



May 2016

Dear Colleagues,

On behalf of the organizing committee, I would like to welcome you all to the **16TH EDUCATIONAL STRATEGIES WORKSHOP OF THE ASSOCIATION OF MEDICAL SCHOOL MICROBIOLOGY AND IMMUNOLOGY CHAIRS (AMSMIC)**. We hope that you will enjoy the new venue and get the most out of what we have planned. We have selected an outstanding property located in the center of the city so we will all be able to wander and experience all that this town has to offer.

This year's workshop continues our quest to identify the best educational practices and curricula available for microbiology and immunology. Our goal this year is to disseminate much of what we analyze, develop and conclude after our 4 days of active learning and discussions through submission of peer-reviewed manuscripts and the generation of enduring media.

We are fortunate to have Dr. Parker Small, an acclaimed pediatrician, immunologist, advocate of team based learning and creator of POPS, to set the focus and direction for our workshop through his keynote talk on reimagining the role of microbiology and immunology in medical education and finding new interactive approaches to its teaching. He and others will remind us to appeal to the intelligence of our learners and engage them in their education. Together, we will discuss and develop solutions for facing the challenges of delivering a greater amount of material relevant to 21st century medicine with less contact time using approaches that promote greater retention and improved efficiency.

A major emphasis for this year's workshop will be the integration of concepts of inflammation and immunology into the understanding of microbial infections. Dr. Judith Owen, co-author of *Kuby Immunology, 7th edition* (and soon the 8th edition) will join us and offer her perspectives and strategies on teaching immunology. She will offer insight into the new discoveries in immunology that will fill our future physician's toolbox, a toolbox that will address the immunological challenges of their patients.

We are delighted to be able to welcome the team that participated in the development of Robert Wood Johnson Foundation's flipped classroom based curriculum for microbiology and immunology. They have provided access to a substantial amount of their content and learning objectives. Dr. Charles Prober, the senior associate Dean for Medical Education from Stanford University's College of Medicine who with his colleagues, Manuel Amieva, MD, PhD, Sharon Chen, MD, and Brian Schwartz, M.D. will guide us through how they generated this remarkable resource.

- Dr. Samia Ragheb will share her experience with best practices utilized in the integrated curriculum at the Oakland University, William Beaumont School of Medicine.



- Dr. Chris Burns will lead and we will participate in a workshop on Team Based Learning.
- Dr. Sarah Farrell will again lead us in a discussion of 'learning and the digital native'. After a long career in medical education, Dr. Farrell promises to help us think about ways to improve our methods for teaching 'the digital native' and offer some effective strategies for teaching to this highly motivated group of individuals.
- Drs. Manuel Paniaqua, Carly Daniels and Aggie Butler from the National Board of Medical Examiners will generously conduct a workshop on *Assessment under the microscope: How to minimize immunity to integrated curricula!*

We are delighted with the number of success stories that you have shared with us via your abstracts. We selected 5 abstracts that will be presented in the session entitled *Insights from the front*. The others will be presenting their work during our desserts with posters session on Monday evening. Please stop by after dinner, and visit with your colleagues and learn what they have developed. Remember, Posters are digital, and are available via our iTunes U portal.

ITUNESU PORTAL

As has been our tradition, we are going to record our plenary sessions so that you may review them and share with your colleagues. Additionally, as this workshop expects everyone to contribute, this portal will be a convenient way to collate our efforts. To gain access to our secure 'course', you will need to enroll in our iTunesU course. This novel content management system will work with Windows, Mac, iOS, or Android (Tunesviewer). (<https://www.apple.com/support/itunes-u/using/>)

To gain access simply enroll using the following enroll code into the appropriate spot within the app.

<https://itunesu.itunes.apple.com/enroll/EJM-PDY-BWA>:

In closing, we are delighted that you decided to join us in Palm Springs. We look forward to working with you all over the next four days. Have fun and Welcome!

Michael Schmidt, Laura Kasman, Kirsten Larson and Ken Rosenthal.

