



**PAOFARMACIE**

Nationaal PostAcademisch Onderwijs Centrum Farmacie  
Netherlands Centre for Post-Academic Education in Pharmaceutical Sciences



# TRAINING COURSE QUALITY MANAGEMENT IN PHARMA AND BIOTECH 2012



**MODULES**

- M1** Quality Management, the role of the Qualified Person
- M2** Drug development from Quality by Design to clinical studies:  
an integrated course for the pharmaceutical industry and hospital pharmacy
- M3** Sterile manufacturing
- M4** Quality and safety for the manufacturing of biopharmaceuticals:  
from cell line development to downstream processing and formulation



## QUALITY MANAGEMENT, THE ROLE OF THE QUALIFIED PERSON

# PROGRAM

6 - 8 February 2012

*Hotel Bergse Bossen, Driebergen, the Netherlands*

### MONDAY, 6 FEBRUARY 2012

**Themes:** *The role and legal obligations of the Qualified Person*  
*Introduction to current concepts in Quality Management*

- 09.15 **Welcome and Introduction**  
*Vivien Moffat*
- 09.30 **Responsibilities of the Qualified Person (QP):**  
**International regulations**  
**Current views from the Inspectorate**  
*Hans Smallegenbroek*
- 10.15 **The role and duties of the Qualified Person in**  
**Pharmaceutical Quality Management and the supply**  
**of medicines to the European Community**  
*Marijke Pubben*
- 12.00 **Lunch**
- 13.00 **Case study addressing the issues facing the QP in an**  
**integrated approach to Quality Assurance**  
**in a pharmaceutical environment**  
*Saskia Sturm and Marijke Pubben*
- 14.15 **Presentations and discussions**
- 15.00 **Validation principles in the pharmaceutical industry**  
*Saskia Sturm*
- 16.15 **Case study: Risk management**  
*Vincent Coolen and Jan Damm*
- 17.45 **Social drink and dinner**

### TUESDAY, 7 FEBRUARY 2012

**Theme:** *Maintaining compliance in the current*  
*Quality environment*

- 09.00 **Quality systems**  
*Sue Mann*
- 10.00 **Compliance, change control and audits**  
*Jolande Schoemaker*
- 11.00 **Case study: in compliance or not in compliance?**  
*Jolande Schoemaker*
- 12.30 **Lunch**
- 13.30 **The role of the QP in the manufacture of Active**  
**Pharmaceutical Ingredients (APIs) and finished**  
**products for investigational purposes (IMPs)**  
*Speaker to be announced*
- 14.30 **Introduction to the case study 'Creatis and BODL 2000'**  
*Dominique Mudde and Carin Huibers*

- 15.00 **Case study:**  
**preparation for an inspection of the manufacturing**  
**of the antidepressant BODL 2000**  
*Dominique Mudde and Carin Huibers*
- 17.00 **The fight against counterfeit medicines:**  
**the new falsified medicines directive and**  
**securing the supply chain for patients**  
*Jean-Michel Guirado*
- 18.00 **Dinner**
- 19.30 **Introduction to the workshop: the real world**  
*Pedro Tetteroo, Vivien Moffat and Mirjam te Koppele*

### WEDNESDAY, 8 FEBRUARY 2012

**Theme:** *Operating effectively as a QP in the complex*  
*world of pharmaceutical manufacturing*

- 09.00 **"The international QP"**  
*Tesh Patel*
- 11.00 **Experiences from a QP in industry:**  
**in a hospital pharmacy:**  
*Katja van Rij*
- 12.30 **Lunch**
- 13.30 **Workshop: the real world**  
*Pedro Tetteroo, Mirjam te Koppele, Vivien Moffat,*  
*Eric van Wensveen and Katja van Rij*
- 15.30 **Lessons from the workshop**
- 16.00 **Evaluation of the course and concluding remarks**  
*Vivien Moffat*
- 16.15 **Farewell drink**

