



***PHARMINE***  
*Pharmacy Education  
in Europe*

# PHARMACY EDUCATION IN EUROPE

Project no. 142078-LLP-1-2008-1-BE-ERASMUS-ECDSP

**Final Report**

**Public Part**

# PHARMACY EDUCATION IN EUROPE (PHARMINE)

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## 1 Declaration by the Beneficiary

**Grant Agreement number: 142078-LLP-1-2008-BE-ERASMUS-ECDSP**

I, the undersigned, hereby declare that the information contained in this Report is accurate and in accordance with the facts. In particular I certify that the Financial Statement, provided as an excel spreadsheet on the CD attached to this report, properly reflects the transactions made for the project in accordance with the provisions of the Agreement and its Annexes signed with the Education, Audiovisual and Culture Executive Agency and that full supporting documentation to justify the costs and revenues is available for checks and audit.

This information has been checked and approved by the partners involved in the activities set out in this report.

Signed in: Brussels

on 28/4/2011

*Signature of the beneficiary's legal representative (in blue ink)*  
organisation

Seal/stamp of the

*Name and function in capital letters*

Paul De Knop,  
Rector  
Vrije Universiteit Brussel

Grant Agreement number: 142078-LLP-1-2008-BE-ERASMUS-ECDSP

# PHARMACY EDUCATION IN EUROPE (PHARMINE)

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## Project information

Project acronym:	PHARMINE
Project title:	PHARMACY EDUCATION IN EUROPE
Project number:	142078-LLP-1-2008-1-BE-ERASMUS-ECDSP
Sub-programme or KA:	LLL
Project website:	<a href="http://www.pharmine.org">http://www.pharmine.org</a>
Reporting period:	From 1/10/2008 To 30/9/2010
Report version:	Final report / public part
Date of preparation:	30/4/2011
Beneficiary organisation:	VRIJE UNIVERSITEIT BRUSEL
Project coordinator:	Prof. Dr. Bart ROMBAUT
Project coordinator organisation:	VRIJE UNIVERSITEIT BRUSSEL
Project coordinator telephone number:	32-2-477-4497
Project coordinator email address:	<a href="mailto:brombaut@vub.ac.be">brombaut@vub.ac.be</a>

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This publication reflects the views only of the author (Jeffrey Atkinson, executive director PCN, PHARMINE), and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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## Executive Summary

### Abbreviations

DG: directorate-general of the European Commission (EC)

EACEA: Education, Audiovisual and Culture Executive Agency ([http://eacea.ec.europa.eu/index\\_en.php](http://eacea.ec.europa.eu/index_en.php))

EAFP: European Association of Faculties of Pharmacy ([www.eafponline.org](http://www.eafponline.org))

EAHP: European Association of Hospital Pharmacists ([www.eahp.eu](http://www.eahp.eu))

EIPG: European Industrial Pharmacists' Group ([www.eipg.eu](http://www.eipg.eu))

EPSA: European Pharmacy Students' Association ([www.epsa-online.org](http://www.epsa-online.org))

HEI: higher education institution

PET: pharmacy education and training

PGEU: Pharmaceutical Group of the European Union ([www.pgeu.eu](http://www.pgeu.eu))

PHAR-EE: Pharmacy education and training in Eastern Europe

PHARMINE: PHARMacy education IN Europe consortium

MEDINE: MEDical Education IN Europe

QA-PHAR: Quality Assurance in European Pharmacy Education and Training

Please note that this report and the PHARMINE project concentrate on PET for pharmacists working in a community, hospital or industrial environment. The author acknowledges that pharmacists have important roles to play in distribution and wholesale of medicines and medical products, clinical laboratory medicine, regulatory agencies, armed forces, etc.

### Target audience

The primary stakeholders are:

1. Students and staff at European HEIs for pharmacy - both within the EU and candidate and/or partner countries
2. EU and national governmental and regulatory institutions and agencies dealing with
  - a. Education in health sciences
  - b. Healthcare policy and use of healthcare resources
  - c. Development of pharmaceutical, cosmetic and biotechnological industries
  - d. EU drug and therapy-related regulatory authorities and industries
3. National pharmacy chambers, organisations and associations
4. Countries
  - a. Member states
  - b. Candidates for EU membership
  - c. Partner countries (Eastern Europe) with on-going development in education systems in health sciences
  - d. Countries (outside of Europe) with on-going development in education systems in health sciences (Africa, Americas, Middle East, Asia...)

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## Project objectives with explicit reference to the target users

Pharmacy education and training (PET) faces the challenge of maintaining a polyvalent, pharmacy diploma based on a 5-year period of education and training – as defined by EU directives for sectoral professions, delivered by DG Internal Market - within the context of:

1. Evolution in the organisation and utilisation of public health resources within a more and more difficult economic situation
2. Rapidly developing changes in the EU drug and therapy-related pharmaceutical and biotechnological industries
3. The implementation of the Bologna philosophy into global education and training in EU higher education institutions and especially the application of the 3+2+3 years B+M+D system
4. The need to tune education and training in the different member states for free movement between states and practice in a profession that is sectorally regulated by an EU directive “DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 September 2005 on the recognition of professional qualifications” hereafter referred to as “the directive”.

