



**SCIENTIFIC
UPDATE**

We've got chemistry

3 day
Course

2020

MEDICINAL CHEMISTRY

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

Celon Pharma

30

Celebrating 30 years serving
the global chemistry industry

1989 - 2019



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.

WHO SHOULD ATTEND?

- > 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.



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Registration 8.30
Course commences 9.00 Day 1
Course adjourns 1 on Day 2

Course fees include a comprehensive course manual, refreshments throughout each day, lunches and one course dinner on the first evening

For all prices and dates please refer to our website



**IT'S EASY TO
REGISTER
ONLINE**

COURSE TUTORS



Dr Will Watson

Technical Director,
Scientific Update



Dr David Clark



**Dr Martin
Swarbrick**



Dr Paul Beswick



Dr Rachael White

You can find the full tutor biographies on our website, tutors will depend on location.

CONSULTANCY SOLUTIONS

OUR EXPERTISE

We are specialists in Industrial Organic Chemistry, solving problems and managing projects in Process Research and Development covering the following industries:

- > Pharmaceuticals
- > Fine Chemicals
- > Agrochemicals
- > Flavour & Fragrance
- > Specialty Chemicals

OUR TEAM

You will be assigned one leading consultant but you will benefit from our team with over 100 years collective industrial experience.



OUR APPROACH

We will sign a CDA and discuss your project by telecom or webinar to assess what benefits we can offer. This initial consultation (up to 4 hours) is free of charge. After which we will offer a detailed proposal with the service we can provide tailored to your individual requirements.

REGISTRATION

Use our **fast online booking system by visiting**

www.scientificupdate.com

Alternatively you can 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 (Amex, 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, on booking, 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 £300.00 (or equivalent in €/£) processing fee. Unfortunately refunds are not possible after that date. Substitutions can be made at any time.

DON'T MISS OUT - REGISTER TODAY

EVENT:**DATES:****LOCATION:****No. of attendees****Price****NEW FAST ONLINE REGISTRATION**

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Third attendee

Title (Dr/Prof/Mr/Mrs/Ms)	<input type="text"/>
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We accept the following credit cards:



To pay by credit card a secure link will be provided once you receive your booking confirmation email, this will then take you to a secure payment gateway.

*payments via Amex can only be made in US dollars

Currency Payments

If you select to pay in a different currency than the event is advertised in, the amount charged will be based on the exchange rate at the time of preparing the invoice.

Discounts

Complete the details for either two or three delegates and your discount will automatically be applied. This offer only applies where all delegates are booked simultaneously and at the same billing address.

Cancellations

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Data Protection

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For full terms of business and payment details please see our website

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