## FACULTY

### COURSE LEADER

**Dr. V.L.C. Moffat**

*Amgen BV, Breda, the Netherlands*

### LECTURERS

**V.P. Coolen, MSc**

*Tebodin, Eindhoven, the Netherlands*

**Dr. J.B.L. Damm**

*PharmSupport BV, Oss, the Netherlands*

**J-M. Guirado**

*Amgen BV, Breda, the Netherlands*

**Drs. C.M. Huibers**

*Janssen Biologics BV, Leiden, the Netherlands*

**Drs. M.A. te Koppele**

*MedImmune Pharma BV, Nijmegen, the Netherlands*

**S. Mann**

*Sue Mann Consulting Ltd (SMC), Newnham, Hook, United Kingdom*

**D.M. Mudde, M.Biotech**

*HAL Allergy, Leiden, the Netherlands*

**Dr. T.K. Patel**

*Astellas Pharma Europe Ltd., Staines, United Kingdom*

**Drs. M.M.G. Pubben**

*Merck, Sharp & Dohme BV, Haarlem, the Netherlands*

**Drs. C.M. van Rij**

*Clinical Pharmacy, UMC St Radboud, Nijmegen, the Netherlands*

**Drs. T.J. Schoemaker**

*Schoemaker Consultancy, Nieuw-Dordrecht, the Netherlands*

**Drs. A.J. Smallembroek**

*Health Care Inspectorate, Den Haag, the Netherlands*

**Drs. S.E. Sturm**

*Merck, Sharp & Dohme BV, Haarlem, the Netherlands*

**Dr. P.A.T. Tetteroo**

*Tetteroo Coaching & Consulting, Oegstgeest, the Netherlands*

**Drs. E. van Wensveen**

*Covidien, Petten, the Netherlands*

### GENERAL INFORMATION

All the information on registration, cost and starting dates can be found on the page "General Information" and is also available on the website of [www.paofarmacie.nl](http://www.paofarmacie.nl) select course **Quality Management**



# TRAINING COURSE QUALITY MANAGEMENT IN PHARMA AND BIOTECH

## DRUG DEVELOPMENT FROM QUALITY BY DESIGN TO CLINICAL STUDIES: AN INTEGRATED COURSE FOR THE PHARMACEUTICAL INDUSTRY AND HOSPITAL PHARMACY

# PROGRAM

16 - 19 April 2012

Hotel Bergse Bossen, Driebergen, the Netherlands

### MONDAY, 16 APRIL 2012

**Theme:** *Medicinal chemistry, pharmaceutical formulations, large scale production*

#### 10.00 Welcome and introduction

*Erik Frijlink and Leo de Leede*

#### 10.15 Introduction of the case study: antidepressant BODL 2000

- the profile of BODL 2000; R&D steps and R&D data
  - registration of BODL 2000; role of RA department
  - the quality of the registration dossier for BODL 2000
  - Good Regulatory Practice (GRP) and the quality of the company
- Leo de Leede*

#### 11.30 Medicinal chemistry: quality in lead finding and lead optimization

*Jac Wijkmans*

#### 12.30 Lunch

#### 14.00 Quality requirements from process chemistry to large scale production

*Michel Guillaume*

#### 15.00 Pharmaceutical formulations

- the development of drug products
  - quality management and cGMP in pharmaceutical development
  - small scale production
  - from small scale to large scale
- Erik Frijlink*

#### 18.00 Social drink and dinner

### TUESDAY, 17 APRIL 2012

**Theme:** *Quality by Design in industry and hospital pharmacy, GMP applied*

#### 09.00 Objectives of the day, focus on GMP:

*Jan-Jaap Scherpbier*

#### 09.15 Quality part of registration dossier

*Frans Metsers*

#### 09.30 From R&D to production

- Quality by Design
  - PAT and PCT in industry and hospital pharmacy
- Erik Frijlink*

#### 11.30 Total Quality Management obtained by Quality by Design

- real life examples in industry
- Ben van Beek*

#### 12.30 Lunch

#### 13.30 Case study BODL 2000: GMP/Quality:

- deviations and changes during manufacturing of clinical supplies
  - impurity profile drug substance
  - specifications and batch analysis data
  - deviations during commercial manufacturing
- Jan-Jaap Scherpbier and Frans Metsers*

#### 15.15 Group presentations

##### Wrap up of the case

#### 17.00 The development of oncolytic drug products: the Slotervaart case

*Jos Beijnen*

#### 18.00 Social drink and dinner

### WEDNESDAY, 18 APRIL 2012

**Theme:** *Pre-clinical development, GLP applied, personal skills*

#### 08.30 Objectives of the day, focus on GLP

*Ineke Jonker-Hoogerkamp*

#### 08.45 Introduction to GLP

*Chris Mitchell*

#### 09.00 Pharmacokinetics and pharmacodynamics (PK/PD) in industrial practice

*Peter Vis*

#### 10.30 Toxicology, BODL 2000 in focus

*Eric de Waal*

#### 12.00 Lunch

#### 13.00 Case study BODL 2000: GLP and regulatory aspects of pharmacokinetics, pharmacodynamics and toxicological studies:

