HAPS Central Regional Meeting
Saturday, March 7, 2015
March, 2015

It is truly an honor and a privilege to welcome each of you to the Spring 2015 Human Anatomy and Physiology Society conference on the Galen College of Nursing Campus in Cincinnati, Ohio. What a great opportunity to learn and collaborate with other educators in this field and to share success and innovative strategies with other professionals.

Galen certainly understands the value of current, valid and evidence based practices within every modality of teaching, learning, developing new and improved processes through research and ultimately the dissemination of this information. Thank you for your attendance and participation in this conference. I wish each of you a great memorable experience.

Sincerely,

Melisa Lepard, MSN, RN
Associate Degree in Nursing Program Director
Galen College of Nursing-Cincinnati Campus
HAPS Central Regional Conference:  
Schedule for Saturday, March 7th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:00 AM – 9:30 AM</td>
<td>Registration</td>
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<td>Library on the 2nd Floor</td>
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<tr>
<td>9:30 AM – 9:45 AM</td>
<td>Welcome</td>
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<td>Room 3</td>
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<tr>
<td>9:45 AM – 10:45 AM</td>
<td>Laura Woollett, PhD</td>
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<td>University of Cincinnati</td>
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<td>School of Medicine</td>
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<td>Room 3</td>
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<tr>
<td>10:45 AM – 11:15 AM</td>
<td>Break with Exhibitors – Room 2</td>
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<td>Posters – Room 4</td>
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<tr>
<td>11:15 AM – 12:15 PM</td>
<td>Workshop 1</td>
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<td>12:15 PM – 1:15 PM</td>
<td>Lunch</td>
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<td>1:15 PM – 2:15 PM</td>
<td>Raymond Boissy, PhD</td>
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<td>University of Cincinnati</td>
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<td>Room 3</td>
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<tr>
<td>2:15 PM – 3:15 PM</td>
<td>Workshop 2</td>
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<tr>
<td>3:15 PM – 4:00 PM</td>
<td>Break with Exhibitors/Door prizes</td>
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<td>Room 2</td>
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*Note that there is an informal trip (no transportation provided) to the Cincinnati Museum Center to see the “Mummies of the World” exhibit. This will complement a workshop on human preservation by Ronn Wade.*
HAPS Central Regional Meeting 2015

HAPS would like to recognize and thank all of our conference exhibitors and sponsors. Their generous support makes this conference possible.

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Thieme Publishers
Update Seminar 1

“Developmental Programming: Impact of Multiparity or Low HDL Levels”

9:45 AM – 10:45 AM
Room 3
Galen College of Nursing

Laura Woollett, Ph.D.
University of Cincinnati
School of Medicine

Laura Woollett received her Ph.D. from Iowa State University in the Department of Biochemistry and did her post-doctoral fellowship at the University of Texas Health Science Center in Dallas. She remained in Texas as an Assistant Professor before coming to the University of Cincinnati. She is currently a professor in the Department of Pathology at UC. Dr. Woollett’s research focuses generally on the parous female and on offspring from fetal stages to adulthood.
Update Seminar #2
“The Cutaneous Melanocyte: A Model for Cellular Trafficking”