The PHARMINE (**PHARM**acy education **IN** Europe) consortium:

1. Identified pharmacy HEIs within Europe and produced a databank (see [www. http://www.pharmine.org/Search/](http://www.pharmine.org/Search/))
2. Evaluated how HEIs are adapting to the above exigencies (see “project objectives”) (see: [http://www.pharmine.org/losse\\_paginas/Country\\_Profiles/](http://www.pharmine.org/losse_paginas/Country_Profiles/))
3. Produced a recommendations for a European model for PET (see: [http://www.pharmine.org/losse\\_paginas/Position\\_Paper/](http://www.pharmine.org/losse_paginas/Position_Paper/))

The consortium worked in three phases:

1. A survey of the existing state of pharmacy education and training in the Europe with
  - a. A study of similarities and differences
    - i. how education and training conforms with the EU directive on the sectoral profession of pharmacy
    - ii. how the Bologna philosophy has affected education and training so far. The above information is contained in chapters 5 and 6 of the country profiles ([http://www.pharmine.org/losse\\_paginas/Country\\_Profiles/](http://www.pharmine.org/losse_paginas/Country_Profiles/)).

Summary position papers will be produced in the summer 2011 for use in the TEMPUS project PHAR-EE / PHARMINE-2 on the extension of PHAMINE principles to Eastern Europe – essentially the Balkans and Moldova.

2. Reflection and discussion on pharmacy competency core curriculum
3. Dissemination to stakeholders
4. Reflexion on the creation of an accreditation scheme (this will be another part of the PHARMINE-2 bids: QA-PHAR “*Quality Assurance in Pharmacy*” to be proposed to EACEA LLL KA4 2011 )

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PHARMINE worked in collaboration with MEDINE-2 (<http://medine2.com/>) – the EU-funded consortium that deals with similar problems in another healthcare sectoral profession that it is regulated by the same EU directive – medicine.

The development of a combined PHARMINE-2 / MEDINE-2 strategy will be discussed at the MEDINE-2 General Assembly, 20<sup>th</sup> May, 2011, Budapest and implemented thereafter.

## **Participants involved in PHARMINE**

The consortium centred around 4 EU universities with solid international reputations in the teaching and training of pharmacists:

1. Brussels VUB Pharmacy Faculty
2. Nancy Pharmacy Faculty
3. London School of Pharmacy
4. Lisbon Pharmacy Faculty

These were supported by the main EU groups dealing with pharmaceutical affairs:

1. the pharmacy students union (EPSA)
2. the pharmaceutical group of the EU (PGEU, representing community pharmacists),
3. the hospital (EAHP) pharmacist group
4. the industrial (EIPG) pharmacist group

The 14 associated partners included at the offset represent professional pharmacy organisations in Europe and in the USA and other universities with a wide range of experience in culturally and linguistically diverse areas of Europe.

This number was increased to 23 associated partners by the end of the project, essentially with the incorporation of Eastern European partners in provision of the PHAR-EE TEMPUS bid.

The coordinator of the consortium was Bart Rombaut from VRIJE UNIVERSITEIT BRUSSEL, Brussels (P1).

The consortium was run by the SME *Pharmacolor Consultants Nancy* (executive director: Jeffrey Atkinson) (P9).

## **Approaches used – methodologies, strategies, analysis, tests carried out**

The key approaches of the PHARMINE consortium were:

1. identification of the main public European HEIs in pharmacy (some private HEIs were included for countries with a large private element in PET such as Portugal and Turkey)
2. Production of a databank of European HEIs in pharmacy
3. Monthly update of databank
4. Electronic survey (using the website and direct contact by e-mail) of pharmacy HEIs

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- a. Countries surveyed in the European Association of Faculties of Pharmacy mid 1990s TEMPUS project (TEMPUS CME 94-F-2002; [http://enzu.pharmine.org/media/filebook/files/Bourlioux\\_full\\_report.pdf](http://enzu.pharmine.org/media/filebook/files/Bourlioux_full_report.pdf)). Results were reported at the 1995 EAAP conference in Berlin. This project and its results formed the basis of the PHARMINE proposal in 2008.
  - b. Member states (as of 2008) not (fully) considered in the first survey and that have since become full members of the EU.
  - c. Candidate and partner countries (as of 2008)
  - d. Other European countries or adjacent countries
5. Electronic survey (using the website and direct contact by e-mail) of stakeholders such as hospital pharmacists and pharmacists working in the EU drug and therapy-related industries in order to evaluate their needs and their opinions on how present-day pharmacy PET met those needs
  6. Production of the electronic and paper versions of the surveys and their analysis to be published on the website and in peer-reviewed journal. Statistical analysis of the data produced.
  7. Discussion of the data harvested in order to formulate recommendations on PET
  8. Proposal to national and EU bodies of PHARMINE pharmacy curriculum model
  9. Establishment of PHARMINE quality assurance network for evaluation and help to universities wishing to incorporate the PHARMINE paradigm ([http://enzu.pharmine.org/media/filebook/files/PHARMINE\\_Paradigm.pdf](http://enzu.pharmine.org/media/filebook/files/PHARMINE_Paradigm.pdf)).

