BioS Project

Dissemination Partner Organization: EMA

Presentation at the AMSE EC Meeting

Berlin, 23 February 2019

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The Deans of the Schools of Medicine are targeted as main stakeholders by the Policy briefs at Month 12th of BioS project addressed to European, National, Regional and Local Policy Makers.

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BioS
DIGITAL SKILLS ON COMPUTATIONAL BIOLOGY FOR HEALTH PROFESSIONALS

This project is in active development

producing an open access e-learning course in computational biology & bioinformatics

according to the rules of European harmonization

This is an unmet need of European Medical and Health Professionals communities.

The extension and empowering of such expertise is required in Europe and worldwide.

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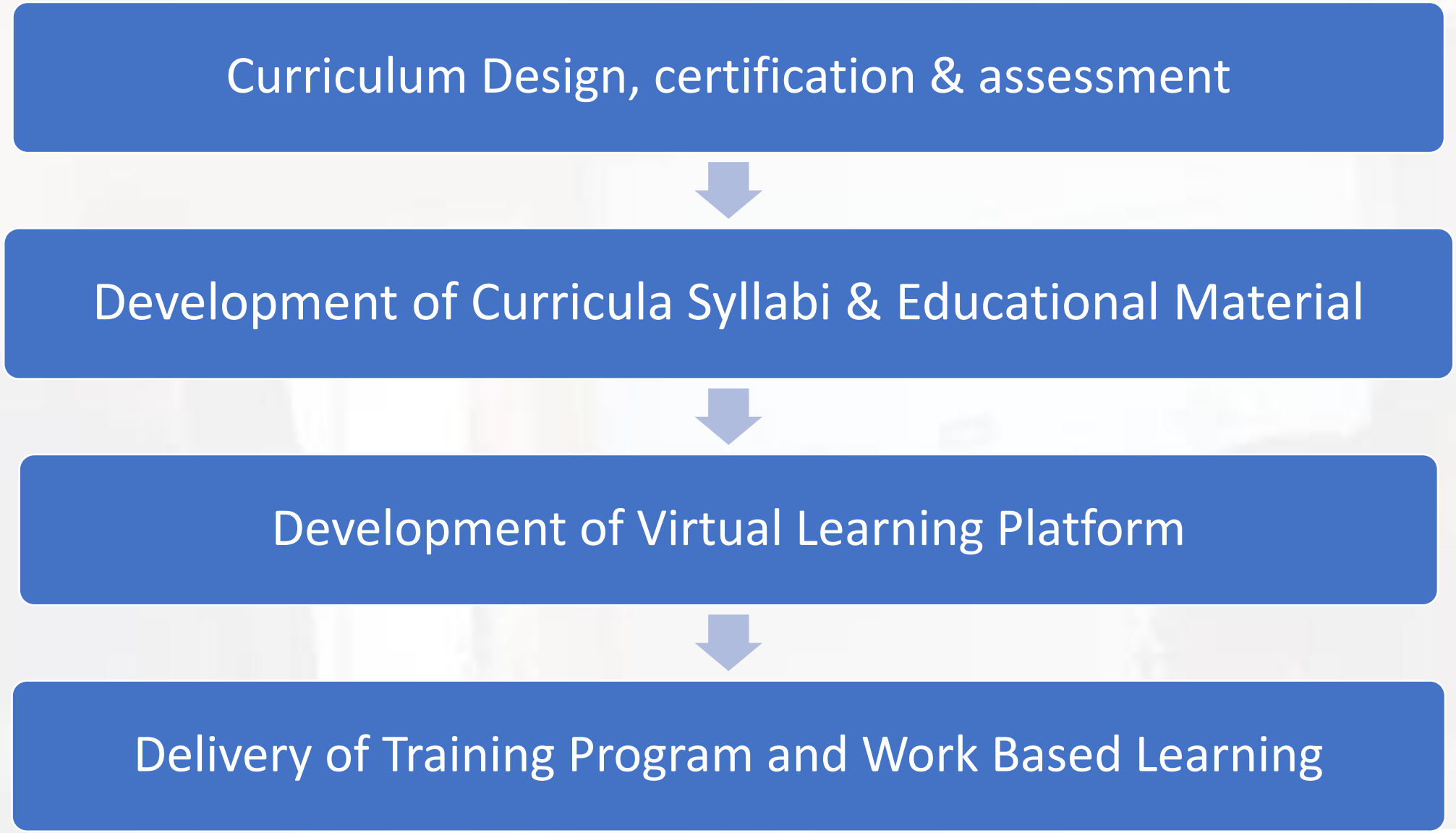
What are BIOINFORMATICS AND COMPUTATIONAL BIOLOGY BACKGROUND

