outside institutions with the ultimate goal to translate into potential new medicines. We will also investigate the role of the immune system in health and disease. The group comprises medicinal chemists, pharmacologists, biologists, and clinical scientists. The aim is to harness the potential for drug development from our home-made knowledge to leverage international, academic and industrial collaborations. The group will ultimately be responsible for the identification of new drug targets, drug design, development of new therapeutics and pathology in health and disease.

Professor Tony Carr

What we do

Genome stability

Our genomes are one of our most precious, and most flexible, possessions. They are the genetic blueprint that tells cells how to function. Unfortunately our DNA is continually being damaged, for example in skin cells – by sunlight, in our intestinal cells – by carcinogens in food, and in all our cells – simply by existing at body temperature. Luckily our cells have also commenced, including a major strategic investment within the school of Life Sciences. The Translational Drug Discovery Group was formed to explore knowledge generated by outside institutions with the ultimate goal to translate into potential new medicines. We will also investigate the role of the immune system in health and disease. The group comprises medicinal chemists, pharmacologists, biologists, and clinical scientists. The aim is to harness the potential for drug development from our home-made knowledge to leverage international, academic and industrial collaborations. The group will ultimately be responsible for the identification of new drug targets, drug design, development of new therapeutics and pathology in health and disease.

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What we do

Thai medicine

We are committed to the development of innovative research aimed at the discovery of new therapies and cures to some of the most feared, devastating and debilitating of diseases affecting billions of people worldwide. The importance of being involved in the school of Life Sciences, in which world-leading research is conducted in particular in the brain and the underlying and pathological processes that cannot be alleviated.

Professor Simon Ward

What we do

Pharmaceutical Drug Discovery Group was recently established as part of a major new strategic initiative within the school of Life Sciences and will be led by Professor Jeremy Field, one of the key figures in the School’s translational research involving animal adaptations across the chemical, biological and clinical sciences. The aim is to translate using existing knowledge and technologies to create potential new medicines. We will also extend our research knowledge to leverage international, academic and industrial collaborations with the ultimate goal to translate this knowledge into new drug targets, drug design, drug development and pathology in health and disease.

Professor Jeremy Field

What we do

Neurodegenerative Disease and Ageing Research Centre. The group comprises medicinal chemists, biologists, and clinical scientists. The aim is to harness the potential for drug development from our home-made knowledge to leverage international, academic and industrial collaborations. The group will ultimately be responsible for the identification of new drug targets, drug design, development of new therapeutics and pathology in health and disease.

Professor Jeremy Field

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Neurodegeneration and brain disorders

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