



£1.2 million grant could lead to “designer” drugs (图)

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03 July 2007, Scientists from the University of Bath have been awarded £1.2 million to help better understand how the cells in our body communicate using “molecular messengers”.

The research could lead to new types of drugs that are tailor-made for tackling specific conditions - such as neurodegeneration and cancer - caused by faults in the cell signalling system.

As part of the five-year research, the scientists will investigate the molecules that relay messages received by cells - from hormones, neurotransmitters and other “first” messengers - to the parts of the cell that carry out specific tasks.

By making structural changes in these “second” messengers, scientists hope to develop a clearer picture of how different molecules within the cell signalling system work.

These synthetic molecules may also prove to have novel benefits that make them useful as drugs that can overcome specific faults in the system.

The research is funded by a grant from the Wellcome Trust and will give scientists in the Medicinal Chemistry Group of the University's Department of Pharmacy & Pharmacology the chance to explore the potential of this emerging field.

Professor Barry Potter and Dr Andrew Riley will lead the research.

“A number of diseases are caused by cell signalling malfunctions,” said Professor Potter.

“There is intense interest in better understanding how the messenger molecules in cell signalling work.

“Our research group has devised ways of changing the molecular structure of messenger molecules and tagging them with fluorescent labels that allow us to see what is happening.

“These compounds, which do not appear naturally, can behave in novel ways.

“They are useful experimental tools that help understand how signalling molecules are recognised by their protein targets, and may even lead to future drugs.”

Dr Riley said: “Our recent work in this field is providing new insights into the mechanisms of cellular signalling at the molecular level.

“This extended period of support from the Wellcome Trust will allow us to pursue these important developments.

“We are delighted with this reaffirmation of the quality of our interdisciplinary work at Bath.”

The team collaborates extensively worldwide with many leading biological groups and particularly with a complementary biological group in the Department of Pharmacology, University of Cambridge.

This week the Department of Pharmacy & Pharmacology is celebrating 100 years of pharmacy training and research in Bath with a special series of events, culminating in a gala dinner for around 300 members of staff, VIPs and former students.

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