MAP OF HOTEL PROPERTY



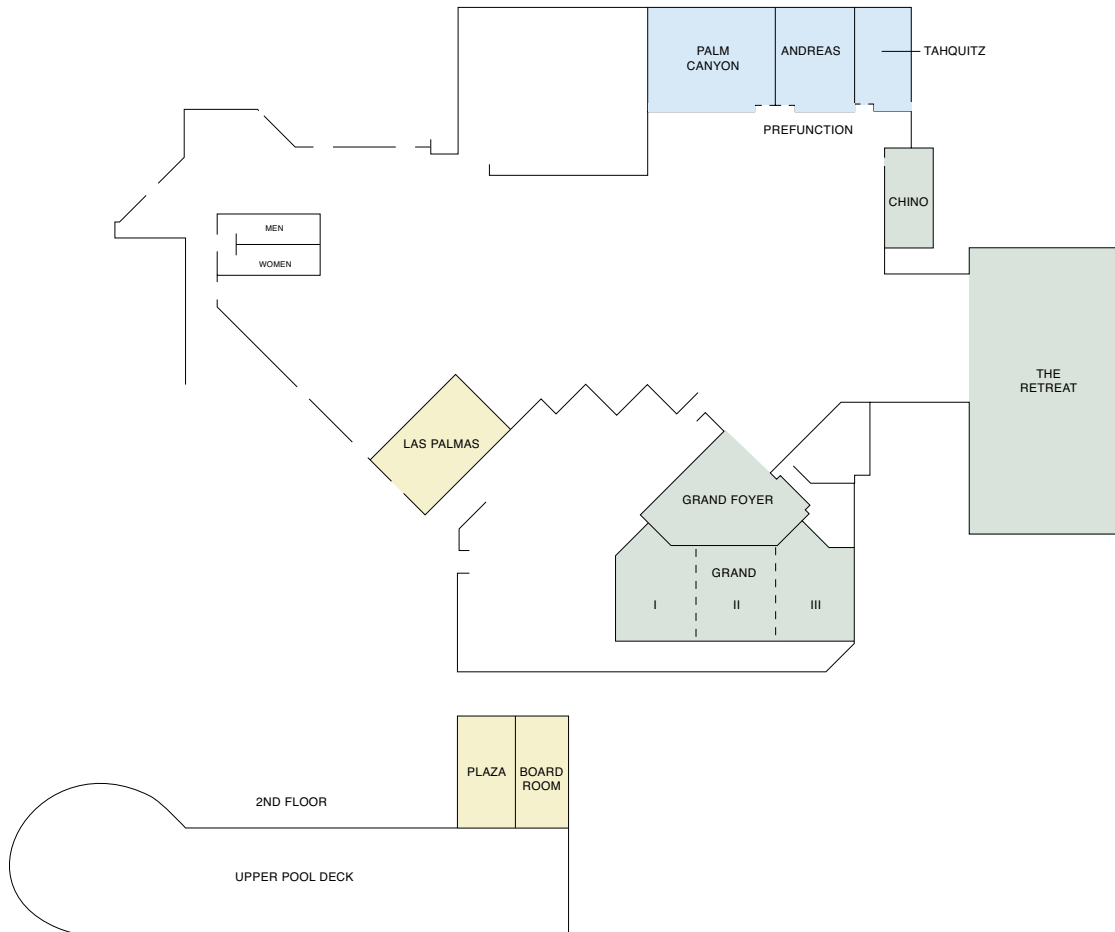
Hyatt Palm Springs

DIRECTIONS

From Palm Springs Airport (3 miles): Take Tahquitz Canyon Way to Indian Canyon Way. Turn right, proceed two blocks to Amado. Turn left, proceed one block to Palm Canyon Dr. Hotel is on corner of Amado and Palm Canyon.

From Ontario Airport: Take I-10 East to Hwy. 111, Palm Springs exit. Hwy. 111 becomes Palm Canyon Dr. Hotel is on corner of Amado and Palm Canyon.

From L.A. Int'l Airport: 105 East to 605 North to 10 East to Hwy. 111, Palm Springs exit. Hwy. 111 becomes Palm Canyon. Hotel is on corner of Amado and Palm Canyon.





Welcome Sunday, May 15th 2016

3:00 pm - 7:00 pm **Registration Desk**
Grand Marble, Hyatt Palm Springs

5:00 pm - 6:00 pm **Welcome Reception**
Grand Marble, Hyatt Palm Springs

6:00 pm - 7:00 pm **Welcome Dinner**
Grand Ballroom, Hyatt Palm Springs-

All of the Plenary Sessions will be held in Grand Ballroom, Hyatt Palm Springs

7:00 pm - 7:15 pm **1. Welcome and Goals Setting (Goals Sunday)**
Michael G. Schmidt, PhD, Program Committee
Laura M. Kasman, Ph.D.
Kenneth S. Rosenthal, Ph.D.
Kirsten A. Larson, Ph.D.

7:15 pm - 8:15 pm **1.2 Medical Education: The Challenges and Outcomes
Needed for our Evolving Health Delivery System**
Parker A. Small, Jr. MD

8:15 pm - 9:15 pm **1.3 Introduction to Stump the Chief**
Kenneth S. Rosenthal, Ph.D.



