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PHAR-QA Quality assurance in pharmacy education and training in Europe

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Working-Life Relevant Curriculum Development – Defining the Learning Outcomes in Collaboration with Faculty Members, Pharmacy Students and External Stakeholders

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University of Helsinki (Est. 1640)

- International Top Level Research University
- For the Best of the World (global challenges)



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**Faculty of
Pharmacy in
the Viikki
Campus of
Biosciences**

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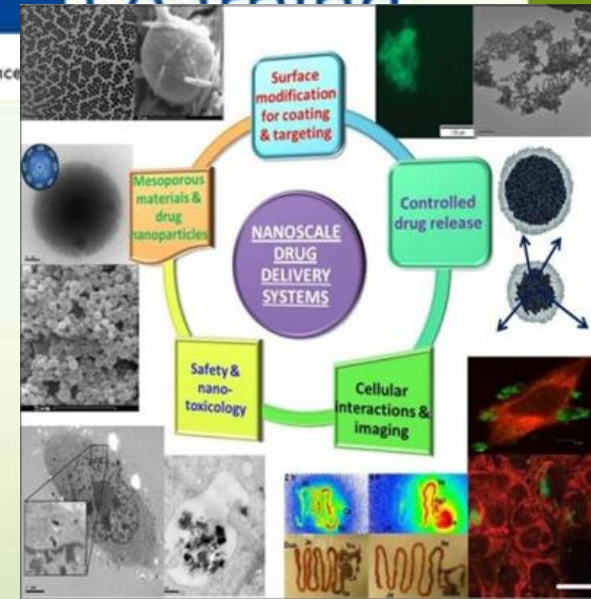
Faculty of Pharmacy strategy:

“Pharmacy is a multidisciplinary field of science that specialises in medicinal treatments and studies drugs, medicines and their development, use and effects from the point of view of natural sciences, health sciences, as well as social sciences and economy. The task of the Faculty is to promote pharmaceutical research and provide the highest education in the field in Finland. Pharmaceutical experts and expertise are integral parts of the national health care system.”



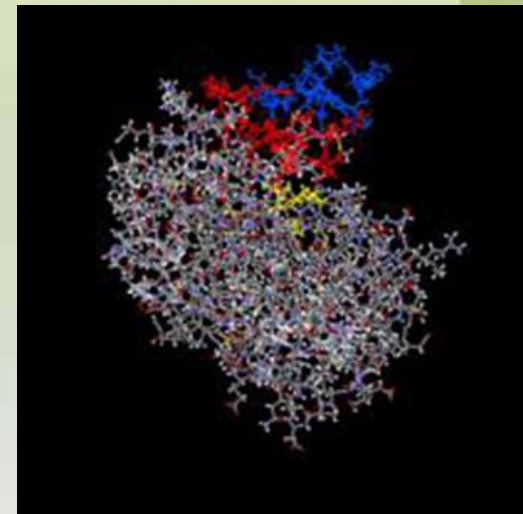
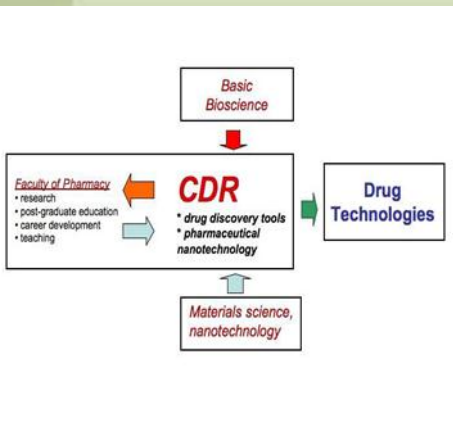
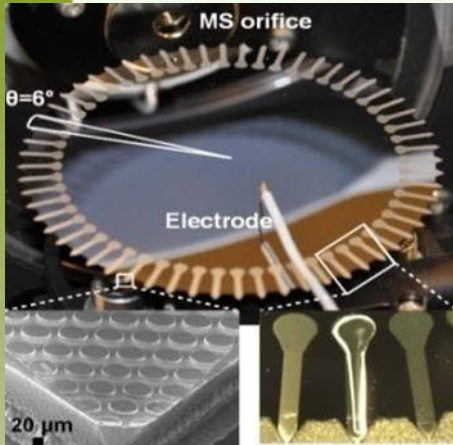
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PHAR-QA Quality assurance



RESEARCH ACTIVITIES

- Pre-clinical medicine research & method development
- Drug and medication safety
- Pharmaceutical micro- and nanotechnology
- Medicinal treatments and drugs for the children and elderly
- Effectivity and cost-effectiveness of drugs