- action steps for the preparation and execution of the toxicological study to guarantee that it will be a GLP compliant study
  - is there a need for additional requirements from GLP perspective for a multi-site study ?
  - are additional data from tox studies required for registration of BODL 2000 ?
- Ineke Jonker-Hoogerkamp and Chris Mitchell*

#### 14.30 Group presentations

##### Wrap up of the case study

#### 15.30 Events occurring in industry and hospital pharmacy, not appreciated by inspectors

*Annie Rietveld*

#### 16.15 Workshop skills required in drug development

##### Real life example: mix-up in a wallet

*Annie Rietveld, Erik Frijlink and Leo de Leede*

#### 16.30 Role play by acting as company experts and authorities

**Experts: representative from R&D (and site) management, the QP, Head of pharmaceutical development, clinical production and packaging, Head of clinical development and Head of quality control**

*Annie Rietveld, Erik Frijlink and Leo de Leede*

#### 19.00 Dinner

### THURSDAY, 19 APRIL 2012

**Theme:** *Clinical development, GCP applied*

#### 08.30 Objectives of the day, focus on CP

*Luuk Promes and Lisette Vromans*

#### 09.00 Clinical development Phase I

**Principles, clinical study documents, requirements for a Phase I clinic, clinical pharmacology, types of Phase I studies**

*Leo de Leede*

#### 10.45 Clinical development Phase II and III

- clinical development plan
  - regulatory requirements clinical trials
  - issues (design, submissions, conduct)
  - investigator initiated studies (including case study)
- Petra Matthijsse*

#### 12.15 Lunch

#### 13.30 Reflection to the lectures and the case study

#### 14.00 Case study BODL 2000: GCP and clinical development program

- possible deficiencies in the clinical program
  - outline for a clinical trial
  - possible deficiencies in the informed consent
  - audit report
- Luuk Promes and Lisette Vromans*

#### 15.30 Group presentations

##### Wrap up of the case study

#### 16.00 Evaluation of the course and learned lessons

*Erik Frijlink and Leo de Leede*

#### 17.00 Farewell drink

## FACULTY

### COURSE LEADERS

**Prof.dr. H.W. Frijlink**

Groningen University Institute for Drug Exploration (GUIDE),  
Dept. of Pharmaceutical Technology and Biopharmacy, the Netherlands

**Dr. L.G.J. de Leede**

Exelion Bio-Pharmaceutical Consultancy BV, Waddinxveen, the Netherlands

### LECTURERS

**Drs. B.D. van Beek**

Merck, Sharp & Dohme, Haarlem, the Netherlands

**Prof.dr. J.H. Beijnen**

NKI and Slotervaart Hospital, Amsterdam, the Netherlands

**Dr. M. Guillaume**

Janssen, Beerse, Belgium

**Dr. A. Jonker-Hoogerkamp**

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**Drs. P.C. Matthijsse**

Trial Form Support, Berghem, the Netherlands

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Health Care Inspectorate, Utrecht, the Netherlands

**Drs. J.J. Scherpbier**

Merck, Sharp & Dohme, Oss, the Netherlands

**P. Vis**

Janssen, Beerse, Belgium

**Ms. E.W.M. Vromans**

Merck, Sharp & Dohme, Oss, the Netherlands

**Dr. E.J. de Waal**

Janssen, Beerse, Belgium

**Dr. J.C.H.M. Wijkmans**

Formerly, Merck, Sharp & Dohme, Oss, the Netherlands

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## STERILE MANUFACTURING

# PROGRAM

8 – 10 October 2012

*Hotel Bergse Bossen, Driebergen, the Netherlands*

### MONDAY, 8 OCTOBER 2012

**Theme:** *Microbiology*

09.30 **Welcome and outline of the course**

*Hans van Doorne*

09.45 **Biology of microorganisms**

**Implications for pharmaceutical production and quality control**

*Hans van Doorne*

10.45 **Sterile manufacturing: a philosophy on design and control**

*Jos Mathôt*

12.30 **Lunch**

13.30 **Environmental monitoring methods:**

- what are the risks we need to recognize and which methods are available?
- what are the results we obtain, how to evaluate them, how to recognize the risks and how to mitigate them
- introduction to the case study