Content Monday, May 16th 2016

6:30 am - 8:00 am	Breakfast-Provided <i>Atrium – Hyatt Palm Springs</i>
8:00 - 8:15 am	2.0 WELCOME TO CONTENT MONDAY <i>Grand Ballroom, Hyatt Palm Springs-</i>
8:15 - 9:15 am	2.1 Hot Topics in Immunology <i>Judith A. Owen, Ph.D.</i>
9:15-10:15	2.2 Immunology in the Integrated Curriculum: How to, Why and Assessment? <i>Kenneth S. Rosenthal, Ph.D.</i>
10:15-10:30	Break
10:30-12:00	2.3 Strategies for Teaching Competency Based Curricula to Digital Natives <i>Sarah Farrell, Ph.D.</i>
12:00-1:00	Lunch - Atrium
1:00-3:00	2.4 Assessment under the microscope: How to minimize immunity to integrated curricula-Workshop offered by National Board of Medical Examiners. <i>Miguel Paniagua, M.D., Carly Daniels, M.A., Aggie Butler, Ph.D.</i>
3:00-3:15	Break
3:15-4:00	2.5 Best Practices of an Integrated Curriculum-Oakland <i>Samia Ragheb, Ph.D.</i>
4:00-5:00	2.6 Is it Infectious? A workshop on developing clinical correlations, case writing and other active learning tools. <i>Kenneth S. Rosenthal, Ph.D. and Friends...</i>
5:00-8:00 pm	Dinner on your own-Enjoy Palm Springs
8:00-10:00 pm	2.7 Posters with Dessert and Coffee and Breakout groups to discuss Robert Wood Johnson Foundation Content

Tuesday	MAY 17TH 2016 –INTERACTIVE TUESDAY–
6:30-8:00 am	Breakfast –Provided - Atrium
8:00-8:15 am	3.0 Welcome
8:15-10:00 am	3.1 New Methodologies of Microbiology/Immunology, their place in an integrated curriculum-Robert Wood Johnson Curriculum, The Flipped Classroom and common content- Did we get it Right? Charles Prober, M.D., Associate Dean, Stanford University Drs. Manuel Amieva, Sharon Fei-Hsien Chen and Brian Schwartz, University of California, San Francisco
10:00-10:30 am	Break
10:30-Noon	3.2 Team Based Learning- Is the juice worth the squeeze? Chris Burns, M.D.
Noon-1:00 pm	Lunch- Provided - Atrium
1:00-1:30 pm	3.3 Revisiting the AMSMIC Learning Objectives-Our Goal, your tasks Laura M. Kasman, Ph.D. and Kirsten A. Larson, Ph.D.
1:30-3:00 pm	3.4 Insight from the front- Invited talks from registered attendees. Laura M. Kasman and Kirsten Larson 3.4.1 Design and Implementation of an Integrated Course to Teach Immunology and Infectious Disease to First Year Medical Students Timothy J. Bauler Ph.D., Western Michigan University, Homer Stryker M.D. School of Medicine 3.4.2 A Crowd Sourced System for Creating Practice Questions in a Clinical Presentation Medical Curriculum M. Rick Stone, MS III, A.T. Still University - School of Osteopathic Medicine in Arizona

3.4.3 The Small-Group Clinical Case Presentation: An Instrument for Assessing Interpersonal Skills, Critical Thinking, and Knowledge in Medical Microbiology, Immunology, and Infectious Diseases

Melissa K. Stuart, Ph.D. and Neil Sargentini, Ph.D., A. T. Still University of Health Sciences, Kirksville College of Osteopathic Medicine

3.4.4 Effectiveness of Patient Video Cases in Preclinical Infectious Disease Small Group Sessions.

Wolfram Züeckert, Ph.D., University of Kansas Medical Center

3.4.5 So you've recorded a podcast, now what?

Brian P. Higgins, Ph.D. University of Kentucky

3:00 pm

Enjoy Palm Springs and Break into Small Groups

5:00-8:00 pm

Dinner on your own

8:00-11:00 pm

Work in Small Groups on Assignments for Product Wednesday

Wednesday

MAY 18TH 2016 –PRODUCT WEDNESDAY—

6:30-8:00

Breakfast-Provided - Atrium

8:00-10:00 am

4.0 Welcome to Product Wednesday

Organizing Committee, Drs. Schmidt, Kasman, Rosenthal and Larson

4.1 Is it Infectious? Output from the workshop on developing clinical correlations, case writing and other active learning tools.

Conference Attendees

10:00-10:30

Break

10:30-11:00

4.2 Lessons learned from Infectious Disease Society of America's Survey on Trends in Medical Microbiology Education.

Brian Schwartz, M.D.