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Educational Development

Faculty of Pharmacy has been nominated a University of Helsinki Quality Teaching Unit in 2005 and 2007-2009, and also a National Centre of Excellence in University Education in 2010-2012 for long-term excellency in active and innovative educational development

Pharmacy education collaboration and research with Utrecht University, Tromsø University, Copenhagen University and Johns Hopkins University



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Curriculum reform of the Bachelor's and Master's programs in the Faculty of Pharmacy

- **(Re)Defining the learning outcomes of the degrees in each study year**
- **Checking up/updating the contents of the degrees; correspondence for the working life?**
- **Overlap in the courses? Need to integrate the studies better**
- **Reassessment of the teaching methods and teaching - learning environment**

Conducted by the University Lecturers Task Force (no Professors in the group) and the Studies Committee (Vice Dean of Teaching)



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There was a lot of background material collected in the previous years, e.g.:

- Student feedback
- External stake-holder feedback (Scientific and working-life pharmaceutical organisations, employers, administrators...)
- Research about teaching and learning at the Faculty of Pharmacy
- Benchmarking: national (Metropolia University of Applied Sciences, University of Vaasa Department of Management, Faculty of Arts, Faculty of Medicine, Aalto University) and international (Utrecht University, Copenhagen University, Johns Hopkins University)

Aim of these benchmarkings is to get new ideas for the development process and find good practices, as well as to increase co-operation in teaching (research) with other organisations



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The Task Force conducted comprehensive interviews in November 2012 – January 2013:

- All Units of the Faculty of Pharmacy
- All Professors and many teachers
- Students
- Interests groups: Association of Finnish Pharmacies, Finnish Pharmacists Association, The Finnish Pharmacists Society, University Pharmacy, Hospital Pharmacy (HUS), Finnish Drug Industry Association, National Agency of Medicines, Bayer, Orion, DRA-consulting, Farenta

Aim of the interviews was to (re)define the learning outcomes of the pharmacy degrees: the core skills and knowledge which should be learned during pharmacy studies and practical training to enable theoretical and practical expertise for the working-life. There is a true need to utilise the 6 month practical training as an integral part of theoretical and practical skills and knowledge development – Problem of “hidden knowledge”



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Defining the learning outcomes: The core knowledge of pharmacists

1. Basics of natural sciences: chemistry, physics, technology, biosciences NEEDED for all the students
 - no sole focus on clinical pharmacy and patient counselling
2. Medicine and medication: compounding of the medicines, holistic view of the medication, pharmacology and biopharmaceutics (side-effects and interactions), patient counselling, efficacy and safety of medicines and medication – Patient/customer, not drug, centred approach
3. Comprehensive and supportive interactions of the various disciplines of pharmacy education and research: the role and significance of pharmacy as a discipline in society, the necessary skills and knowledge in scientific thinking and pharmaceutical research
4. In addition (esp. at the M.Sc. level): basics of economics and management, multidisciplinary, hospital pharmacy, scientific writing skills, management skills



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Defining the learning outcomes: The core knowledge of pharmacists

Teaching and learning of “general skills” in direct association to subject-specific courses

- Pharmacist’s professional identity – the role in society as a part of the health care system
- Critical and creative thinking
- Problem-solving skills – skills to face uncertainty
- Personal learning skills and life-long learning
- Attitude and sense of responsibility
- Communication skills