## Major results/products achieved

The following has been achieved:

Task	Status 31/4/2011
<i>Production of a databank of European HEIs in pharmacy</i>	Model developed in MS ACCESS software. website, interactive version available ( <a href="http://www.pharmine.org/Search/">http://www.pharmine.org/Search/</a> ). About 250 EU universities contacted. with updates every month.
<i>Electronic survey (using the website and direct contact by e-mail) of pharmacy HEIs - firstly those surveyed in the European Association of Faculties of Pharmacy mid 1990s project, secondly those member states not fully considered in the first survey and that have since become full members of the EU, finally other countries.</i>	Model developed based on 1994 survey (TEMPUS project) and those used by other organisations. Trial run with 5 test universities. Obtuse survey questions reworded or dropped. Survey sent out to 45 universities. Detailed analysis of 25 countries ( <a href="http://www.pharmine.org/losse_paginas/Country_Profiles/">http://www.pharmine.org/losse_paginas/Country_Profiles/</a> ).

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<i>Electronic survey (using the website and direct contact by e-mail) of stakeholders such as experienced hospital pharmacists and pharmacists working in the EU drug and therapy-related industries in order to evaluate their needs</i>	Surveys carried out with the European Industrial Pharmacists Group and the European Association of Hospital Pharmacists.
<i>Statistical analysis of the data produced and modelisation</i>	Parametric and nonparametric models developed in StatView software. Preliminary analysis on data to test the models (see below*)
<i>Discussion to formulate recommendations for pharmacist training</i>	Discussions amongst partners. Comparisons of data with competency frameworks.

\*Preliminary analysis on data to test the models.

## Plans and prospects for the future

Ideas for future PHARMINE-2 bids were exposed at the annual PHARMINE meeting in Catania, June 2010.



Reaction from HEIs throughout Europe was enthusiastic. Work started on preparation of the bids at the end of August 2010.

Two PHARMINE bids will be submitted in 2011:

1. Pharmacy education and training in Eastern Europe - PHAR-EE

TEMPUS 4<sup>th</sup> Call 2011

The PHAR-EE project will look at the same problem as that of PHARMINE (that studied the EU), viz tuning to Bologna and EHEA principles of education and training of a sectoral profession (pharmacy)

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in which studies are governed by an EU directive (2005/35/EC) and are characterized by their long duration (5 years) and the important roles played by apprenticeship/traineeship and continuing professional development. Furthermore besides these two demands on pharmacy education and training (PET) (the EU directive and Bologna), PET supply has to reply to 2 other demands: the evolution of the role of the pharmacist in the healthcare system and the European pharmaceutical/biotechnological industry. The way in which supply replies in the future to demand in PET will be studied in Eastern European countries are or may be candidates for EU membership and as such affected by EU directives on sectoral professions. They are in the process of developing their PET and starting up new HEIs in PET. Most have already begun to incorporate Bologna and EHEA principles into PET. The consortium groups HEIs for pharmacy and other HEIs that provide essential input to PET (medicine, chemical technology...). The consortium will be coordinated and run by institutions from two EU founder members (Belgium and France) with decades of experience in fundamental and advanced PET. The results and conclusions of the project will be discussed and exploited by local stakeholders: the pharmaceutical chambers and societies, pharmaceutical, healthcare and educational organisations and agencies. PHAR-EE is one part of the developments of PHARMINE-2, the follow-up to the EU-funded programme PHARMINE ([www.pharmine.org](http://www.pharmine.org)). It represents an interesting challenge in terms of transfer of experience from member states to partner countries in an area - PET - of primordial importance for healthcare and industry.

## 2. Quality Assurance in European Pharmacy Education and Training - QA-PHAR EACEA LLL KA4 2011

Objectives and impact on European QA in PET:

- I. Establishment of European network in QA for PET (WP DEV Y1). This will provide a source of information on QA in any given country.
- II. Survey existing QA systems used and produce report (WP DEV Y2)
- III. Develop a model for QA for PET based on (2) and Delphi/TUNING interaction with partners (Y3). This will allow harmonisation of the multitude of very diverse QA frameworks.
- IV. Propose a finalised model for application (Y3). This will provide a basic harmonized model for QA for PET in Europe.