11:00-Noon **4.3 Revisiting the AMSMIC Learning Objectives for Microbiology and Immunology from a Perspective of Delivery via an Integrated Curriculum**
Laura M. Kasman, Moderator, Reports from Conference Attendees

Noon-1:00 PM **Lunch Provided - Atrium**

1:00-3:00 pm **4.4 Revisiting the AMSMIC Learning Objectives for Microbiology and Immunology from a Perspective of Delivery via an Integrated Curriculum**
Kirsten Larson, Moderator, Reports from Conference Attendees, General Discussion

3:00-3:30 pm **Break**

3:30-4:30 pm **4.5 Revisiting the AMSMIC Learning Objectives for Microbiology and Immunology from a Perspective of Delivery via an Integrated Curriculum**
Ken Rosenthal, Moderator, Reports from Conference Attendees, General Discussion

4:30-5:00 pm **4.6 Report Development-Team Assignments**
Michael Schmidt, Moderator, General Discussion

5:00 pm **Session Ends**

6:00 pm **4.7 Farewell Dinner, Lessons Learned, and the Best of Stump the Chief**

South Deck, Hyatt Palm Springs-

Thursday **MAY 19TH 2016 –DEPARTURE THURSDAY—**

6:30 8:00 am **Breakfast on your own...**

8:00-11:00 am **Writing Team Coordination and Next Steps**
Michael Schmidt, Kenneth Rosenthal and conference attendees

11:00 am **Conference Closes**

See you at ASM Microbe!



Program Committee:

Laura Kasman
Kirsten Larson
Ken Rosenthal
Michael Schmidt

A special thanks to all of you for attending and making this workshop a success



Dear AMSMIC members,

Over the past two years, faculty at the schools of medicine at Stanford University, the University of Washington, Duke University, the University of California San Francisco, and the University of Michigan collaborated to create a comprehensive medical school microbiology and infectious diseases curriculum. It was our vision to create a product that would be of value to medical schools and faculty across the country, and we are excited to get your feedback during this meeting. In designing the curriculum, we aimed to find a way to tie core basic science principles with clinical applications. The curriculum is organized into 34 content modules. Each module includes the following:

- Patient-centered, illustrated, narrative video underscoring the clinical relevance of the basic science concepts
- Several short, content-rich, voice-over power point videos created by faculty experts
- An in-class interactive session hosted at participating schools

During the meeting, we will be hosting an interactive session to gather your feedback and input. We are interested to hear your biggest challenges in teaching microbiology, reaction to the style and content of the curriculum, and whether it might be useful for your own course.

In order to ensure we use your time effectively in Palm Springs, we ask that you review some of our content in advance. We have created a box folder that includes the following content:

Link to Box Folder: <https://stanford.box.com/s/xs5ye2atn0ntrtvzhhonsmzdl0fqr8g1>

1. A Project Trailer video that better describes our vision for this initiative
2. Examples of 3 content modules – Included in each folder is the patient-centered introduction narrative to the module, as well as the content-rich videos.
3. Course syllabus describing the contents of each module
4. Spreadsheet detailing the titles of all videos in our curriculum

Please let us know if you have any trouble accessing the files or questions in advance of our meeting. We are looking forward to a great discussion!

Best wishes,

Charles Prober, Senior Associate Dean of Medical Education, Stanford Medicine
Brian Schwartz, Co-course director Microbiology and Infectious Diseases, UCSF
Manuel Amieva, Co-course director Microbiology and Infectious Diseases, Stanford Medicine
Sharon Chen, Co-course director Microbiology and Infectious Diseases, Stanford Medicine



INVITED TALKS

1:30-1:45 PM Tim Bauler, PhD (tjbaul@med.wmich.edu)

Design and Implementation of an Integrated Course to Teach Immunology and Infectious Disease to First Year Medical Students

Timothy J. Bauler PhD, Richard Van Enk PhD, Brandy Shattuck MD, Larry Lutwick MD, Bonny L. Dickinson, PhD Departments of Biomedical Sciences, Pathology, and Medicine Western Michigan University, Homer Stryker M.D. School of Medicine

The preclinical curriculum of the Western Michigan University Homer Stryker M.D. School of Medicine was designed to provide students with a strong basic science foundation to support clinical reasoning and decision making. Courses were collaboratively developed by teams of basic science and clinical faculty to maximize the integration needed to promote synthesis and learning in context. Here we describe the design and implementation of Foundations of Immunology and Infectious Disease, a five-week course for first year medical students that integrates immunology, microbiology, and core concepts of infectious disease. Within this framework, relevant aspects of pharmacology, anatomy, pathology, histology, genetics, and medical ethics are embedded to promote learner synthesis, application, and retention of material.

