



# SCIENTIFIC UPDATE

*We've got chemistry*

## MEDICINAL CHEMISTRY

2-4 MAY 2018

**Edinburgh, UK**  
Radisson Blu Hotel

"Thank you for everything. This course will absolutely help me to be a better scientist."

**Celon Pharma**



A 3 day course given by  
**Dr Paul Beswick**  
**Dr David Clark**  
**Dr Mary Donnelly**  
**Dr Martin Swarbrick**  
**Dr Will Watson**

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# MEDICINAL CHEMISTRY

A 3 day course given by  
Dr Paul Beswick, Dr David Clark, Dr Mary Donnelly,  
Dr Martin Swarbrick and Dr Will Watson

2-4 May 2018 Edinburgh, UK, Radisson Blu Hotel

Multiple  
attendees  
discounts  
**UP TO 15%**  
available

## INTRODUCTION

**This course in medicinal chemistry sets out to train organic chemists to understand the key factors in discovering a new drug substance, from target selection, through lead generation and lead optimisation, to the selection of a development candidate. The course will cover aspects of the drug discovery process such as structure activity relationships, the use of computational chemistry in drug discovery, ADME and safety issues.**

Medicinal chemists need to understand the relationship between chemical structure and the physical properties of molecules and how this translates into compound stability and the interaction of the molecule with biological structures. These biological targets include proteins, lipids, nucleic acids and cell membranes. Interaction of the molecules with these targets affects the distribution of the compound in biological systems and modulates biological function.

To do this successfully the medicinal chemist needs to be aware of how target selection is carried out and how this affects lead generation. The medicinal chemist needs knowledge of structure property relationships, the physico-chemical properties of drugs and how these molecules interact with the body- pharmacokinetics and ADME (Absorption, Distribution, Metabolism and Excretion).

The course also includes an overview of the use of computational chemistry in virtual screening and library design. The lectures are backed up by a number of case studies and workshop sessions, which involve the participants in using the concepts discussed.

## COURSE OUTLINE

- > Introduction: Overview of drug discovery process, target selection in the post-genomic era.
- > Introduction to Medicinal Chemistry, definitions, QSAR studies, drug receptors, physico-chemical properties.
- > Physico-chemical properties of drugs, and implications for Absorption.
- > Lead generation approaches.
- > Lead generation using computational techniques: molecular recognition, structure- and ligand-based virtual screening, success stories.
- > Molecular diversity and combinatorial library design.
- > Pharmacokinetics and ADME, with examples.
- > Introduction to Lead Optimisation, Case Studies.
- > Overview of some of the reasons for project failure, of Safety, in particular to its relationship to chemical structure and of critical issues in Drug Development
- > Intellectual property issues related to drug discovery.
- > What happens next? – a (very) brief overview of process development issues.

## WHAT WILL ATTENDEES GAIN?

- An understanding of how biological disease targets are selected.
- An insight into the terms, definitions and analysis methods used by medicinal chemists in the pharmaceutical industry.
- An introductory knowledge of Pharmacokinetics and ADME (Absorption, Distribution, Metabolism and Excretion) and how physicochemical properties influence absorption.
- An introduction to the use of computational chemistry including pharmacophore generation, virtual screening and library design.
- An overview of safety assessment and how chemical structure relates to safety.



# SCIENTIFIC UPDATE

*We've got chemistry*

**Start** 9.00am - Wednesday 2 May

**Finish** 4.30pm - Friday 4 May

**Course dinner** 7.00pm - Wednesday 2 May

**Course Fee:** £1,470 + VAT

Which includes comprehensive course manual, refreshments throughout the day, lunch and one course dinner.

**Course Fee:** £1,470 + VAT

## COURSE TUTORS



**Dr Paul Beswick**  
Medicinal Chemist



**Dr David Clark**  
Charles River  
Early Discovery



**Dr Mary Donnelly**  
MDPharmasolutions  
Ltd



**Dr Martin Swarbrick**  
Cancer Research  
Technology

Full Tutor  
biographies on  
our website.



**Dr Will Watson**  
Scientific Update

## REGISTRATION

You can either use our fast online booking system or mail or fax the attached registration form to:  
Scientific Update  
Maycroft Place, Stone Cross, Mayfield,  
East Sussex, TN20 6EW, UK  
Fax Number +44 1435 872734

### How to Pay

When you register online, you can have the option to pay via credit card (Mastercard or Visa). A receipted invoice will be automatically generated once paid and sent via email. Should your company wish to pay by cheque or bank transfer bank details will be supplied with an invoice.

### Bank Transfer or Cheque

Should your company wish to pay by cheque or bank transfer, on booking you can choose between paying in either €, \$ or £. All bank details will be supplied with an invoice.

### Group Discounts

Group discounts are available on two or more attendees - see registration form. This offer only applies if bookings are made simultaneously and from the same billing address.

### Confirmation of your registration

These will be sent via email.

### Late Applications

For late applications, please register online or fax the completed registration form, including credit card payment information.

### Cancellations/Refunds

Should you be unable to attend and cancel in writing no later than 1 month before the start of the course, Scientific Update will refund your registration less £300 (or equivalent in €/£) processing fee. Unfortunately refunds are not possible after that date. Substitutions can be made at any time.

## Course Participants - Who is this course aimed at?

- > Young chemists who have just started in industry as medicinal chemists.
- > Experienced medicinal chemists who wish to gain additional knowledge on how to obtain compounds with optimal drug-like properties and get up to date with the latest thinking.
- > Chemists from other areas of Research and Development who would like to gain an appreciation of the processes and drivers involved in drug discovery.
- > Students who are planning a career in industry and can obtain company sponsorship.

## VENUE

The Radisson Blu Hotel, Edinburgh  
80 High Street, The Royal Mile,  
Edinburgh, EH1 1TH, Scotland  
Tel: +44 131 557 9797  
[www.radissonblu.co.uk/hotel-edinburgh](http://www.radissonblu.co.uk/hotel-edinburgh)

The Radisson Blu Hotel is located halfway between Edinburgh Castle and Holyrood Palace and within a few minutes walk from the designer shops on Princes Street. Waverley Station is only a 5 minute walk away.

A limited number of rooms have been reserved at the hotel for the special rate of £183 per night including VAT and a full Scottish breakfast. A hotel booking form will be sent when you register.



# MEDICINAL CHEMISTRY



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#### Cancellations

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