The objective behind the attempts to improve QA for PET in Europe is to improve patient safety through better and safer use of medicines (community and hospital pharmacy) and the development and production of safer medicines (industrial pharmacy). To do this QA-PHAR will produce framework tools to help improve existing well-established PET systems by accompanying changes and develop new(er) systems. It will impact on fundamental PET for basic practice as well as continuing education for advanced practice (hospital, industry and other), and CPD. It will bring an element of sectoral professionalism into existing systems that are more academically based at the present time.

The creation of a QA network will be one of the essential elements of QA-PHAR.

# PHARMACY EDUCATION IN EUROPE (PHARMINE)

## Organisation of MGT for PHAR

Administrator: B. Rombaut, VUB, Executive Director: J. Aikins, ICN  
General Secretaries: A. Cavaco, Lisbon, D. Rekkas, Athens, D. Volmer, Tartu

<b>"Northern"</b> Regional directors D. Volmer - Estonia J. Hirvonen – Finland  Members: Estonia Finland Latvia Lithuania Sweden Iceland Norway	<b>"Central"</b> Regional directors B. Bozic - Slovenia S. Polak - Poland  Members: Slovenia Poland Czech Republic Slovakia Hungary Austria	<b>"Eastern"</b> Regional directors V. Petkova - Bulgaria C. Rais, Romania  Members: Bulgaria Romania Albania Bosnia Croatia FYROM Kosovo Moldova Montenegro Serbia Ukraine	<b>"Western"</b> Regional directors B. Thys - Belgium H. J. Haisma – The Netherlands  Members: Belgium The Netherlands Ireland UK Germany Switzerland	<b>"Southern"</b> Regional director A. Cavaco - Portugal D. Rekkas - Greece  Members: Portugal Spain France Italy Greece Malta Turkey
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Further PHARMINE bids centred on

1. PET for industrial pharmacy and
2. PET for hospital pharmacy

will be presented in 2012.

### Details of the project website.

The website is running at [www.pharmine.org](http://www.pharmine.org).

# PHARMACY EDUCATION IN EUROPE (PHARMINE)

**Pharmine**  
Pharmacy Education in Europe

Education & Culture DG  
Lifelong Learning Programme

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[News](#)  
[Position papers](#)  
[Country profiles](#)  
[Databank of universities](#)

**Pharmine**

We are pleased to announce that the PHARMINE project has been funded with support from the European Commission, Lifelong Learning Programme of the European Union:

In the XXI century EU, pharmacists will play an increasingly important role as partners in the efficient use of the health care resources of the EU (community and hospital pharmacists). They will also be major players in the development of the EU pharmaceutical industry (industrial pharmacists). Whilst abiding by the recommendations for the duration and course content for EU pharmacy education and training given in the directive 2005/36/EC on the recognition of professional qualifications, PHARMINE will examine the opportunities for the introduction of the principles of the Bologna declaration into pharmacy education and training with the aim of tuning the latter to the future needs in the three areas of pharmaceutical expertise: community, hospital and industrial pharmacy.

[read more...](#)

**Tribute to Steven Hudson**

[read more...](#)

It contains details of partners and the work to be done, as well as important EU directives, Bologna documents and other position papers.

PHARMINE-2 websites (PHAR-EE and QA-PHAR) will branch off from the central PHARMINE website.

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Joint publication of findings on pharmacy and medicine HEIs (based on PHARMINE WP7) in journals such as The European Journal of Pharmaceutical Sciences (The European Federation for Pharmaceutical Sciences – EUFEPS, SE-175 72 Järfälla (Stockholm) Sweden).21	
Given the need for better interaction between health care professionals such as pharmacists, doctors, nurses..development of competence frameworks for joint courses in which different actors in the health care system are obliged to interact, for example: .21	
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## 1. Project Objectives

The aims of the PHARMINE consortium were to:

- i. Identify, localise and survey existing curriculum in pharmacy education and training in Europe
  - a. Evaluate the impact of directive 2005/36/EC in pharmacy faculties
  - b. Determine to what extent – if any – national frameworks have adopted the Bologna philosophy
  - c. Evaluate potential conflicts between EU directives and the Bologna philosophy
  - d. Study those faculties in which options for hospital or industrial pharmacy have been developed in order to
    - i. Evaluate how options can be incorporated in the pharmacy curriculum
    - ii. Evaluate the impact of options on the pharmacy profession in the country concerned
- ii. Widely disseminate the results of (i) through European partner associations in order to recover feedback
- iii. Together with stakeholders (EU professional pharmacy associations, EU pharmacy students, national professional organisations, industrial representatives...) produce competence frameworks for European PET

### How the project benefits users and how they are involved in the project.

The project will benefit first of all the **staff and students** of the pharmacy HEIs by providing them with tools – the databank and country surveys – that will permit easy identification of potential institutions for mobility and exchange at all levels – staff and student. The country survey will provide them with the background knowledge essential for exchange and collaboration.