1:45-2:00 PM M. Rick Stone (mstone@atsu.edu)

A crowd sourced system for creating practice questions in a clinical presentation medical curriculum

M. Rick Stone, OMS III, Marjorie Buick Kinney, M.Ed., Carolyn Parks, OMS III, Robin K. Pettit, Ph.D.

A.T. Still University - School of Osteopathic Medicine in Arizona

Medical students must learn a large amount of information in their first two years of medical school. Question banks such as UWorld and Combank are a popular method of preparation for national board exams, but it is difficult to have a similar uniform resource to prepare for exams administered by individual medical schools because the curriculum varies from school to school, and schools may choose to test on information that is not included as part of national board exams. In order to help prepare for course exams, students from the Class of 2017 at A.T. Still University School of Osteopathic Medicine in Arizona (ATSU-SOMA) collaborated to create crowd sourced practice quizzes based on the specific material taught at their school. Google Drive was used to manage sign-up sheets and collect questions, and Blackboard was used to create automatically graded practice quizzes. A student coordinator was in charge of overseeing the project, organizing assignments, and creating practice quizzes with questions submitted by students.



Participants were given a survey at the end of their second year of medical school to assess their opinions of the project's effectiveness. Students indicated that participation in the project helped them feel more confident on exams, improved their ability to write higher-order, clinically based questions, and improved their ability to predict what types of questions would be used on school-administered exams. Participants ranked the crowd sourced practice quizzes as more useful than textbook practice questions and as useful as faculty-written practice quizzes, board question banks, and verbal quizzing in study groups in preparing for school-administered exams (Kruskal-Wallis and post-hoc pair-wise comparison, $p < 0.01$). Analysis suggested the practice quizzes may benefit lower-performing students more than higher-performing students.

2:00-2:15 **Melissa K. Stuart, PhD and Neil Sargentini, PhD** (mstuart@atsu.edu)

The Small-Group Clinical Case Presentation: An Instrument for Assessing Interpersonal Skills, Critical Thinking, and Knowledge in Medical Microbiology, Immunology, and Infectious Diseases

Melissa K. Stuart, PhD; Neal R. Chamberlain, PhD; Vineet K. Singh, PhD; Deborah A. Hudman, MS; Priscilla L. Phillips, PhD; and Neil J. Sargentini, PhD

Department of Microbiology/Immunology, A. T. Still University of Health Sciences, Kirksville College of Osteopathic Medicine

Background: Since 2008, our Medical Microbiology, Immunology, and Infectious Diseases courses have used Clinical Case Presentations (CCPs) to help first- and second-year medical students assess their preparedness for a subsequent high stakes exam on a block of basic science material. CCPs are small-group exercises led by a facilitator. The exercises have evolved greatly over time. **Methods:** In this interactive poster, second-year osteopathic medical students enrolled in Infectious Diseases demonstrate how the CCP exercise is currently conducted. The exercise is performed in groups of 5 medical students, each of whom receives a unique clinical case covering an infectious or immunological disease. Review of case materials proceeds in two stages over a total of 10 minutes. In stage one, students select a presumptive disease diagnosis based solely on the patient's history and physical exam data. In stage two, laboratory data is provided, and a final disease diagnosis (in the Infectious Diseases and Immunology courses) or etiologic microorganism (in Medical Microbiology) is selected from a list of 5 choices. Each student spends 3 minutes orally presenting his/her case, including ruling in/out each answer choice. An additional 3 minutes is devoted to answering questions from peers. Students are not allowed to use reference materials during the exercise. **Results:** Besides improving exam scores compared to previous years without exercises, the CCPs have allowed development and assessment of core professional attributes, namely, critical thinking and interpersonal

2:15-2:30 **Wolfram Züeckert** (wzueckert@kumc.edu)

Effectiveness of Patient Video Cases in Preclinical Infectious Disease Small Group Sessions

Jessica Newman, DO¹, Emma Nguyen², EdD, & Wolfram Züeckert, PhD³



¹University of Kansas Medical Center, Division of Infectious Diseases, Department of Internal Medicine, ²Office of Medical Education; Assessment & Evaluation, ³Department of Microbiology, Molecular Genetics & Immunology

Case-method teaching and patient video cases (PVCs) have been utilized in a variety of upper level educational venues including graduate medical education. Integrating such clinical cases with foundational science material taught in the first (M1) and second year (M2) medical classrooms is becoming an increasing focus of undergraduate medical education as a mechanism of increasing exposure of students to "patients" in a traditionally pre-clinical curriculum. Benefit in formative learning is less established, though studies with medical students suggest PVCs lead to enhanced cognitive processing. In this three-year pilot study, we created 5 PVCs to deliver the majority of the patient history and physical exam information to M2s in two small group sessions. One PVC was developed for a joint M1/M2 small group session discussing both immunological and infectious disease principles. We determined the level of satisfaction of student learning experiences and the impact of PVCs on small group learning outcomes. Overall, PVCs contributed positively to student satisfaction with the specific small group sessions and the overall learning experience in the Infectious Disease Module. Comparison of pre- and post-test scores also suggest positive learning outcomes. One main driver of PVC effectiveness is production quality, e.g., well-lit video, addition of realistic audio such as heart or bowel sounds, scripting of the interaction of the physician with a trained standardized patient actor, and judicious editing for brevity.