1:15 PM – 2:15 PM
Room 3
Galen College of Nursing

Dr. Raymond E. Boissy is Professor of Dermatology & Cell Biology and Director of Basic Science Research at the University of Cincinnati College of Medicine (UCCOM). The research program at UCCOM focuses on many aspects of pigment cell biology including regulation of skin pigmentation, melanoma biology, and pathophysiology of pigmentary diseases. Dr. Boissy received his Ph.D. degree in Veterinary Sciences from the University of Massachusetts where his thesis research focused on the loss of pigmentation in the avian model for Vitiligo, the Smyth chicken. Dr. Boissy subsequently trained as a junior faculty in Dermatology Research at Yale University School of Medicine under the tutelage of Dr. Aaron Lerner, where he began to investigate the melanocyte pathophysiology of Vitiligo. In 1986, Dr. Boissy joined the faculty of the Departments of Dermatology and Cell Biology at the University of Cincinnati College of Medicine, where he continued his investigation of Vitiligo with Dr. James Nordlund. For the past two decades, Dr. Boissy has also investigated the cellular/molecular biology underlying pigment granule formation, melanosome transfer to keratinocytes, albinism, Hermansky-Pudlak Syndrome, Chediak-Higashi Syndrome, and neurofibromatosis. Dr. Boissy has published over 100 scientific papers, 27 review articles and book chapters, and has helped edit two editions of The Pigmentary System: Physiology and Pathophysiology (Blackwell Publishing, Oxford, UK). Dr. Boissy has lectured throughout the world and has recently received the Literature Award from the Society for Cosmetic Chemistry for his publications on pigment cell biology. Dr. Boissy has been Secretary/Treasurer of the PanAmerican Society for Pigment Cell Research, Council Member of the International Federation for Pigment Cell Research, Council Member of the International Federation for Pigment Cell Research, and the President/Executive Director of the National Vitiligo Foundation.
Maintaining the Anatomical Position of the Upper Limb for Cadaver Dissection
Scott Barton, UC San Diego, stbarton@ucsc.edu
Maria Savoia, M.D., UC San Diego, msavoia@ucsd.edu
David Rapaport, UC San Diego, drapaport@ucsd.edu
Dissection of cadavers with pronated forearms and clenched hands is challenging technically. Furthermore, it creates confusion for students when demonstrating structures with reference to anatomical position. Here we report the development of a novel device that counteracts the forearm pronation that occurs during embalming, holding it in supination. The device has been used in our facility for about two years. In the anatomy laboratory both faculty and students have found it easier to dissect the forearm and hand on treated cadavers and have had advanced experience relative to the control group.

Impact of Videos on Student Laboratory Practical Scores
Tim Bradshaw, Polk State College, tbradshaw@polk.edu
Emily Bradshaw, Florida Southern College, ebradshaw@flsouthern.edu
Suzanne Halverson, Polk State College
Introductory A&P students often struggle with the names of the bones of the body, even though a solid understanding is beneficial to health professionals. We developed videos highlighting the names/locations of all the bones. Students were given online access to videos one week prior to their exam. Students reported how many videos they viewed and scores were compared between students who watched some, all, or none of the videos. Students who watched some of the videos scored lower (57.7 +/- 16.1) than students who watched all (73.2 +/- 18.1) and students who watched none (72.3 +/- 12.1) of the videos (p<0.05). Videos help some students learn this topic.

Unusual Drainage of the Right Testicular Vein: A Case Report
Dr. Seth Gardner, Bowling Green State University, gardnes@bgsu.edu
Routine cadaver dissection was carried out on a 69 y.o male and the drainage pattern of the testicular veins was photographed. Dissection showed the right testicular vein drainage to be abnormal as it was draining into the right renal vein, while the left testicular vein demonstrated a normal pattern by draining in to the left renal vein. The unusual drainage of the right testicular vein into the right renal vein may complicate surgical procedures and/or complicate hemodynamics thus causing a varicocele on the left side. Knowing the anatomical variant of the venous system can help the surgeon to avoid potential complications during routine laparoscopic procedures.
**Do you want to Play Hangman?**  
Leila Jabbour, Franklin Pierce University, jabbourl@franklinpierce.edu

In a lecture classroom of 50 students, a few invariably disengage no matter what teaching style is used. Flipped classroom, project based learning (PBL), and process oriented guided inquiry (P.O.G.I.L.) are great pedagogical tools but not always applicable to large classroom sizes. To stimulate student engagement, I decided to incorporate hangman games throughout the lecture notes. It required effort to include “mystery words” and create a “student-version” of my lectures. However, it helped many students pay more attention and participate. In conclusion, this method, despite its challenges, proved to be helpful to students in a large classroom setting.