*Klaus Haberer*

15.30 **Heat sterilization**

**Exercises**

*Hans van Doorne*

17.30 **Film: Parenteral production at MedImmune, Nijmegen**

*Mirjam te Koppele*

18.00 **Social drink and dinner**

19.30 **The gowning procedure**

*Mirjam te Koppele*

### TUESDAY, 9 OCTOBER 2012

**Theme:** *Water systems and parenteral production  
Sterility assurance in practice*

08.30 **Case study: Environmental monitoring methods**

*Klaus Haberer*

10.00 **Pharmaceutical water systems**

*Frank van Ede*

11.30 **Environmental monitoring methods:**

- water monitoring

*Klaus Haberer*

12.30 **Lunch**

13.30 **Membrane filtration**

*Hans van Doorne*

14.30 **Case studies: Sterility Assurance in practice**

- selection of formulation and process
- combination of production and QC activities
- isolator application in unclassified environment
- validation of visual inspection
- environmental monitoring trend
- start-up after power failure
- HEPA filter failure
- new requirements for vial capping

*Jos Mathôt*

16.00 **Presentations of the case study results  
Evaluation**

18.00 **Social drink and dinner**

### WEDNESDAY, 10 OCTOBER 2012

**Theme:** *Validation and qualification of processes and personnel  
The role of the QP*

09.00 **Validation of aseptic processes**

- introduction
- technologies
- qualification
- validation
- case studies aseptic processing

*Jos van der Lubbe*

11.30 **Validation of analytical methods**

- introduction
- validation
- specifications

*Jos van der Lubbe*

12.15 **Operator Qualification**

- introduction
- training
- case studies analytical methods and operator qualification

*Jos van der Lubbe*

13.00 **Lunch**

14.00 **Workshop: the role of the QP in assuring the quality of sterile pharmaceuticals**

*René Maassen*

16.00 **Evaluation of the course**

*Hans van Doorne*

16.30 **Farewell drink**

## FACULTY

### COURSE LEADER

**Dr.ir. H. van Doorne**

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Dept. of Pharmaceutical Technology and Biopharmacy, the Netherlands*

### LECTURERS

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**Dr. K. Haberer**

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**Drs. M.A. te Koppele**

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**Dr.ir. J.L.M. van der Lubbe**

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**Drs. R.H.L.M. Maassen**

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# TRAINING COURSE QUALITY MANAGEMENT IN PHARMA AND BIOTECH

## QUALITY AND SAFETY FOR THE MANUFACTURING OF BIOPHARMACEUTICALS: FROM CELL LINE DEVELOPMENT TO DOWNSTREAM PROCESSING AND FORMULATION

# PROGRAM

26 – 28 November 2012

*Hotel Bergse Bossen, Driebergen, the Netherlands*

### MONDAY, 26 NOVEMBER 2012

**Theme:** *Cell line development, upstream and downstream*

09.30 **Welcome**

*Aad van de Leur*

09.45 **Introduction to biotechnology: applications and elements of the biotechnological production process, quality and regulatory aspects**

*Aad van de Leur*

11.00 **Upstream process development for biopharmaceutical products: different expression systems and unit operations**

*Wout van Grunsven*

12.30 **Lunch**

13.30 **Cell line development and cell bank preparation  
Theory and case study**

Genetics: gene of interest; description of the starting strain(s) or cell line(s); preparation and description of the product strain or cell line; genetic stability during storage of cell bank and during production.

Cell Bank system: preparation and description of the Master Cell Bank (MCB); testing/in-process controls; protocol for preparation of subsequent Working Cell Bank (WCB)

*Nienke Vriezen*

17.00 **Purification survey of unit operations and process integration**

*Marcel Ottens*

18.30 **Dinner**

### WEDNESDAY, 28 NOVEMBER 2012

**Theme:** *Quality issues*

09.00 **Protein analytics of biopharmaceuticals:  
relevant assays and their principles**