- A hybrid science that links biological data with techniques for information storage, distribution, and analysis to support multiple areas of scientific research, including biomedicine.
- It is fed by high-throughput data-generating experiments, including genomic sequence determinations and measurements of gene expression patterns
- Database projects curate and annotate the data and then distribute them via the World Wide Web. Mining these data leads to scientific discoveries and to the identification of new clinical applications.
- Computational Biology, which includes many aspects of bioinformatics, is the science of using biological data to develop algorithms or models to understand biological systems and relationships.

Flow chart – overview of the project -



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Flow chart – dissemination -

Knowledge and skills in Computational Biology-informatics. Which shortage and which evidence of increased quality of health care by its practical application

Which unmet needs in Europe in teaching-training

E-learning courses already available on these topics:

which evidence of effective teaching, which enhancement of professional attractiveness of the end-users

Sustainable strategy of dissemination: media, social networks, scientific venues.

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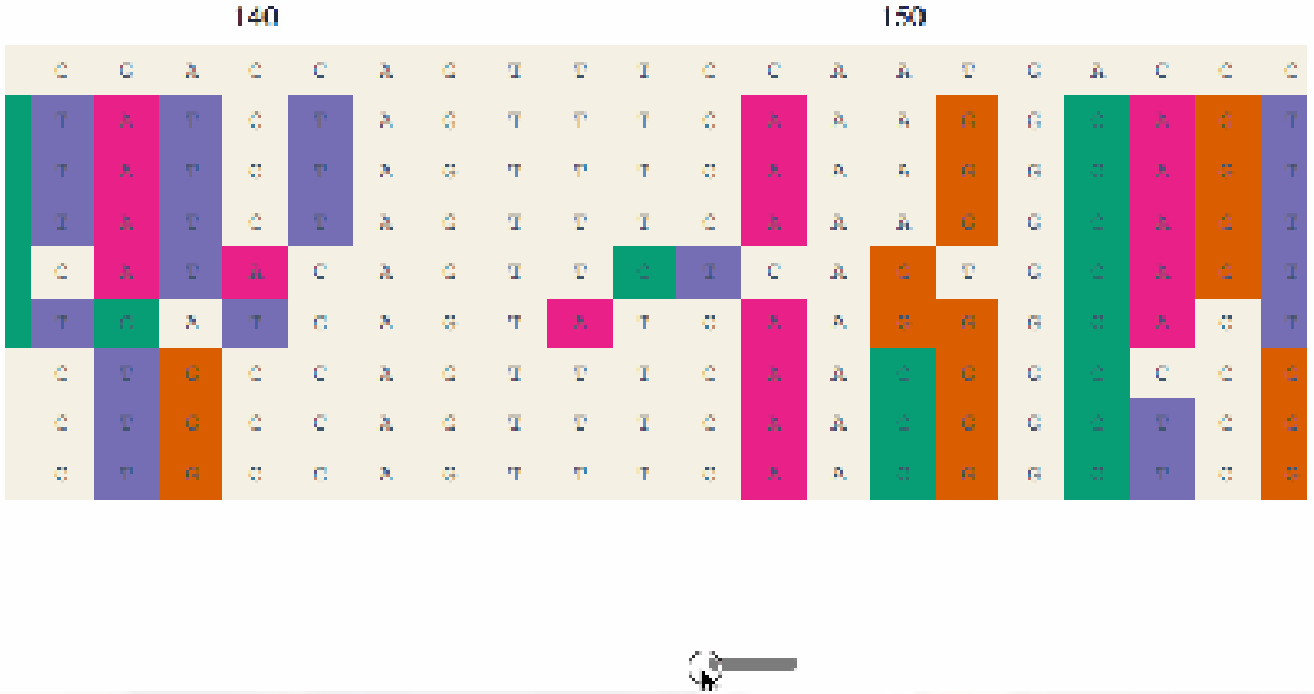
The PROJECT – AIMS AND SOME PROBLEM

- The Goal of the BioSProject is to develop a tool for widening knowledge and skills among European Health Professionals.
- Diffusion of information regarding the BioSProject among Stakeholders and potentials users elicits specific questions on these topics.
- Answers to questions coming from stakeholders and potential users are clear, realistic, verifiable and sustainable.
- Answers are supported by the explicit feature of the forthcoming course, including its quality, reliability and effectiveness criteria.

