

Establishment of competence centre in personalized medicine – the impact on pharmacy students education

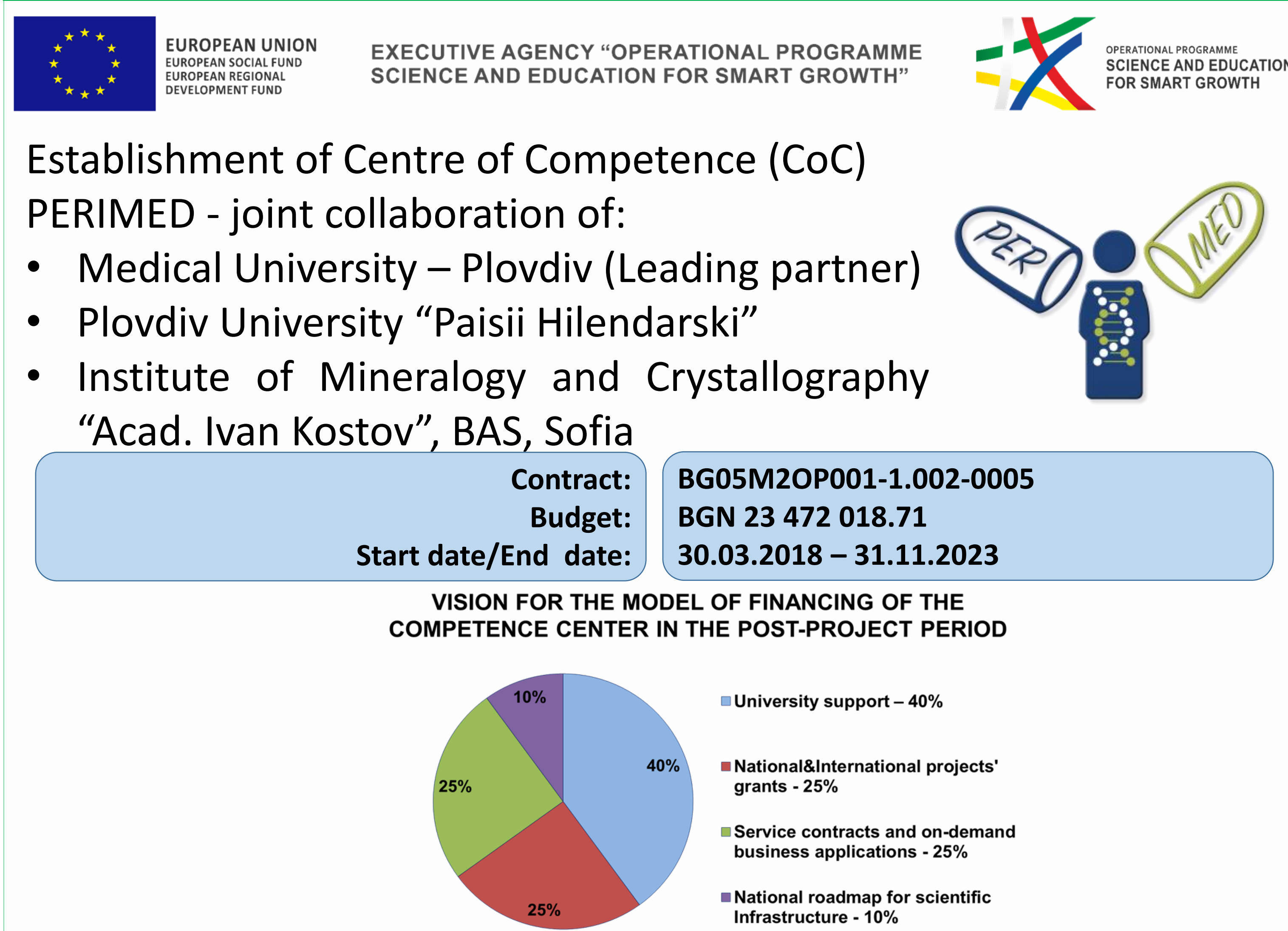
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INTRODUCTION

The paradigm of competency-based education focuses on creating specialists with competencies that best meet societal needs. Many countries have already adopted competency-based pharmacy education by construction and implementation of curricula and accreditation criteria of pharmacy programs. The transformation of traditional education into competency-based offers several advantages but is also associated with substantial challenges. The concept of personalized medicine offers numerous opportunities to pharmacists, and pharmacists have specific knowledge, skills and abilities that make them uniquely suited to promote the use of personalized medicine as a clinical tool.