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**Creative Strategies that Strengthen Understanding of Complicated Anatomical Concepts**  
Mary Tracy-Bee, University of Detroit Mercy, tracyma@udmercy.edu  
Mark Ottenbriet, University of Detroit Mercy  
James Montante, Macomb Community College, ad3543@wayne.edu  
Chris Discenna, Oakland University

Hands-on activities make anatomy education more stimulating. We have utilized and examined several different group activities and approaches to teaching anatomy designed to keep the learning process engaging and self-motivating. The level of student satisfaction increased 28% and the majority of students felt that these activities enhanced their learning with an average of 4.81 out of 5 on the Likert scale. Moreover, grades increased 14% compared to another section of the same class where these techniques were not employed. Engaging teams of students is great importance for understanding difficult concepts, retention of knowledge in anatomical sciences and student satisfaction.

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**An Investigation of best Practices for Learning Muscular Attachments: Book student or Hands-on?**  
Mary Tracy-Bee, University of Detroit Mercy, tracyma@udmercy.edu  
Greg Grabowski, University of Detroit Mercy

Helping students to visualize the relationship of muscles is a challenge. We present a visual, interactive exercise to reinforce student understanding in this area. Students were asked to place precut two-dimensional felt models of the muscles on a life sized skeleton or disarticulated bones compared to a control group that simply read during the activity time. Students who worked with the felt muscles showed a greater improvement relative to the students who studied independently. We advocate the use of this activity to engage the students and to provide an opportunity for the students to reinforce their muscle attachment understanding.
Workshops: Session 1

30 Minute Workshops:

11:15 AM – 11:45 AM Room 4: Using History to Teach Anatomy and Physiology
Vinson H. Sutlive, Pfeiffer University, vinson.sutlive@pfeiffer.edu
Giving a historical context to the details of anatomy and physiology can be a useful method of helping some students grasp the seemingly tedious pieces of information. This presentation uses history – from Dr. Robert Gross' first ligation of patent ductus arteriosus, Dr. Alfred Blalock and Vivien Thomas' Blue-Baby Operation, to Dr. C. Walton Lillehei's first open-heart repair of Tetralogy of Fallot - as a way to teach and reinforce the anatomy and physiology of the heart. Allowing students to connect a human story to the specific anatomical information stimulates interest and makes the lessons ‘stick’.

11:45 – 12:15 PM Room 4: Three Strategies to Fit it All in and Make it Stick: Effective Approaches to Lead Students Successfully Through the World of Human Anatomy and Physiology
Dr. Jennifer Zitzner, Loyola University Chicago, jzitzner@luc.edu
A common challenge in teaching Human Anatomy and Physiology is covering an overwhelming amount of material in a relatively short time-frame. In addition, how can we ensure that students remain engaged throughout the year and retain the vital information critical to their future professions? In this workshop, three specific strategies to effectively guide students through the challenging and content-intensive course of Human Anatomy and Physiology will be presented. A discussion of participant’s experiences will also be included – so feel free to bring your best practices to the table too!

60 Minute Workshops:

11:15 AM – 12:15 PM Science Lab: Hands-On Ultrasonographic Examination of Cardiac Function for Teaching Anatomy and Physiology of the Heart
Cara Davies, Ph.D., University of Findlay, davies@findlay.edu, Michael Parrish, B.S., RDCS, RVT, University of Findlay, parrish@findlay.edu, Susan Perry, University of Findlay, perry@findlay.edu
This workshop will introduce participants to sonographic visualization of the heart taught by anatomy and cardiac ultrasound experts. The workshop includes review of normal cardiac anatomy and physiology, as well as hands-on scanning of cardiac structures with live models, for a realistic experience. This type of sonographic visualization is becoming integrated into Clinical Anatomy courses in medical education; introduction in a workshop of this type is the first step in obtaining a strong foundation in order to begin performing and/or interpreting cardiac Ultrasound Examinations in clinical practice. The Cardiac Ultrasound protocols are taught in accordance with AIUM and IAC guidelines.