We are facing a new medicine



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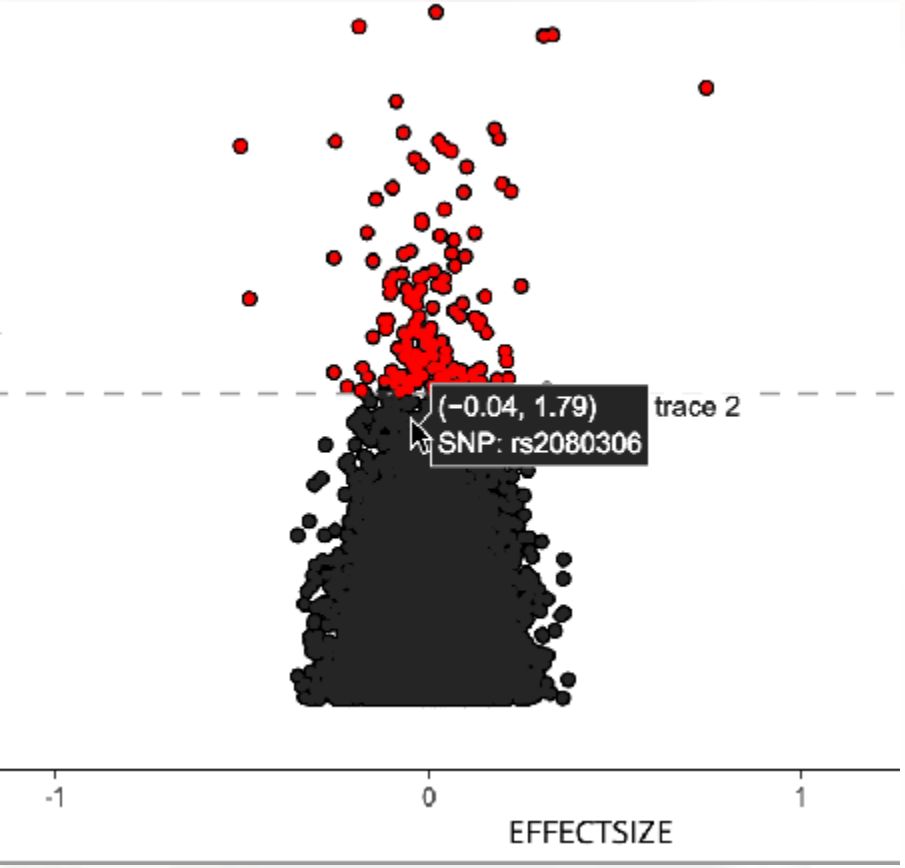
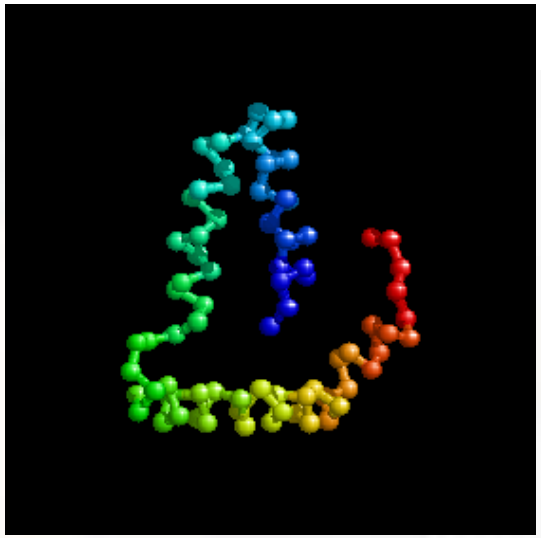
EVIDENCE OF UNMET NEEDS IN EUROPE

