



## ORAL PRESENTATION ABSTRACT

### 1.2. "Novel En Bloc Dissection and Plastination of Full Body Systems". "Novedosa Disección en Bloque y Plastinación de Sistemas de Cuerpo Completo".

Gustilo, K1; Curran, S.1, Goldberg, C.1, Lohman Bonfiglio, C.M. 1; Frank, P. W. 2; Baptista, C.A.C 2; Stabio, M.E.1

1 Modern Human Anatomy Program, Department of Cell & Developmental Biology, University of Colorado School of Medicine, Aurora, CO, USA

2 Department of Medical Education, College of Medicine & Life Sciences, University of Toledo

**Introduction:** With the transition to integrated anatomical curricula in professional programs, the use of traditional, region-based, human body dissection has decreased while the use of systems-based prosections has increased<sup>1-3</sup>. Recent studies have demonstrated the value of such prosections but have only described partial systems<sup>4-6</sup>. Here, two novel en bloc nervous and circulatory system extractions are described. **Material and Method:** Two embalmed cadaveric donors were obtained from the Colorado State Anatomical Board. Dissections were performed with common dissection tools without the use of polymer injection into the vessels prior to embalming. Best approaches, challenges, and time-saving strategies were recorded to create dissection guides. Plastination was performed using NCSX silicone (North Carolina) by cold temperature von Hagens' silicone technique<sup>7</sup>. Prior to dehydration specimens were attached to a non-flexible stainless-steel platform to avoid deformities. Dehydration was done with acetone at -25°C (three changes). Impregnation was performed under vacuum at -15°C. After impregnation the stainless-steel platform was raised from the silicone, drained overnight, and transferred to room temperature. The specimens were pinned to a Styrofoam in anatomical position prior to curing. Custom Plexiglas displays were built to house the systems in 3D space. **Results:** The full nervous system including brain with eyes, spinal cord, and all major peripheral nerves was successfully extracted from one donor. The full cardiovascular system, including heart, liver, 390 named arteries and 63 named veins was extracted from another donor. The plastination process resulted in dry, odorless, and precise specimens that illustrate the complexity and continuity of full body systems. **Discussion:** This reimagination of traditional dissection techniques has generated new avenues for illustrating the human body for biomedical education, even in an established field such as gross anatomy. **Conclusions:** This project demonstrates the feasibility to dissect, extract, and plastinate full body systems en bloc for long-term educational use.

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