2:30-2:45 **Brian P. Higgins, Ph.D.** (brian.higgins@uky.edu)

So you've recorded a podcast, now what?

Given the interest in the flipped classroom approach in medical education, many faculty have begun to produce podcasts as a means to disseminate information. While this is an important starting point, it is by far the easiest step in the process. The most essential component of the flipped classroom approach is also the hardest to do well: the large group activity. In my recent TEDx talk (<https://www.youtube.com/watch?v=YEvgrOJcSBQ>) I challenged the efficacy of didactic lecture and shared strategies on bringing active learning to competency based education. This talk will expand on the methods and strategies used to bring active learning into microbiology and immunology, and in particular I will highlight several activities that encourage active learning and attempt to engage students in higher levels of learning (Bloom's taxonomy).



POSTERS

Modifications of Traditional, Lecture-Based Medical Microbiology Course.

Cindy Grove Arvidson^{*1}, Leighann Tomaswick², Libby Bogdan-Lovis², Kirstin L. Parkin¹

¹Department of Microbiology and Molecular Genetics, ²Center for Ethics and Humanities in the Life Sciences. College of Human Medicine, Michigan State University, East Lansing, MI

*Presenter: e-mail arvidso3@msu.edu

Medical Microbiology and Immunology is required for all CHM students in their second semester of medical school. The course contains three units: Unit I - immunology; Unit II - bacteriology; Unit III - mycology, parasitology, and virology. Here I will describe three major changes made in Unit II - bacteriology in the spring 2016 iteration of the course. 1) Transmission exercise with social context integration. Two live laboratory sessions were added in which students quantified the bacteria on their hands; determined the effects of different treatments on reducing that number; cultured bacteria from various environments; and demonstrated transfer of bacteria by a simple handshake. In the second of these two labs, the students engaged in a 'role of touch' exercise demonstrating non-verbal doctor-patient communication via a handshake. The objectives for these exercises were to illustrate 1) the ubiquitous presence of bacteria, 2) the ease of bacterial transfer from one surface/person to another, and 3) the power of touch to convey emotional messages. 2) Flipped-classroom. The lectures on 16 bacterial pathogens, which had traditionally been delivered live over six hours of lecture, were pre-recorded as modules of one (or two closely related organisms) and posted on the course website. Students were expected to view the lectures as preparation for in class activities. The goal was to encourage the students to use the information rather than just memorizing it. a. Team-based learning. Students were assigned readings on sexually-transmitted and urinary tract infections as preparation for the session. Students were also expected to draw on knowledge from the previous laboratory exercises in the course, lab manual material, live lectures of the unit (bacterial structure, physiology, genetics, host-pathogen interactions, normal microbiota, antisepsis and antimicrobials) and the pre-recorded 'bug-parade' lectures. The session included an iRAT, a tRAT, and patient case application problems. b. Case discussions. Three themed (i. toxins, ii. bacteremia, and iii. hypersensitivities) live sessions were devoted to discussions of cases, focused primarily on the pathogens of the 'bug-parade'. Outcomes to be presented will include data from the transmission exercise, student feedback and performance on exam items linked to the TBL and case discussion exercises.

Identifying Flawed Exam Questions: Two Statistics, and Beyond

Rebecca Greenblatt^{*}, PhD, and Lauren Germain^{**}, PhD SUNY Upstate Medical University, Syracuse, NY ^{*}Department of Microbiology and Immunology ^{**}Office of Evaluation, Assessment and Research