*Martijn Pinkse and Peter Verhaert*

10.00 **Critical attributes and comparability studies**

*Prathima Acharya*

11.15 **Specific quality issues around ATMPs**

*Arnold Vulto*

12.15 **Lunch**

14.00 **Biosimilars**

*Arnold Vulto*

15.15 **Immunogenicity and formulation of biopharmaceuticals**

*Wim Jiskoot*

16.15 **Evaluation of the course**

*Aad van de Leur*

16.30 **Farewell drink**

### TUESDAY, 27 NOVEMBER 2012

**Theme:** *The practice*

09.00 **Design of an industrial process for purification of biologicals**

*Michel Eppink*

10.15 **Development, tech transfer and commercial production of monoclonal antibodies: theory and case studies**

- The use of platform technology

12.30 **Lunch**

- Critical quality attributes and critical process parameters
- Spec setting and the consequences for routine manufacturing
- Case study 1
- Technology transfer and process validation
- Pre-approval inspections
- Process Fit to Plant
- Case study 2
- Changes, deviations and CAPAs in manufacturing
- Process Excellence for continuous cost reduction

*Linda Bus-Jacobs, Diana van der Graaf-Harris and Maaïke Poppema*

18.00 **Viral safety**

*Klaus Kellings*

19.30 **Dinner**

## FACULTY

### COURSE LEADER

**Drs. A.C.A.J. van de Leur**  
*Synthon BV, Nijmegen, the Netherlands*

### LECTURERS

**Dr. P.S. Acharya**  
*KBI Biopharma Inc., Durham, North Carolina, USA*

**L. Bus-Jacobs, MSc, PDEng**  
*Janssen Biologics BV, Leiden, the Netherlands*

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**Prof.dr. A.G. Vulto**  
*Erasmus MC, Rotterdam, the Netherlands*

### GENERAL INFORMATION

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# COMMITTEE AND BOARD

## PROGRAM-/EXAMINATION COMMITTEE

### **Prof.dr. W. Jiskoot (chairman)**

Leiden/Amsterdam Centre for Drug Research (LACDR), Leiden, the Netherlands

### **Dr. J.L.M. van der Lubbe (vice chairman)**

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### **Dr.ir. H. van Doorne**

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### **Prof.dr. H.W. Frijlink**

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### **Dr. V.L.C. Moffat**

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### **Prof.dr. P.D.E.M. Verhaert**

Delft University of Technology, Dept. of Biotechnology, the Netherlands

## SCIENTIFIC ADVISORY BOARD

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## SCIENTIFIC ADVISORY BOARD

### **Members**

### **Prof.dr. H.J. de Jong (chairman)**

Formerly Leiden University, the Netherlands, Servier, R&D, Courbevoie, France, and European Pharmacopoeia, Strasbourg, France

### **Prof.dr. M. Danhof**

Leiden/Amsterdam Center for Drug Research (LACDR), Leiden University, the Netherlands

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### **Drs. J.M.M. Hansen**

Health Care Inspectorate, Den Haag, the Netherlands

### **Dr. P.H.H. Le Brun**

Apotheek Haagse Ziekenhuizen, Den Haag, the Netherlands

### **Drs. M.M.G. Pubben**

Merck Sharp & Dohme BV, Haarlem, the Netherlands

### **Dr. A. Rietveld**

Health Care Inspectorate, Utrecht, the Netherlands

### **Dr. A.P. Sam**

Merck Sharp & Dohme BV, Oss, the Netherlands and FIP's Industrial Pharmacy Section

### **Drs. A.J. Smallenbroek**

Health Care Inspectorate, Den Haag, the Netherlands

### **Prof.dr. H. Vromans**

Utrecht University, Pharmaceutical Sciences, Utrecht, the Netherlands

### PAOFarmacie offers Post Academic Education in Pharmaceutical Sciences



#### CHIEF EXECUTIVE OFFICER

*Sharon Schouten Tjin A Tsoi*

Pharm D and CEO of the Netherlands Centre for Post Academic Education in Pharmaceutical Sciences.

#### PARTNERSHIP

The Netherlands Centre for Post Academic Education in Pharmaceutical Sciences (PAOFarmacie) is a professional partnership between Pharmaceutical Sciences at Utrecht University (UU), The faculty of Medical Sciences of the University of Groningen (RuG), the Royal Dutch Pharmacists Association (KNMP), the Association of Dutch industrial Pharmacists (NIA) and the Dutch Association of Hospital Pharmacists (NVZA). The Board and Scientific Board of PAOFarmacie are formed by representatives of this professional partnership.

