



**BioUpdate  
Foundation**

# **CARBOHYDRATE-BASED VACCINES**

**2<sup>nd</sup> and 3<sup>rd</sup> April 2012**

**Regardz Berghotel Hotel, Amersfoort, the Netherlands.**

## **Course Introduction and Aims**

Glycoconjugate vaccines are currently the most rapidly expanding class of bacterial vaccines, and are a very active field of research both in academic labs and in industry. Current vaccines are used to protect against bacterial meningitis, acute respiratory infections and invasive pneumococcal disease. Already widely used in developed countries, they have the potential to save millions of lives, mainly of young children in developing countries. Future vaccines against diseases such as typhoid and shigellosis have proven promising in clinical trials.

Glycoconjugate vaccines are produced by chemically attaching cell surface carbohydrates from a pathogenic bacterium to a suitable carrier protein, and are a development of older pure polysaccharide vaccines. Crucial to their success is the observation that conjugate vaccines, unlike the polysaccharides, are effective in protecting young infants because they activate the immune system through different pathways.

This intensive post-experience course covers the development of polysaccharide and glycoconjugate vaccines, their manufacture and quality control, and those factors considered crucial for an effective product. The molecular mechanisms by which these vaccines work and clinical trial and post licensure monitoring of their effects will also be covered.

## **Who should attend**

The course is designed primarily for industrial and academic scientists engaged in vaccine development, and particularly in development, production, purification, characterisation, or quality control, and also for professionals involved in the licensing and regulation of products of this type. Previous participants in this course have been from both large and small vaccine manufacturing companies, from regulatory authorities and from academic laboratories. This has led to wide ranging discussions and a fruitful exchange of opinions between participants and tutors.

## Course Topics

In this course the two tutors will discuss these vaccines, focussing discussion around a series of questions which include:

1. Which are the diseases against which existing vaccines have proven effective?
2. How do conjugate vaccines differ from the older polysaccharide vaccines?
3. What are the structures of these vaccines and their individual components?
4. How are these vaccines made?
5. How are these vaccines characterised?
6. What quality control methods are used to ensure continuing efficacy?
7. Why are complex multi-component vaccines required?
8. How do these vaccines create a protective immune response?
9. How did these vaccines perform in clinical trials?
10. What are the key factors which define an effective vaccine of this type?
11. What factors are involved in protecting a population and unvaccinated individuals?
12. How well have these vaccines performed when used in mass vaccination campaigns?
13. What problems have been observed, and how can they be avoided?
14. What other vaccines of this type are being developed?

## Tutorial Team

**Chris Jones, Ph.D.** is Head of the Laboratory of Molecular Structure at the National Institute for Biological Standards and Control (NIBSC), South Mimms, UK. He has been involved in the characterisation and quality control of polysaccharide and glycoconjugate vaccines, and in the development of international regulatory standards for these products.

**Ian Feavers** is Head of the Division of Bacteriology at the NIBSC, UK. In addition to his active research programme on the molecular genetics and immunology of meningococcal and pneumococcal antigens, his laboratory is responsible for the control of meningococcal and pneumococcal vaccines. With a broad experience of bacterial vaccines and molecular biology, he is closely involved with a number of vaccine developments. He regularly contributes to WHO and EU guidelines and is a member of the HPA's Vaccine Programme Board.

## About the BioUpdate Foundation

Established in the Netherlands in 1992, the Foundation promotes residential post-experience education and training for the biotechnology and allied industries. As a non-profit Foundation, affordable fee structures can be maintained. The BioUpdate Foundation ensures the highest standards by engaging only tutors with extensive experience. Courses and short seminars are continuing to attract participants from many European countries, and even countries further afield.

### Venue and terms

The course will begin at 10.00am on 2 April 2012 and finish at approx.16.30pm on 3 April 2012. It will be held in the pleasant Regardz Berghotel, Utrechtseweg 225, 3818 EG, Amersfoort, The Netherlands. The telephone number of the hotel is +31-33-4224222 . Amersfoort can be reached easily from Schiphol airport by train (journey time 45 minutes, a train leaves every 30 minutes).

The course fee of €1050 includes registration, accommodation at the Regardz Berghotel for one night (2 April 2012), one dinner, continental breakfast and two lunches, all tuition and a comprehensive course manual. Attendance on the course is limited to the first 25 participants whose registration is confirmed.

Those who would like to stay in the hotel the night before the start of the course are advised to make reservations directly with the hotel (<https://booking.regardz.nl/en>) or by phone (+31-33-4673730) mentioning the BioUpdate Foundation. For this purpose BioUpdate has reserved a block of rooms which are offered at €89 per night. The hotel bill for such a room must be settled independently.

## Registration

Please complete the attached registration form to secure your place and for detailed information contact André Schram at [schram@bioup.com](mailto:schram@bioup.com)

**For future courses and conferences,  
please visit the BioUpdate Foundation website at**

**<http://www.bioup.com>**



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# Registration Form

Carbohydrate Based Vaccines

Amersfoort, The Netherlands

April 2-3, 2012

Course Fee €1050

## BIOUPDATE FOUNDATION COURSE REGISTRATION

### DELEGATE DETAILS

Family name	
Forename	
Title	
E-mail	
Telephone	
Job Title	

### COMPANY DETAILS

Company Name	
Address line 1	
Address line 2	
City	
Postcode	
Country	

### BOOKING CONTACT DETAILS if different to delegate details

Family name	
Forename	
Title	
E-mail	
Telephone	

#### Terms & Conditions

**Course fees** must be paid in advance to secure your place. The fee includes lunch, dinner and accommodation on April 2<sup>nd</sup> and breakfast and lunch on April 3<sup>rd</sup>.

**Cancellations:** Notice of cancellation must be given in writing. Cancellations within 30 days of the course start date will be refunded at 50% of the fee. No refunds for cancellation within 10 days of the start date.

**Confirmation** You will receive confirmation of your booking. If you do not, please contact schram@bioup.com.

#### Payment Information: Payment to be made by cheque or direct bank transfer.

Invoice required? Yes/No

##### Payment by cheque

**Payable to:** The BioUpdate Foundation

**Address:** Brinklaan 76A3,  
1404 GL Bussum,  
The Netherlands.

**Please quote** delegate name/CBV

##### Payment by bank transfer

**Bank:** ABN-AMRO  
**Account:** The BioUpdate Foundation  
**Acc Number:** 554079968  
**IBAN:** NL17ABNA0554079968  
**BIC (Swift):** ABNANL2A  
**Please quote as reference** delegate name/CBV

**Data Protection.** The personal information given on this form will be held on a database. The BioUpdate Foundation will not share this information with any third party other than to book hotel rooms and as required to do so by law.