The growing physician shortage in the US has led to increased medical school enrollment. Larger class sizes have in turn led to increased reliance on quantitative assessments featuring multiple choice questions (MCQs). Because MCQs provide very narrow windows on student comprehension, quality control is critical. While the NBME has enough test-takers to pilot MCQs without scoring them on their first use, individual medical schools generally must grade their new exam questions. A fraction of these questions may later be found to be flawed, necessitating regrading. Since 2014, SUNY Upstate COM has applied a two-part post-hoc quality-control system to all internal MCQ evaluations. Step one is a statistical item analysis that flags questions on which student performance fell outside of established thresholds. Step two is a manual review of the flagged items by course directors. Directives from accreditation bodies to develop quantitative measures of student performance tend to favor statistical analyses over human review. Here, we assess the feasibility of a purely-statistical quality control regime by applying one retrospectively to Upstate exam data. First, we examined the MCQs that were flagged statistically during the 2014-2015 and 2015-2016 academic years (27/138 in Microbiology; 46/374 in Pharmacology) and those that were regraded after faculty review (4 in Microbiology; 2 in Pharmacology). We then adjusted the statistical screen to be more stringent, just-catching the flawed exam items from 2014-2015, and applied the stringent screen to the 2015-2016 test data. To our surprise, the stringent-statistics-alone approach did catch all of the 2015-2016 MCQs that expert review found flawed. However, like its more-conservative parent, the stringent screen also flagged a number of MCQs that were merely difficult, not flawed. Without expert review, we would have adjusted many more items than necessary, and the average final exam grade would arguably have been too high.

A New TORCH for the age of Zika

Laura Kasman Ph.D.

Medical University of South Carolina, Charleston SC.

The TORCH or ToRCHeS mnemonic for vertically transmitted infections with serious consequences for the newborn has been in use since the 1970's and various expansions of it have been proposed over the years as the consequences of other prenatal infections became known. In just the past year, Zika virus has been shown to be a prenatal infection associated the devastating birth defects in naive populations. This poster traces the history of the TORCH mnemonic and proposes two alternatives that incorporate Zika as well as HIV, Listeria, Parvovirus and Varicella which were left out of the original.

The Power of Patient Panels

Laura Kasman Ph.D., L. Preston Church, MD, Erin Presnell, MD, Joseph Blumer, Ph.D., Evelyn Bruner, MD, Sally Self, MD, Madeline Martin MS, Thomas Brouette, MD, and Lindsay Persinger. Medical University of South Carolina, Charleston SC.

HIV/AIDS is a significant public health problem in the United States and especially in the



southern states. Our medical school has provided instruction on HIV for over 20 years via a CME-style 1.5 day symposium for second year students featuring guest lecturers and a patient panel of local HIV positive people. In November of 2014 and 2015 the HIV/AIDS Symposia, five of the lecture sessions and the patient panel, although not the panelists, were the same between the two years. The common lecturers were all clinicians who care primarily for HIV+ patients. An assignment due within 72 hrs of the Symposium was a 500-1000 word reflective essay in which students were required to respond to 3 questions: (1) What do you think are the main health concerns of people infected with HIV? Are your opinions informed by your specific personal experiences or by other information? (2) What personal challenges would you anticipate if you were providing health care to this segment of the population? (3) How comfortable do you think you would feel caring for this group? Are your opinions informed by your specific personal experiences or by other information? Students were also informed that their essays would be graded on the following 3 criteria: The extent to which the author addresses the questions posed above, the extent to which the essay makes use of information and experiences gained from participation in the HIV/ AIDS Symposium, and the organization and clarity of the writing. A total of 348 essays were received and graded. For this study, the essays were de- identified and multiple readers blinded to the hypothesis of the study scored each essay for which sessions of the symposium were specifically mentioned by the writer. Since the instructions did not require the students to comment on any session specifically, we suggest that the frequency that a session was mentioned in the essays is an indication of the impact that it had on student learning. The counts showed that the patient panel was mentioned significantly more often than all other sessions when responding to the questions. This is despite the fact that it was the only one of the sessions without printed notes or learning objectives. Our conclusion is that patient panels may be a simple and effective addition to the preclinical curriculum.

Integration of the Oral Microbiome into Interprofessional Healthcare

Engebretsen, Steven¹, OMS III, Boyd, Nichole¹, OMS I, Frith, Kassondra¹, OMS I, Thatcher, Jacob¹, OMS I, Freeman, Celia¹, MBA, **Taylor, Kimberly²**, PhD

¹Pacific Northwest University of Health Sciences, Yakima, WA, USA ²Chief, Division of Microbiology/Department of Biomedical Sciences, Pacific Northwest University of Health Sciences, Yakima, WA, USA

INTRODUCTION An increasing emphasis on interprofessional training opportunities is placed for individuals serving the diverse healthcare needs. Collaborations can be facilitated by the growing knowledge of the normal oral microbiota implicated in connections between oral and systemic health. These topics are currently at the forefront of national discussion within the medical and dental educational and professional communities. The purpose of the current project was to address these topics in a local healthcare community educational event.