11:15 AM – 12:15 PM Room 5: The Nerve of it All: The Brachial Plexus in 3D
Christine Yu, Indiana University Bloomington, cid@indiana.edu
This workshop will present and encourage you to make the Brachial Plexus with pipe cleaners. The purpose of this activity is twofold: it provides you with a kinesthetic tool to aid student learning of the Brachial Plexus, and it will provide you with a super cool Brachial Plexus model that you can bring to parties and show to your friends (though it is not to scale). Materials and assembly instructions will be provided. Highlights from “A novel technique for teaching the brachial plexus” (2011) will be presented. Discussing “replication and extend” studies is an aim of this workshop as well.
30 Minute Workshops:

2:15 PM – 2:45 PM Room 6: Using the Stock Market to Teach Real World Applications of Scientific Principles
Emily Bradshaw, Ph.D., Florida Southern College, ebradshaw@flsouthern.edu, Tim Bradshaw, Ph.D., Polk State College, tbradshaw@flsouthern.edu

To help students appreciate how biology content has relevance outside of the classroom, we developed an interdisciplinary research assignment that used products from publicly traded biotech companies. Students used concepts learned in class, such as stem cells, to understand primary literature on products from each company. Student feedback indicated a marked interest in this research project, a desire to learn more about specific biotech products, and an interest in taking more upper level biology courses. This workshop will describe the development of the assignment and thematic analysis of student responses at two-year and four-year colleges.

2:15 PM – 2:45 PM Room 7: Medical Mummies – Introducing the Historic Burns Museum, A Collection of Human Medical Teaching Specimens (1790 – 1809)
Ronn Wade, University of Maryland School of Medicine, rwade@som.umaryland.edu

Combined presentations – 2 topics related to human preservation. (1) Medical Mummies – Introducing the historic Burns Museum Collection Medical human teaching specimens prepared Scottish anatomist Allan Burns. Many procured and resurrected from their freshly dug graves.

Ronn Wade, University of Maryland School of Medicine, rwade@som.umaryland.edu

Replication of Egyptian Mummification, an on-going research project. It was the first human Egyptian style mummification in 2,800 years.

60 Minute Workshops:

2:15 PM – 3:15 PM Room 4: Best Practices in Multiple Choice Question Writing and Item Analysis
Jennifer Marie Burgoon, Ph.D., The Ohio State University, Jennifer.burgoon@osumc.edu, Melissa Marie Quinn, MD, The Ohio State University, Quinn.269@osu.edu

With increasing class sizes and the need to quickly return exam scores, many instructors are utilizing some form of multiple choice exams in their courses. Composing effective multiple choice questions is not an easy task and requires considerable time and effort. Poorly written multiple choice questions can be confusing and frustrating for students. Therefore, it is important for instructors to learn the appropriate steps and guidelines to compose quality multiple choice questions. This workshop is designed to do just that along with evaluating and modifying existing multiple choice questions through item analysis.

2:15 PM – 3:15 PM Room 5: Adapting Team-Based Learning in a Large Undergraduate Anatomy Course
April Richardson Hatcher, Ph.D., University of Kentucky, arich3@uky.edu, Kristen Platt, Ph.D., University of Kentucky, platt.kristen@uky.edu, Christena Gazave, University of Kentucky, christena.gazave@uky.edu

Team-Based Learning (TBL) is an engaging teaching tool that challenges students to take an active part in their own learning by content-rich discussions with peers and by applications of the foundational material. This workshop will introduce the basics of TBL and how it was modified and implemented in a large undergraduate anatomy course. Scratch-off cards were used to provide instant feedback on answer choices and clinical applications were introduced to supplement basic anatomical principles. Participants will learn the TBL technique and discuss the challenges and rewards of implementing dynamic learning strategies in a dense curriculum.