This will also be a tool for **professional educators** and educational theorists in the area of health care by providing them with the fundamental knowledge of how PET is organised throughout Europe. Many of the above – staff and students at HEIs and educationalists – are already actively involved in the PHARMINE project in collection of data for the databank and for the survey. PHARMINE will help strengthen and develop links already existing through the EAFP.

Secondly the project will benefit the DGs of the EC commission dealing with education and culture on the one hand (DG Education and Culture), and internal market on the other (DG Internal Market and Services). Contacts have already been developed with the latter (head of unit Professional Qualifications) who has expressed interest in the project.

Thirdly the results of the survey and the recommendations following the deliberations of the partners will help **national governments** in their reflection on the increasingly important role of pharmacists as health care providers, on the efficient use of dwindling healthcare resources and on the role of pharmacists in the development of the European pharmaceutical and biotechnological industries.

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Fourthly the project will benefit the **professional chambers, societies and associations of pharmacy and pharmacists** involved in PET in their respective countries and in requests for mutual recognition of diplomas from pharmacists trained elsewhere. Several such associations are involved in the project.

Fifthly the project will be a starting point for a development of PET for pharmacists working in **industry or in hospitals**.

## Potential impact upon and benefits to target users.


Target users	Impact and benefits
Faculty staff, students and educationalists	Widen horizons in Europe. Promote mobility of staff and students Advance educational theory in health care sciences
EC commission	Help in the development of the directives on the sectoral profession of pharmacy
National governments	Help cost-efficient use of limited higher education resources required for forming health care professionals
Professional pharmacy organisations	Widen horizons in Europe
Pharmaceutical industry	Ensure the formation of a professional workforce with the skills required for the XXIst century drug industry
Hospital pharmacy	Ensure the formation of a professional workforce with the skills required for pharmacy in a hospital setting

## 2. Project Approach

### Methodologies, surveys, analyses, tests carries out, networks

A **databank** of European pharmacy faculties and other organisations has been set up using MS ACCESS software. At the moment it has 260 entries from over 40 different European countries.

Example:

PHARMINE EU Pharmacy education database		 <small>European Union</small> <small>Erasmus Learning Programme</small>	 <small>PHARMINE</small> <small>Pharmacy Education in Europe</small>	08/02/2011
type:	EDU-UNIV			
institution:	Faculteit Geneeskunde en Farmacie			
univ - acronym:	Vrije Universiteit Brussel			
street:	Laarbeeklaan 103			
zip:	1090			
city:	Brussels			
country:	Belgium			
website:	www.vub.ac.be/MICH/			
Contact forename:	Bartholomeus			
surname:	Rombaut			
e-mail:	brombaut@vub.ac.be			
teleph:	32 2 477 44 97			
mobile:	32 479 956 871			
fax:	32 2 477 74 95			
function:				
2nd contact forename	Rudy			
2nd surname	Verbinnen			
2nd e-mail:	rverbin@vub.ac.be			
2nd telephone				
2nd fax/mobile				
2nd function				
3rd contact forename	Lea			
3rd surname	Noel			
3rd email	lea.noel@vub.ac.be			
3rd telephone				
3rd fax/mobile				
3rd function				
Note				

Other fields will be added as the databank develops with PHAR-EE and QA-PHAR.

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Various lists can be derived from the databank, e.g.:



PHARMINE  
Pharmacy Education  
in Europe

## The PHARMINE consortium The EU Pharmacy education database

### Greece

institution	univ - acronym	street	zip	city	contact forename	surname	teleph	fax	e-mail	website
School of Pharmacy	University of Athens	Panepistimiopolis	157 71	Athens - Zographou	Panagiotis	Macheras	30 210 727 4026	30 210 727 4027	macheras@pharm.uoa.gr	http://www.pharm.uoa.gr/
Department of Pharmacy	University of Patras	R I O 26500	26500	Patras	Paul	Crodopatis	30 2610 969 934	30 2610 997 714	pacord@upatras.gr	www.pharmacy.upatras.gr
Department of Pharmacy	Aristotle University	Ethnikis Aminis St	54124	Thessaloniki	Asterios	Tsiftoglou	30 2310 997613	30 2310 997612	tsif@pharm.auth.gr	www.pharm.auth.gr/en/contact_pharm.html

J. Atkinson, PCN, Villers, France

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08/02/2011

### Added value of the approach used (pedagogical, organisational and/or political)

Within the consortium there was a wide geographic distribution covering the differing systems for PET in Europe from the northern European countries, to the southern European countries, and from the UK to the Balkans.

Outside the consortium, stakeholders were: staff, student and professional organisations, industry, health care services, EU offices, etc.

### Evaluation strategy

The work of the consortium was assessed by partner P4.

