

Morphology on the cloud - Virtual Campus, an integrated didactic platform for biomedical studies

Giuseppe Anastasi¹, Demetrio Milardi¹, Angelo Favalaro¹, Giancarlo Ceresetti², Simona Corso³, Antonio Esposito⁴, Nicoletta Gagliano⁵, Carla Martinelli⁶, Maurizio Vertemati⁷, Daniela Zarcone⁸, Paolo Govoni⁹, Antonio Zicca⁸, Sergio Castorina¹⁰, Raffaele de Caro¹¹, Massimo De Felici¹², Guido Macchiarelli¹³, Domenico Ribatti¹⁴, Chiarella Sforza¹⁵, Nadir M. Maraldi¹⁶, Carlo Tacchetti⁴

¹ Department of Biomedical and Dental Sciences and of Morphological and Functional Imaging, Anatomy section, University of Messina

² IT Unit, Edi.Erme, Milan

³ Department of Oncology, University of Turin and Candiolo Cancer Institute - FPO,IRCCS

⁴ Experimental Imaging Centre, IRCCS San Raffaele and University Vita-Salute San Raffaele, Milan

⁵ Department of Biomedical Sciences for Health, Histology section, University of Milan

⁶ Department of Health Sciences, Histology section, University of Milan

⁷ "L. Sacco" Department of Biomedical and Clinical Sciences, University of Milan

⁸ Department of Experimental Medicine, Anatomy section, University of Genoa

⁹ Department of Biomedical, Biotechnological and Translational Sciences (S.Bi.Bi.T), University of Parma

¹⁰ Department of Biomedical and Biotechnological Sciences, Anatomy section, University of Catania

¹¹ Department of Neuroscience, Anatomy section, University of Padua

¹² Department of Biomedicine and Prevention, Histology section, University of Rome 2

¹³ Department of Health Sciences, Anatomy section, University of L'Aquila

¹⁴ Department of Basic Medical Sciences, Neurosciences and Sense Organs, Anatomy section, University of Bari

¹⁵ Department of Biomedical Sciences for Health, Anatomy section, University of Milan

¹⁶ Laboratory of Musculoskeletal Cell Biology, IOR-IRCCS, and University of Bologna

The current Core Curricula of Degree courses in Biomedical areas has enormously compressed the hours dedicated to the student for self-learning in morphological subjects. The result is a reduced student attitude to integrate the information received by attending lectures and practical sessions, with the indispensable consultation of texts dealing with morphological and 'functional' subjects, a key experience to autonomously logically identify the rationale of the morphology/function relationship in the human body, at the macroscopic and microscopic level.

These changes are occurring at a time when new medical imaging technologies become more and more informative in both morphological and functional areas.

As a consequence, we are modifying our way of organize lessons compared to the generations of colleagues who have preceded us. More and more frontal lessons are organized with a logical morpho-functional approach. For example, the reference to the anatomy of the living, displayed through invasive or not invasive imaging, is added to the necessary and traditional anatomy of the cadaver. The reference to the pathology helps to define how the alteration of morphological integrity is reflected on function, both at the macro and microscopic level, and so on.

However, there are no organized easy-to-use guided tours for the student to allow, in the shortest possible time, to 'rationally see' what he has studied, in the various imaging contexts available at the macro- and microscopic level. At the same time, there are no 'data bank' of resources for the preparation of the lessons.

That is why we have imagined 'virtual campus' an integrated digital learning platform for self-learning. The platform has been thought and realized thanks to a group of teachers of 'morphologic' and 'functional' biomedical subjects and computer engineers belonging to a publishing house.

The presentation will explain the rationale behind the platform, its structure and the educational opportunities offered.