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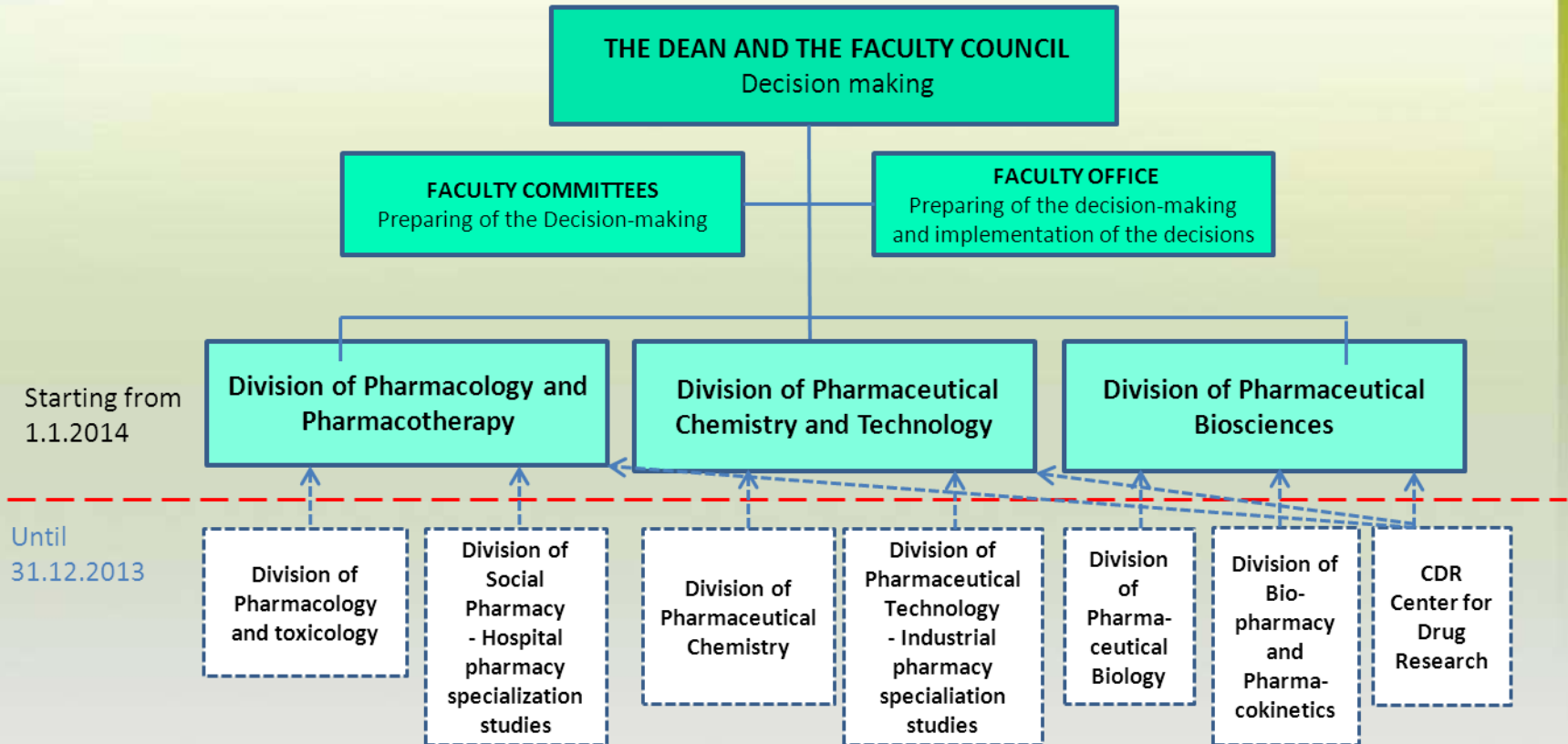
Challenges in the curriculum and teaching development

- We need to challenge the students more and to let them to be more responsible for their own learning
- We need to enhance students' professional identity and building up the conception of “pharmacy as a discipline”, not building up boundaries between community or hospital pharmacies or between drug industry and academic pharmaceutical research
- We need to increase optional studies from 10% to 20-25% -> “specialised studies”, “study paths” (e.g., community/hospital/clinical pharmacy orientation; industrial/administrative pharmacy focus; research/scientist track)
- We truly need to create a system that motivates the Units and Faculty members to respect the commonly agreed rules and practices



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THE FACULTY OF PHARMACY ORGANISATION REFORM 2014



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Ways forward:

- Regular meetings with responsible teachers and Professors: designing an ideal timetable and integrating the existing study courses in a better way
- Commitment and cooperation warrant for a lot of discussion and repetition
- Focus not only on course contents, discussions also about pedagogically relevant teaching methods and practices (for example from lecturing towards more activating teaching methods; from final exams as a sole method of measuring the student learning to more versatile evaluation and feedback methods)



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Pharmacy curriculum based on four strands (2014-):

- 1) Pharmacy as a multidisciplinary science with numerous opportunities in the working-life
 - 2) Basics of pharmaceutical sciences
 - 3) Patient and medication
 - 4) Optional studies and selected study-paths
- Strand leader (not a Professor) is nominated for each multidisciplinary strand and a responsible teacher for each study course
 - Development of teaching methods and decreased amount of lectures (for example 28h of lectures / 7 credit course)



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Preparing students for new pharmacy services:

- Increased focus and skills on clinical pharmacy and medication evaluations via the respective study path (medication reviews...) – development of pharmaceutical expertise on selected therapeutical areas requests specialisation studies after graduation
- Medicines and medication safety experts
- Multidisciplinary health care teams
- Responsibility and courage to find new employment paths – instead of the traditional pharmacy/industry/University... careers
- Self- employers, personnel rental agencies
- IT innovations and applications in pharmaceutical and health care fields (Nokia's downfall)

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Thank You - Kiitos!



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