### Dissemination and exploitation; contribution to project sustainability

Dissemination and exploitation will be assured by:

- a. Websites
  - i. The consortium: [www.pharmine.org](http://www.pharmine.org)
  - ii. Partners
    1. European Association of Faculties of Pharmacy: [www.eafponline.org](http://www.eafponline.org)
    2. Pharmaceutical Group of the EU: [www.pgeu.eu](http://www.pgeu.eu)
    3. European Association of Hospital Pharmacists: [www.eahp.eu](http://www.eahp.eu)
    4. European Industrial Pharmacists' Group: [www.eipg.eu](http://www.eipg.eu)
    5. European Pharmaceutical Students' Association:  
[www.epsa.online.org](http://www.epsa.online.org)
- c. Position papers and recommendations



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- d. Presentations at European and international meetings e.g. annual EAFP conference, EUFEPS PharmSciFair...
- e. PHARMINE-2 and the European Working Group on Pharmacy Education.

## 3. Project Outcomes & Results

### Management.

During PHARMINE, the **associated partners' list** was expanded to:

1. Estonia – Faculty of Pharmacy, University of Tartu, Peep Veski and Daisy Volmer ([www.ut.ee/](http://www.ut.ee/) or [www.med.ut.ee/farmaatsia](http://www.med.ut.ee/farmaatsia))
2. Greece – Faculty of Pharmacy, University of Athens, Panos Macheros and Dimitrios Rekkas (<http://www.pharm.uoa.gr/>)
3. Greece – Faculty of Pharmacy, University of Patras, Constantinos Poulas ([www.pharmacy.upatras.gr](http://www.pharmacy.upatras.gr))
4. Spain – Faculty of Pharmacy, University of Madrid, Benito del Castillo Garcia (<http://www.ucm.es/info/farmacia>)
5. Spain - Faculty of Pharmacy, University of Grenada, Luis Recalde (<http://farmacia.ugr.es/>)
6. Spain - General Council of Pharmacists in Spain (<http://www.portalfarma.com/>)
7. France – Faculty of Pharmacy, University of Lille, Annie Marcincal (<http://arachosia.univ-lille2.fr/>)
8. France – Conseil national de l'Ordre des pharmaciens (CNOP), Présidente Isabelle Adenot. personne de contact pour le dossier pharminie Isabelle BARON, Adviser European affairs ([www.ordre.pharmacien.fr/](http://www.ordre.pharmacien.fr/))
9. Scotland – Faculty of Pharmacy, University of Strathclyde (<http://www.strath.ac.uk/>)
10. Bulgaria - Faculty of Pharmacy, University of Sofia, Valentina Petkova ([http://www.pharmfac.net/index\\_en.html](http://www.pharmfac.net/index_en.html))
11. Latvia - Faculty of Pharmacy, University of Riga, Rita Muceniece ([www.lu.lv/eng/](http://www.lu.lv/eng/))
12. Germany – Faculty of Pharmacy, University of Freiburg, Regina Suss ([www.chemie.uni-freiburg.de/pharma](http://www.chemie.uni-freiburg.de/pharma))
13. Slovenia – Faculty of Pharmacy, University of Ljubljana, Borut Bozic (<http://www.ffa.uni-lj.si/>)
14. Finland - Faculty of Pharmacy, University of Helsinki, Juoni Hirvonen (<http://www.helsinki.fi/ml/pharmacy>)
15. Romania – Faculty of Pharmacy, University of Bucharest, Constantin Mircioua (<http://www.univermed-cdgm.ro/>)
16. Czech Republic – Faculty of Pharmacy, University of Prague, Miroslav Polasek (<http://www.faf.cuni.cz/>)
17. Hungary – Faculty of Pharmacy, University of Szeged, Gyöngyver Soos (<http://www.pharm.u-szeged.hu/>)
18. Norway - Faculty of Pharmacy, University of Oslo, Karen Ulshagen ([www.farmasi.uio.no/instituttet/english.html](http://www.farmasi.uio.no/instituttet/english.html))
19. Turkey – Faculty of Pharmacy, University of Hacettepe, Filiz Hincal ([www.hacettepe.edu.tr/english/index.php](http://www.hacettepe.edu.tr/english/index.php))

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20. USA – Accreditation Council for Pharmacy Education, Chicago, Mike Rouse (<http://www.acpe-accredit.org/>)
21. Ukraine - Faculty of Pharmacy, University of Kharkov, Christina Valentine ([www.ukrfa.kharkov.ua](http://www.ukrfa.kharkov.ua))

Work continues on the development of other partnerships.

It is hoped that by the end of the PHARMINE-2 projects a network of some 40 European countries will be established.

Details of all associate partners are on their own website and on the PHARMINE website ([www.pharmine.org](http://www.pharmine.org)). .

## **Sponsorship.**

An intense effort was made by the executive director (P9/PCN) to harvest funds from industrial and other sponsors throughout the project. This met with little success.