#### BOARD

Representatives of state universities and pharmaceutical associations form the board of PAOFarmacie. The board is responsible for policy, finance and personnel.

*Prof.dr. A. de Boer* chairman

*Dr. F. Moolenaar* secretary

*Drs. R.J. Wolters* chairman of finance

*Prof.dr. A.F.A.M. Schobben* board member

*Drs. R. Dessing* board member

*Drs. M.M. Tjoeng* board member

#### SCIENTIFIC ADVISORY BOARD

Members of the Scientific Advisory Board (WAR) are linked to national universities and pharmaceutical associations. Their aim is to further develop the curriculum of PAOFarmacie. In the WAR members of science and practice meet. They propose new topics for further training, continue development of existing topics and guarantee the scientific quality.

*Prof.dr. J.J. de Gier* chairman, representing the RuG

*Prof.dr. A.C.G. Egberts* representing the NVZA

*Drs. J.A.M. Wessels* representing the Post Academic Education for Hospital Pharmacists (PUOZ)

*Dr. T. Schalekamp* representing the UU

*Dr. H. Buurma* representing the Director of studies for the KNMP

*Drs. B.J.F. van den Bemt* representing the Dutch Association of Policlinic Pharmacy (NVPF)

*Dr. K. Taxis* representing the RuG

*Dr. F.J. van de Vaart* representing KNMP

*Drs. A. Nooij* representing the KNMP

*Ms. A. Hildebrand* representing the Association for Registration of Industrial Pharmacists (StRIA / NIA)

#### THE ISO STANDARD

PAOFarmacie is certified to the ISO standard since 2009  
ISO9001



# GENERAL INFORMATION

**M1 Quality Management, the role of the Qualified Person**  
6 – 8 February 2012

**M2 Drug development from Quality by Design to clinical studies: an integrated course for the pharmaceutical industry and hospital pharmacy**  
16 – 19 April 2012

**M3 Sterile manufacturing**  
8 – 10 October 2012

**M4 Quality and safety for the manufacturing of biopharmaceuticals: from cell line development to downstream processing and formulation**  
26 – 28 November 2012

## AIM

The course offers an integrated approach on quality management in the pharmaceutical, biotechnological, medical device industries and hospitals to safeguard the quality of their products.

Expert knowledge and real life case studies are combined and presented and coached by professionals from Industry, Universities and Health Care Inspectorates. The training is interactive.

## TARGET GROUPS

- Professionals in pharmaceutical, biotechnological and medical device industries
- Professionals in institutions and Contract Research Organisations (CRO's)
- Hospital pharmacists
- Postgraduate students

For (young) professionals in Research and Development, Production, Packaging, Quality Control and Quality Assurance or Regulatory Affairs, who are dealing with the complexity of quality systems, it is important to have an overview of these systems in order to improve quality management in their own environment.

## CERTIFICATES & DIPLOMA

You can select individual course modules best suited to complement your education or experience. After attending a module, you will receive a certificate for attendance.

In addition, the participants are offered the possibility to complete the modules through an examination. The examination sessions are free of charge and will be scheduled in consultation with the participants.

In combination with a university degree in e.g. pharmacy, biology, chemistry or engineering, and with industrial experience, successful completion of the modules of the training course forms a good starting point to apply for Qualified Person (QP) status.

## ACCREDITATION

For hospital pharmacists in the Netherlands: 20 accreditation-hours for each course module attended.

## ORGANISATION

The training course is organized by Netherlands Centre for Post-Academic Education in Pharmaceutical Sciences: [www.paofarmacie.nl](http://www.paofarmacie.nl) in close collaboration with:

- Leiden/Amsterdam Center for Drug Research (LACDR): [www.lacdr.nl](http://www.lacdr.nl)
- Groningen University Institute for Drug Exploration (GUIDE): [www.rug.nl/guide](http://www.rug.nl/guide)
- Biotechnology Studies Delft Leiden (BSDL): [www.bsdledu.bt.tudelft.nl](http://www.bsdledu.bt.tudelft.nl)
- Top Institute Pharma: [www.tipharma.com](http://www.tipharma.com)
- European Federation of Pharmaceutical Sciences (EUFEPS): [www.eufeps.org](http://www.eufeps.org)
- International Pharmaceutical Federation (FIP): [www.industrialpharmacy.org](http://www.industrialpharmacy.org)

## WHERE?

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