



University of  
**Strathclyde**  
Science

MSc

**CANCER THERAPIES**

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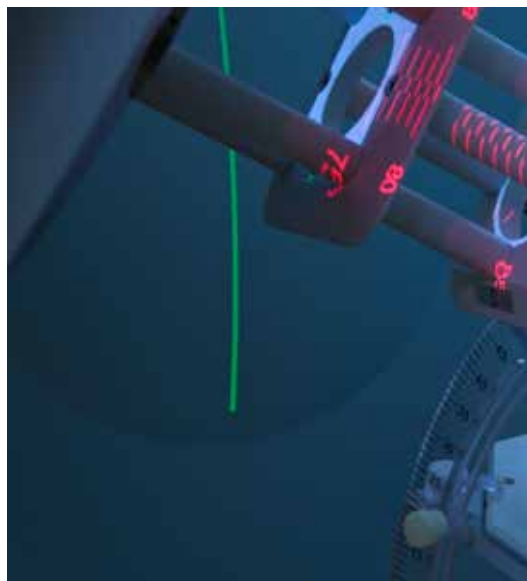
## CANCER THERAPIES

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This course will enhance your knowledge and understanding of cancer therapies and provide you with the skills to assess, analyse, critically appraise and evaluate current and emerging anti-cancer therapies and the drug discovery cascade, from target evaluation and engagement to clinical trials.

The programme was developed in response to the increasing demand for a course which focuses on current and emerging cancer therapies. It is the only programme in the UK which combines a focus on cancer biology with the practical, ethical and economic implications of personalised cancer therapy, along with its biology and the discovery and development of drugs.

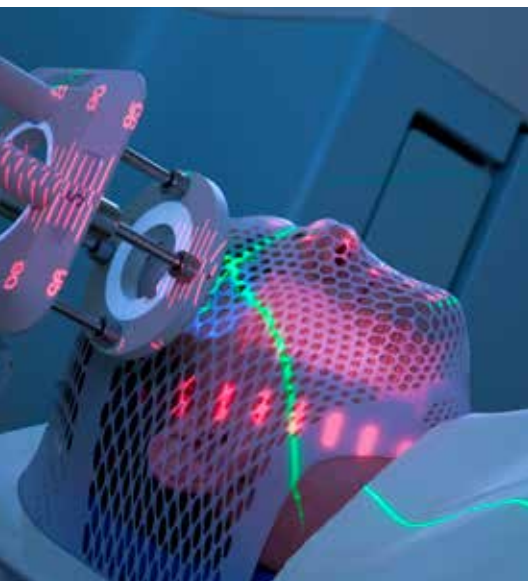
Strathclyde Institute of  
Pharmacy & Biomedical  
Sciences was ranked No 1 for  
Research Power in Scotland  
and 4th in the UK (REF 2014).



### Programme Skills Set

By the end of the course you will be able to:

- focus on anti-cancer treatment therapies, with a particular emphasis on personalised medicine, covering the therapeutic target and the biological mechanisms of current and emerging anti-cancer therapies
- explore radiotherapy as a diagnostic, and as a single or combinational treatment with drugs in anti-cancer therapy
- understand the discovery and development of new drugs and the challenges associated with this process
- develop anti-cancer agents and progress these through the drug discovery cascade,
- evaluate the drug discovery pipeline including medicinal chemistry, screening, secondary assays and other drug discovery and development technologies



### Careers

Graduates will have the skills to contribute to the global drive in advancing cancer treatment through research, teaching, industry and public sector employment.

They will have a number of potential employment opportunities: large and small pharma companies, SMEs, within health services and providers, their home

institutions and as academics in UK, EU or international universities.

The course will enable careers in research, academia industry and the health sector and offers you a unique exposure to the entire drug discovery and development cascade while keeping patients' needs at the forefront of the learning process.

### Compulsory Classes

- **Generic Research Skills** – refine your skills in statistics, data presentation and career development; learn about the ethical choices and dilemmas you may encounter in your scientific career – skills which are particularly relevant in the field of cancer therapies and drug discovery
- **Entrepreneurship, Innovation and Commercialisation** – find out from the experts what it takes to translate ideas in biomedical sciences into patents, business plans and spin-out companies
- **Advanced Techniques in Biomedical Research 1 & 2** – two compulsory laboratory classes familiarise you with the key research skills relating to the biochemistry, pharmacology, microbiology and immunology fields, help develop your skills in data analysis and report writing, and pave the way for a smooth transition into your summer research project
- **Radiology and Radiation Oncology: From Beam to Bedside** – gain an understanding of the current clinical modes of radiotherapy and the emerging technologies most likely to provide the next generation of radiotherapy methods such as proton and radiopharmaceutical therapies; learn about the cellular effect of radiation including the strengths and limitation of different radiation methods and the use of nuclear medicine in therapy and diagnosis

- Drug Discovery and Development in Cancer – examine the key overriding issues in cancer drug formulation and delivery and gain an understanding of the cancer drug discovery pipeline; gain an overview of medicinal chemistry principles and consideration of what is a ‘drug’ and how to develop one by understanding the importance of ADMET and PK in drug development
- Scientific Writing – use methods such as scenarios, evidence-based medicine, and research and reference materials to develop academic writing skills such as critical analysis, advanced literature and data set searching, and proposal organisation and writing skills
- Development and Design of Anti-cancer Drugs – work in groups on a virtual drug discovery programme – from target and target validation to developing and testing a new anti-cancer drug in clinical trials
- Research Project – over a 10-week period from May to August, students undertake a research project under the supervision of a leading researcher in their field

### Course Duration

12 months full-time; 24 months part-time

### Entry Requirements

Lower second-class Honours degree, or equivalent. Alternative qualifications or professional experience may also be considered for admission to the diploma course. Following satisfactory completion of semester 1, these students may be able to transfer to the MSc programme.

**English language:** IELTS 6.5 (with no component below 5.5) is required for all non-English speakers.

### Fees and Funding

For information on current fee levels, see: [www.strath.ac.uk/studywithus/feesfunding/tuitionfees](http://www.strath.ac.uk/studywithus/feesfunding/tuitionfees)

A number of scholarships are available for outstanding UK, EU and international applicants. For details, please visit [www.strath.ac.uk/studywithus/scholarships](http://www.strath.ac.uk/studywithus/scholarships)

### Further Information and How to Apply

For further information and how to apply, please visit [www.strath.ac.uk/courses](http://www.strath.ac.uk/courses)

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[www.strath.ac.uk/science](http://www.strath.ac.uk/science)

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