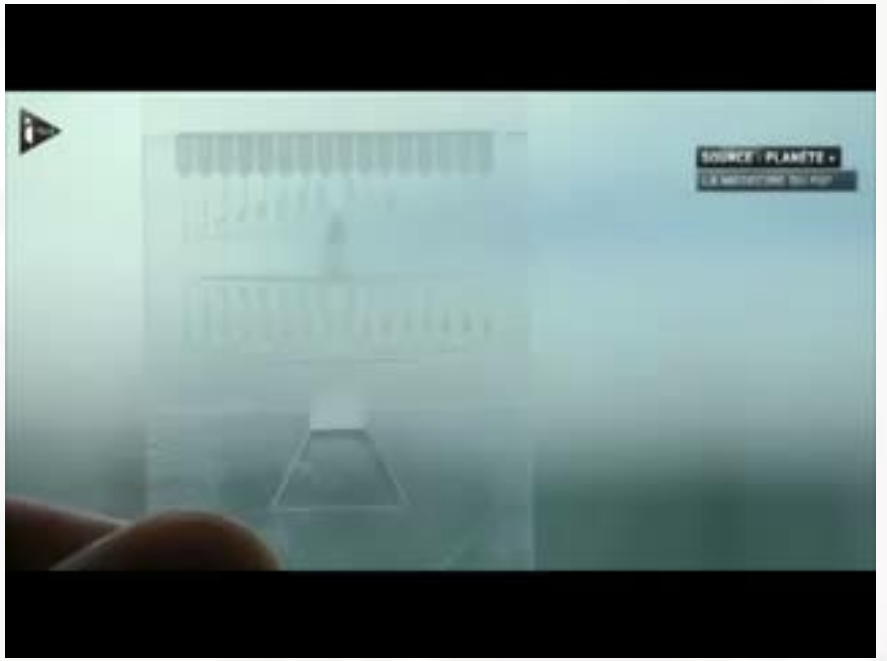
- Improvement of health care by this approach
- References to information provided by currently active bioinformatics health professionals, Academic Institutions and CME providers
- New career opportunities
- Shortage of health professionals with this specific expertise
- Insufficient bioinformatics courses and curricula are currently available

THESE ARE SOME OF THE TOPICS TO WHICH STAKEHOLDERS AND POTENTIAL USERS ARE VERY SENSITIVE

Easier diagnosis by the culture of computational biology







THE BIOSPROJECT TOOL OUTCOME

- A comprehensive e-learning MOOC course
- Open source
- Authorship, developers and producers of learning content and objects are credited of high degree of accuracy, completeness, up-to-dateness and reliability.
- Feature of blended learning – tutoring and mentoring -
- Multi-language as much as possible, but mainly in English
- Mutual recognition of the qualification of Member States and internationally

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Digital Skills on Computational Biology for Health Professionals BioS Erasmus + / Sector Skills Alliances

- Within the Consortium, previous experience in these advanced fields of vocational scientific education, i.e. in e-learning and bioinformatics, is present.
- This action and methods are aimed to overcome barriers in education and practice: these are due to several factors, which caused unsatisfactory achievements of knowledge and skills in other contexts worldwide.

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German Oncology Center

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Digital Skills on Computational Biology for Health Professionals
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Several relevant stakeholders are already targeted

- the Deans of the European Schools of Medicine and Allied Health Professions
- the current and former Parliaments Members
- public and private managers of health facilities
- several health-related associations and organizations.





Digital Skills on Computational Biology for Health Professionals
BioS Erasmus + / Sector Skills Alliances

- There is still a limited awareness of the appropriateness of including bioinformatics and computational biology knowledge and training in medical doctors and health professionals curricula.
- For this action also explicit interventions addressed to scientific and health literacy regarding bioinformatics are needed, and are already on-going by the interactive use of social media.

THE CONTRIBUTION AND THE ENDORSEMENT OF THE DEANS OF THE EUROPEAN SCHOOL OF MEDICINE IS WARRANTED

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Digital Skills on Computational Biology for Health Professionals
BioS Erasmus + / Sector Skills Alliances

- **AMSE promotes and develops the co-operation between Medical Schools in Europe, it also enhances and ensures the quality of their activities.**
- **The BioS Project, developed as a key Erasmus Plus intervention, will increase quality of curricula and competiveness of the School of Medicine that will be ready for accepting within their curricula the free e-learning course on bioinformatics.**

Digital Skills on Computational Biology for Health Professionals
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AMSE CAN FURTHER PROMOTE THE DISSEMINATION ACTION OF EMA, contributing to the optimization of

- the relationship between Medical Schools, health service and health care organisations, and relevant national and international authorities
- the developments in professions allied to medicine and their links with Medical Schools
- the role of Medical Schools in post-graduate and continuing professional development
- the role of Medical Schools in research and research training