

reactions adequate for ovine MHC antigen structure and contractile properties (mATPase) of individual skeletal muscle fibers.

112 - Veterinary anatomical series for iPad: an evolutionary learning concept

J. Perkins, R. McGhie and P. Noble*

Anatomy discipline, Department of Anatomy and Pathology, School of Veterinary and Biomedical Sciences, Faculty of Medicine, Health and Molecular Sciences, James Cook University, Australia

Introduction: A recent study supports the role of eBook technology in modern anatomy curriculum as a useful adjunct to traditional methods (Stirling A *et al.*, 2014: *Anat Sci Educ* 7, 19–27). In that context, the project focus is the construction of an anatomical eBook series that supplements other delivery methods such as lectures and dissections. The objective is to accommodate diverse learning styles enabling students to have a better comprehension of anatomy for clinical practice.

Methods: Using dissections of bovine, equine and canine specimens, photos and movies of myology and osteology were designed with iMovie and PhotoshopCS6. An Apple iPad eBook was then developed using custom programming.

Results: Users are able to navigate content through an interactive 'table of contents'. Search capabilities are accessed through an alphabetical 'index'. Each anatomical structure includes a detailed page with the precise location within the body, as well as subsequent views to aid the user to better understand the 3d visualization. Videos of dissections are also included. Tap gestures will expose a toolbar which is used to navigate to a flash card deck. Finally the program is able to support user additions, including custom notes. This is accomplished with a finger swipe, across included text. This results in a pop-up menu that gives users the option to add highlights, notes or copy and paste information within their addition.

Conclusions: This program coupled with the iPad's dynamic and interactive feature sets allows students to utilize the provided content quickly and efficiently. The evolutionary platform features allow users to add updates and customizations to their edition as desired. Due to the nature of the ever changing Veterinary Medical field, this design, along with the ability to access downloadable updates, offers an advantageous approach to anatomical learning. Additional information: http://m.youtube.com/watch?v=-M_zGfRA9w8.

113 - Practical aspects of the corrosion casting technique

Ö. Petneházy^{1,*}, K. Czeibert², G. Baksa³ and L. Patonay³

¹University of Alaska Fairbanks, College of Natural Science and Mathematics, USA ²Department of Anatomy and Histology, Faculty of Veterinary Science, Budapest, Hungary ³Department of Anatomy, Histology and Embryology, Semmelweis University, Budapest, Hungary

Introduction: Correct anatomical visualization and interpretation of the vascular system is a big challenge in the research, clinical work and education. The new 3D reconstruction methods of diagnostic imaging (vascular reconstructions) give us a non-destructive method (Lafayette *et al.*, 2009 : *Tissue engineering*. 15, 729–738, Mondy WL. *Et al.* 2013 : *Microscopy and microanalysis*. 19, 1416–1427) but it has its limits. Corrosion casting is a widely used method for demonstrating the different vessels (Bugge, 1963: *Acta Anat.* 54, 177–192; Noestelthaller *et al.*, 2007: *Anat. Histol. Embryol.* 36, 33–37; Tompsett. D.H., 1956: *Anatomical Techniques*). The authors present the possibilities of this technique.

Material and methods: Corrosion casts from different organs and body regions of domestic mammal and bird cadavers were made using Tensol No.70, Biodur E20, Acrifix 190 and Acrifix 1900. The resins were modified in viscosity and color for achieving the desired results. Macerations were tested using: hydrochloride acid, potassium-hydroxide and modified enzymatic maceration for the conservation of the bones.

Results: By selecting the right material (i.e. Tensol No.70, Acrifix 190 and 1900 for the macrocorrosion casts, Biodur E20 for the microcorrosion casts), viscosity (low, middle and high), color and maceration procedure we were able to demonstrate the vasculature in a wide range of diameter. We produced micro- and macrocorrosion casts of different organs and body regions.

Conclusions: With the current diagnostic imaging methods (CT and MR) it's hard to reproduce the finer branches of the vessels for large organs or body regions, which could play a major role in clinical research. Corrosion casting can help us to complement the reconstruction of the vascular system by selecting the right technique, material (McMullan *et al.*, 2004: *Microvascular research* 67, 215–217) and maceration method.