The European Association of Faculties of Pharmacy donated €40 000 to the consortium.

## **Dissemination**

The main dissemination issues were:

- a. The establishment of the website ([www.pharmine.org](http://www.pharmine.org)).
- b. Flyers and other forms of paper support
- c. Presentations to over 50 international meetings on
  - a. Education
  - b. Pharmaceutical affairs
  - c. Health care matters
  - d. Drug industry

Efforts in PHARMINE-2 will be centred on dissemination extra-Europe to the Americas, Asia and the Middle East. It is judged that dissemination in Europe is not satisfactorily assured.

## **Exploitation**

Meetings are ongoing with the EIPG and EAHP on development of framework competences for industrial and hospital pharmacy – these will continue in PHARMINE-2.

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The PHARMINE paradigm ([http://enzu.pharmine.org/media/filebook/files/PHARMINE\\_Paradigm.pdf](http://enzu.pharmine.org/media/filebook/files/PHARMINE_Paradigm.pdf)) will be extended to Eastern Europe in the PHAR-EE consortium.

QA issues arising from PHARMINE frameworks and other matters will be handled in QA-PHAR.

## Quality Assurance

A QA questionnaire was produced in association with ACPE (Accreditation Council for Pharmacy Education of the USA ([www.acpe-accredit.org/](http://www.acpe-accredit.org/))). This formed chapter 7 of the PHARMINE survey (<http://enzu.pharmine.org/media/filebook/files/PHARMINE%20WP7%20survey%20of%20European%20HEIs%200309.pdf>).

## Development

The PHARMINE survey of pharmacy faculties carried out using the document cited above.

The document has 7 chapters:

1. Organization of the activities of pharmacists, professional bodies
2. Pharmacy faculties, students and courses
3. Data on teaching and learning methods
4. Data on subject areas
5. Impact of the Bologna philosophy on pharmacy education and training
6. Impact of the EC directive 2005/36/EC
7. Quality assurance.

Detailed analysis of the replies is being processed and statistical analysis carried out.

## 4. Partnerships

### European added value

The added value gained with collaboration of partners from different European countries is:

1. Larger impact of results and implementation of the project as concerns stakeholders within different European countries.
2. A contribution to the reflection on free movement of pharmacists within the directive
3. Increased European multidisciplinary excellence in PET for all branches of pharmacy practice.
4. Increased co-operation between European partner organizations.

### Added value related to geographical coverage

Within the consortium there was a very wide geographic distribution thus covering the differing systems for PET in Europe from the northern European countries, to the southern European countries, and from the UK to the Balkans.

### Partnerships with groups outside the consortium

#### **EUFEPS: European Federation for pharmaceutical sciences (<http://www.eufeps.org/>).**

A useful partnership has been established with the European Federation for Pharmaceutical Sciences (EUFEPS; [www.eufeps.org](http://www.eufeps.org/)). A half-day symposium on PHARMINE was organised at their *PharmSciFair* meeting in Nice, June, 2009. From the EUFEPS website: *"We are convinced of the need to carry the Pharmaceutical Sciences forward in this kind of global event, enabling all involved to think and consult together and to share experiences. The 2011 PharmSciFair, with around 1000 expected delegates, will allow us to understand the different approaches, perspectives and sensitivities among the different players in Pharmaceutical Sciences represented by delegates from academia, industry and regulatory. Building on the strengths of each and every actor, it ensures a consolidated movement towards common goals and targets and creates synergy within the array of different disciplines, all having the objective to better serve the Health."*

PHARMINE will be present at other *PharmSciFair* biennial meetings that carry Pharmaceutical Sciences forward with a global event, enabling all involved to think and consult together and to share experiences. The PharmSciFair, with around 1000 expected delegates, allow the understanding of the different approaches, perspectives and sensitivities among the different players in Pharmaceutical Sciences represented by delegates from academia, industry and regulatory affairs. Pharmaceutical Sciences, as a multi-faceted concept is reflected at this event, which is wide-ranging in terms of scientific content, activities and participating parties. PHARMINE hopes to play an essential role in the education aspects of this event.

### MEDINE

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Medical Education in Europe (<http://medine2.com/>) – AMEE: Association of Medical Educators in Europe ([www.amee.org](http://www.amee.org)).

The annual conference of AMEE is “the” main meeting of medical education in the world that brings together more than 2300 participants from 90 countries. AMEE decided to develop MEDINE (Medical Education in Europe), a project funded by the European Commission within the Erasmus LLL programme (Thematic Networks). During the 2009 AMEE conference in Malaga, it was announced that MEDINE-2 had been funded by the European Commission. Bart Rombaut (coordinator of PHARMINE) was invited to the meeting of the Executive Committee of MEDINE-2 at the AMEE conference.