METHODS Under faculty mentorship, topics were addressed by organizing osteopathic medical students to create an interprofessional conference at Pacific Northwest University of Health Sciences in the spring of 2016. Continuing education credit was offered to local physicians,



dentists, dental hygienists, and nurses. Collaboration between local and national professionals addressed various topics regarding basic science, translational research, and clinical practice. Topics including microbiology, immunology, and epidemiology were chosen to bring multidisciplinary attendees together to improve patient outcomes. Various educational modalities were employed to encourage interprofessional discussion and development. **RESULTS** A wide variety of professionals attended the conference from Yakima, WA and surrounding communities. Of the 61 attendees, 52% were dental professionals, 28% were medical professionals, and 20% were categorized as 'other' (PhD, MPH, etc.). The discussion-based interactive session involved problem-solving between professionals. A major response expressed by participants was the benefit of collaborative education between medical and dental professionals and the need for similar activities on a continuing basis. Additionally, pre- and post-test data suggest that conference learning objectives regarding microbiology topics were successful. Overall, 93% of attendees claimed that the understanding gained during the conference would improve the treatment of their patients. **CONCLUSION** A local, student organized continuing education conference successfully integrated medical and dental professionals from the local community. Basic science topics including microbiology and immunology were successfully applied to clinical practitioner knowledge. An overwhelming majority of participants reported that learning outcomes of the conference would positively impact their patient care.











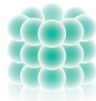




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AMSMIC

ASSOCIATION OF MEDICAL SCHOOL MICROBIOLOGY AND IMMUNOLOGY CHAIRS

SCHEDULE AT A GLANCE

16th EDUCATIONAL STRATEGIES WORKSHOP OF THE ASSOCIATION OF MEDICAL SCHOOL MICROBIOLOGY AND IMMUNOLOGY CHAIRS					
Time	Welcome Sunday Sunday- 15 May	Content and Process Monday 16-May-16	Interactive Tuesday 17-May-16	Product Wednesday 18-May-16	Departure Thursday 19-May-16
6:30-8:00	Travel and Arrival Palm Springs Hyatt	Breakfast Hot Topics In Immunology, Judith A. Owen, Ph.D.	Breakfast New Methodologies of Microbiology/Immunology, their place in an integrated curriculum-Robert Wood Johnson Curriculum, The Flipped Classroom and common content- Did we get it Right? Charles Prober, Associate Dean, Stanford, Dr. Manuel Amieva, Dr. Sharon Fei-Hsien Chen and Dr. Brian Schwartz (UCSF)	Breakfast Is it Infectious? Clinical correlations Case Writing, Introduction by ID Physician- Develop a Case, with exhibits and questions, basic science to clinical- Part 2	Breakfast on your Own Departure and writing teams to assemble and distribute tasks.
8:30		Immunology in the Integrated Curriculum: How to, Why and Assessment? Kenneth Rosenthal, Ph.D.			
9:00		Break Strategies for Teaching Competency Based Curricula to Digital Natives- Sarah Farrell, Ph.D.	Break Team Based Learning- Is the juice worth the squeeze? Chris Burns	Break Brian Schwartz Lessons learned from revisiting the AMSMIC Learning objectives for Microbiology and Immunology from the Perspective of Integrated Curriculum	
9:30					
10:00					
10:30					
11:00					
11:30					Depart Palm Springs
12:00		Lunch NBME-Assessment under the microscope: How to minimize Immunity to integrated curricula! Dr. Miguel Paniagua, Dr. Carly Daniels and Dr. Aggie Butler	Lunch Revisiting the AMSMIC Learning objectives Tips from the integrated trenches 5 invited talks from registered attendees	Lunch Group Reports from the evaluation of the AMSMIC Learning objectives for Microbiology and Immunology from the Perspective of Integrated Curriculum- Publication Outline	
1:00		Break Best Practices of an Integrated Curriculum-Oakland, Samia Ragheb, Ph.D.	Visit Palm Springs		
1:30		Is it Infectious? Clinical correlations Case Writing, Introduction by ID Physician- Develop a Case, with exhibits and questions, basic science to clinical- Part 1			
2:00	Registration				
2:30					
3:00					
3:15					
4:00	Registration				
4:30					
5:15	Reception	Session End	Session End	Session End	
6:00	Welcome Dinner	Dinner On your own-Enjoy Palm Springs	Dinner On your Own, Enjoy Palm Springs	Farewell Dinner, Lessons Learned, Stump the Chief	
7:00					
8:00	Medical Education -Challenges & Outcomes Needed for Our Evolving Educational Market-Reflections-Dr. Parker Small and an introduction to Stump the Chief	8-10 Posters with Dessert and Coffee, Vendor Demos/Focus Groups;			
	Invited Speaker	Plenary Session	Active Learning Group Discussion	Catered Meals	Meeting Housekeeping
Key					