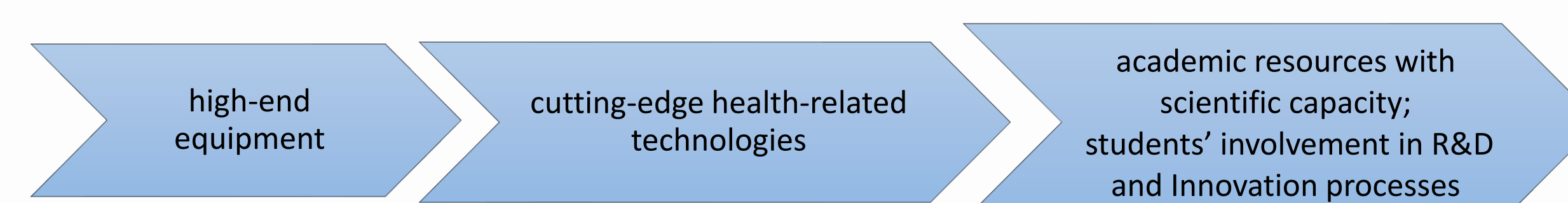
METHOD



AIMS

- Health care-related technologies
- Main activities: patient-oriented strategies in health care with scientific and applied science priority “Personalized Medicine, Diagnostics & Individual Therapy”
- Educational goals: the Centre of Competence to be an incubator for young scientists in the field of Personalized Medicine

Strategies for achieving the goal:



Informing students about the concept of innovation centres:

- Gain knowledge about two parallel activities on the basis of a successful innovation centre - applied science and entrepreneurship.
- Innovation - a new term and non-traditional thinking in student education in favour of a new product, service, process or form of organization.
- Technology transfer activities - from the student group to the company.
- Student participation in spin-off and spin-out structure.

RESULTS

Direct student participation in CoC - a basis for career guidance and professional growth

Theoretical background	<p>Upgrading students' knowledge of the principles of personalized medicine Involvement of interested students in supporting the work of research teams on work packages in the field of three main scientific pillars:</p> <ul style="list-style-type: none"> ✓ Molecular and biological methodologies for application in Personalized medicine; ✓ Innovative drug delivery for targeted therapy; ✓ Bioengineering technologies and biosensors; ✓ Reviews of scientific literature; analysis of the experience and achievements of similar European structures; conditions for the inclusion of CoC in European research networks
Practical skills	<p>Exchange of students for practical classes and exchange of good practices:</p> <ul style="list-style-type: none"> ✓ In the research laboratories of the partners ✓ In the Technology Transfer Office of the Competence Centre ✓ At the Associated Partners - for MU-Plovdiv - University Hospital and Pharmaceutical Company ✓ Work with the scientific equipment in fulfilment of the scientific tasks of the team ✓ Direct participation in scientific developments and scientific forums under the guidance of the Team Leaders
Entrepreneurship in healthcare and pharmacy	<ul style="list-style-type: none"> ✓ The student's role in building the portfolio of the Competence Centre; European and international visibility of CoC; ✓ Sustainable perspective for development, not for "survival" - in the hands of entrepreneurs; The five steps from the scientific result to the potential user of innovative solutions. Success and risk assessment ✓ Training students in the art of mediation between scientists and business representatives ✓ Intellectual property, copyright, licenses, patents, utility models ✓ Financial analysis, market potential ✓ Contract management; knowledge of regulations; private practice or corporate career ✓ Start-ups - a perspective for CoC and the university; student participation in start-up, spin-off



CONCLUSION

At the CoC, students gain a set of knowledge, skills and competencies that give them advantages in their realization as specialists and experts in the real conditions of the medical labour market. The implementation of competency-based pharmacy education is a long-term, and complicated process, which requires student commitment and institutional stability. All stakeholders involved (teachers, students, and employers) pointed out the need to update teaching practices according to the rapidly developing knowledge in various fields of pharmacy profession.