














# Molecules, Cells and Systems








## Gene Expression


| Principal Supervisor        | University | Department   | Co-Supervisor               | Title of Project   | Project description   |
|-----------------------------|------------|--------------|-----------------------------|--|---|
| BRINDLE, Professor Nicholas | Leicester  | Biochemistry | HOLLOX, Dr Edward           | Molecular evolution of tyrosine kinases and metazoan multicellularity                              |    |
| GYORY, Dr Ildiko            | Leicester  | Biochemistry | PRITCHARD, Professor Catrin | Investigating the role of a novel tumour suppressor in an animal model of K-RAS-driven lung cancer |    |
| SCHWABE, Prof John          | Leicester  | Biochemistry | REVYAKIN Dr, Andrey         | Structural and functional studies of the general RNA polymerase II transcription factor TFIID      |    |
| SCHWABE, Prof John          | Leicester  | Biochemistry | JAMIESON, Dr Andrew         | Rationally Designed Chemical Tools to Dissect the Epigenetic Role of Histone Deacetylase Complexes |  |
| COWLEY, Dr Shaun            | Leicester  | Biochemistry | SCHMID, DR Ralf             | Understanding the role of HDAC1 in transcriptional activation                                      |  |

## Molecular Mechanisms

| Principal Supervisor | University | Department   | Co-Supervisor       | Title of Project  | Project description   |
|----------------------|------------|--------------|---------------------|---|---|
| BAYLISS, Dr Richard  | Leicester  | Biochemistry | JAMIESON, Dr Andrew | Exploring the cellular roles of Aurora-A protein-protein interactions using synthetic |  |

|                           |           |  |                                    |   |   |
|---------------------------|-----------|--|------------------------------------|---|---|
|                           |           |  |                                    | proteomimetics  |   |
| COWLEY, Dr Shaun          | Leicester | Biochemistry                                       | SCHMID, Dr Ralf                    | Understanding the role of HDAC1 in transcriptional activation   |    |
| ECHALIER Dr, Aude         | Leicester | Biochemistry/Cancer Studies and Molecular Medicine | BAYLISS, Dr Richard; SOBOTT, Frank | Investigation of a cancer-related protein interaction network at the molecular level  |    |
| EL-MEZGUELDI Dr, Mohammed | Leicester | Biochemistry                                       | REVYAKIN Dr, Andrey                | Investigation of the spatial and temporal distribution of actin binding proteins: calponin, caldesmon and tropomyosin in spines and dendrites using single-molecule super-resolution microscopy (STORM) |    |
| EPERON, Prof Ian          | Leicester | Biochemistry                                       | HUDSON, Dr A                       | New ways to analyse complex reactions at the single molecule level  |  |
| EPERON, Prof Ian          | Leicester | Biochemistry                                       | REVYAKIN Dr, Andrey; HUDSON, Dr A  | Single molecule microscopy of transcription and splicing  |  |
| FRY, Prof Andrew          | Leicester | Biochemistry                                       | FOSTER, Dr Steven                  | The role of NEK kinases in the DNA Damage Response  |  |
| MACIP, Dr Salvador        | Leicester | Biochemistry                                       | PILETSKY, Professor Sergey         | Understanding and ameliorating ageing through   |  |

|                     |           |              |                      |   |   |
|---------------------|-----------|--------------|----------------------|---|---|
|                     |           |              |                      | the characterization of novel effectors of senescence.  |   |
| MAKAROVA, Dr Olga   | Leicester | Biochemistry | REVYAKIN, Andrey     | Mechanisms of cross-intron bridging   |    |
| MOODY, Dr Peter     | Leicester | Biochemistry | RAVEN, Dr Emma       | Oxygen activation: Heme Enzymes   |    |
| REVYAKIN Dr, Andrey | Leicester | Biochemistry | COWLEY, Dr Shaun     | Self-assembled DNA nano-antennas to record single-molecule movies of transcription activation in live embryonic stem (ES) cells                 |    |
| SCHWABE, Prof John  | Leicester | Biochemistry | REVYAKIN Dr, Andrey; | Structural and functional studies of the general RNA polymerase II transcription factor TFIIF   |  |
| SCHWABE, Prof John  | Leicester | Biochemistry | JAMIESON, Dr Andrew  | Rationally Designed Chemical Tools to Dissect the Epigenetic Role of Histone Deacetylase Complexes  |  |
| SHACKLETON, Dr Sue  | Leicester | Biochemistry | SCHWABE, Prof John   | Investigating the role of the LINC complex in myogenesis and myonuclear positioning through a combined interactome and structure-based approach |  |
| TANAKA, Dr          | Leicester | Biochemistry | KLIPP, Prof          | Integrated  |  |

|                            |           |              |                                 |  |   |
|----------------------------|-----------|--------------|---------------------------------|--|---|
| Kayoko                     |           |              | Edda;<br>BAYLISS, Dr<br>Richard | understanding<br>of regulatory<br>mechanism of<br>RAS-MAPK<br>signalling |   |
| VUISTER, Prof<br>Geerten W | Leicester | Biochemistry | MITCHESON<br>, Dr John          | Regulation of<br>Trp channels  |  |