It was decided that MEDINE-2 and PHARMINE will work closely together since many of the goals and objectives of both projects are similar given the many interactions between the two professions.

MEDINE-2 invited members of PHARMINE to act as external reviewers for their project. This was accepted and PHARMINE asked members of MEDINE-2 to act in a similar way for their project.

Since then PHARMINE has continued to work in collaboration with MEDINE-2. The development of a combined PHARMINE-2 / MEDINE-2 strategy will be discussed at the MEDINE-2 General Assembly, 20<sup>th</sup> May, 2011, Budapest and implemented thereafter.

Possible points of convergence are:

1. Joint publication of findings on pharmacy and medicine HEIs (based on PHARMINE WP7) in journals such as The European Journal of Pharmaceutical Sciences (The European Federation for Pharmaceutical Sciences – EUFEPS, SE-175 72 Järfälla (Stockholm) Sweden)
2. Given the need for better interaction between health care professionals such as pharmacists, doctors, nurses..development of competence frameworks for joint courses in which different actors in the health care system are obliged to interact, for example:
  - a. Possible of common courses during first year(s) of preclinical studies – see, for example, present developments in France (<http://www.pharmacie.unilim.fr/uploads/data/l1-sante-10-11-bis.pdf>)
  - b. Development of common LLL/CPD courses given growing importance of the role as prescriptors of pharmacists and nurses (see UK white paper at <http://www.official-documents.gov.uk/document/cm73/7341/7341.pdf>)

## EUA

European University Association ([www.eua.be](http://www.eua.be)). Several meetings were held with Howard Davies of the EUA in order to tune PHARMINE and EUA projects on education for sectoral professions.

PHARMINE (P1 (Bart Rombaut), P5 (John Chave) and P9 (Jeffrey Atkinson)) participated at the congress below on “*The Bologna Process and Directive 2005/36/EC on the Recognition of Professional Qualifications: is there scope for creative interaction?*” and expressed the views of the PHARMINE consortium.

**EUA**  
European University Association

**STRONG UNIVERSITIES FOR EUROPE**

**EVENTS**

**MEETING ON THE RECOGNITION OF PROFESSIONAL QUALIFICATIONS**

**EVENTS**

**EVENT REGISTRATION**

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**The Bologna Process and Directive 2005/36/EC on the Recognition of Professional Qualifications: is there scope for creative interaction?**

**European Parliament, Brussels, Belgium (14 October 2010)**  
**Committee Room A5G-3**

The European University Association in collaboration with European Commission Internal Market and Services Directorate General (DG MARKT) and European Parliament Committee on Internal Market and Consumer Protection (EP IMCO), will be hosting a meeting in room A5G-3 at the European Parliament (entrance: ASP Building from Rue Wiertz) in Brussels, Belgium, between 14.00 and 17.00 on **14 October 2010**.

## **The Bologna Process and Directive 2005/36/EC on the Recognition of Professional Qualifications: is there scope for creative interaction?**

**Thursday, 14 October 2010**

### **14.30 Welcome on behalf of European University Association (EUA)**

- Lesley Wilson, EUA Secretary General

### **14.35 Presentation by the European Commission, Directorate General Internal Market and Services (DG MARKT)**

- Jürgen Tiedje, Head of Unit D4, Professional Qualifications, DG MARKT

### **14.55 Presentation by EUA: Background to the Bologna Process**

- Howard Davies, EUA Senior Advisor

### **15.05 Statement by European Parliament Committee on Internal Market and Consumer Protection (EP IMCO)**

- Malcolm Harbour, Chair of EP IMCO

### **15.30 Observations and questions from the floor**

- Chaired by Howard Davies, EUA Senior Advisor

### **16.30 Concluding comments**

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- Jürgen Tiedje, Head of Unit D4, Professional Qualifications, DG MARKT
- Howard Davies, EUA Senior Advisor



## 5. Plans for the Future

PHARMINE-2 consortia will deal with:

1. Extension of the PHARMINE paradigm to Eastern Europe
2. Installation of a European network in QA for PET

(see above)

## 6. Contribution to EU policies

Meetings have been held with the head of unit Professional Qualifications DG Internal Market and Services and his staff concerning the future modifications of the directive 2206/36/EC on the recognition of professional qualifications ([http://enzu.pharmine.org/media/filebook/files/EC%20directive%202005\\_36\\_EC%20recog%20prof%20qualif%200905.pdf](http://enzu.pharmine.org/media/filebook/files/EC%20directive%202005_36_EC%20recog%20prof%20qualif%200905.pdf)).

PHARMINE also expressed its views at the EUA/DG Internal Market symposium on sectoral qualifications (see above).

PHARMINE was also invited to EACEA symposia:

1. Thematic and monitoring cluster meeting on health professions Brussels, June 21, 2010
2. Seminar on knowledge alliances, Brussels, February 2011

## 7. Extra Heading/Section

No other comment