

STRATEGIES FOR TEACHING MEDICAL SCIENCES IN THE 21ST CENTURY — A CONFERENCE OVERVIEW

JUNE 21-24, 1997

ROGER W. KOMENT, PH.D., IAMSE PRESIDENT

The Third Biennial International Conference of the Basic Science Education Forum was hosted once again by the Medical University of South Carolina at the Hawthorne Suites Hotel in Charleston, SC. Many will recall this was the site of our very successful First Biennial Conference in 1993. As in previous years, demand exceeded space, but we stretched stated logistical limits to register 178 individuals. Faculty participants this year represented 87 medical schools from 11 countries. These were Argentina, Bulgaria, Canada, China, Grenada, Israel, Malaysia, Russia, Turkey, United Kingdom, and the United States. Forty participants had significant speaking presentation roles, while an additional 47 authors were represented by poster presentations.

The Organizing Committee who designed and orchestrated this conference consisted of four faculty and two directors. The four faculty were: **Thomas Viggiano, M.D.** (Mayo Clinic and Medical School); **Jane Scott, Ph.D.** (Wright State University); **Michael Schmidt, Ph.D.** (Medical University of South Carolina); and **Charles Puglia, Ph.D.** (Allegheny University of the Health Sciences). The two directors were **Roger Koment, Ph.D.** (BSEF Executive Director) and **Gabriel Virella, M.D., Ph.D.** (Conference Host and Site Director). Dr. Virella is Professor and Vice Chair of Microbiology and Immunology at the Medical University of South Carolina. As at previous conferences, participants attended a Saturday evening Reception, this time graciously sponsored by **Lippincott-Raven Publishers**. The Opening Session on Sunday morning featured an address by **Layton McCurdy, M.D.**, Dean of the College of Medicine, Medical University of South Carolina. Dr. McCurdy spoke of the importance of this conference and warmly welcomed all participants to Charleston and the Medical University.

Our Organizing Committee chose to approach this topic, *Strategies for Teaching Medical Sciences in the 21st Century*, by dividing it into four discrete and sequential subtopics, each being the subject of a Plenary Session. Mornings were devoted to those Plenary Sessions, which were then followed by a double series of afternoon Breakout Sessions addressing individual related issues.

1) The Physician of the 21st Century: Knowledge, Skills, and Attitudes

It was unanimously agreed that, before we, as educators in basic science, began discussing how and what amount of basic science to teach physicians in training, it would be wise to have a realistic view of a

physician's needs for the future practice of medicine. Invited speakers **Rhee Fincher, M.D.**, (Medical College of Georgia), and **Allen Neims, M.D., Ph.D.**, (University of Florida) addressed this subtopic in a Plenary Session which was organized and moderated by **Thomas Viggiano, M.D.**, (Mayo Clinic and Medical School).

2) Determining and Evaluating the Science Curriculum for the 21st Century

This Plenary Session was organized and moderated by **Roger Koment, Ph.D.**, (University of South Dakota) and featured presentations by **Gabriel Virella, M.D., Ph.D.** (Medical University of South Carolina) and **Elizabeth Simons, Ph.D.** (Boston University). As anticipated, the presentations generated audience discussion resulting in a diversity of opinions being expressed. The three speakers, collectively representing nearly 70 years of teaching experience in basic science, agreed upon points that described how relevance of content, computer technology, and actual physician needs must guide us in the coming millennium.

Following lunch, registrants actively participated in a series of Concurrent Breakout Sessions addressing issues related to the two morning Plenary Sessions. These were: *Science and Physician Attitudes*; *Teaching Science for Knowledge and Problem-Solving Skills*; *The Team Approach to Learning Science*; and *Integrating Science Throughout the Curriculum*.

Monday morning began once again with two Plenary Sessions.

3) Technology and Medical Education in the 21st Century

This important Plenary Session, organized and moderated by **Michael Schmidt, Ph.D.**, (Medical University of South Carolina) addressed a number of issues providing a glimpse into the future of how computers will impact on the way we teach. Presentation/demonstrations were provided by **Jim Swierkosz, Ph.D.** (St. Louis University); **Thomas Nosek, Ph.D.** (Medical College of Georgia); and **Tom Basler, Ph.D.**, (Medical University of South Carolina).

4) The Impact of Downsizing on Medical Education and the Basic Sciences

This final Plenary Session addressed a subject which lurks in the minds of all medical science educators — how in the future will we maintain our professional standards of achievement with yet further reductions in

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resources. **John Burdick, Ph.D.** (Chicago College of Osteopathic Medicine) was invited to organize and moderate this session, and he chose for his co-presenters **James Buggy, Ph.D.** (University of South Carolina), and **Donna Murasko, Ph.D.** (Allegheny University of the Health Sciences).

That afternoon was devoted to another double series of Breakout Sessions which considered issues relating to the two morning Plenary Sessions. These were: *The Future of Problem-Based Learning in an Era of Downsizing; Developing Information Resource and Life-Long Learning Skills; Getting Basic Science Into the Clerkships and Beyond; and Applications of Computer Technology*

On Monday evening, participants enjoyed our conference social event — a Charleston Harbor Dinner Cruise. By chartering the entire ship, all were treated to an engaging tour of famous U.S. Revolutionary War sites, typical South Carolina shoreline scenery, and camaraderie with fine dining.

Tuesday morning began with several concurrent Breakfast Workshops: *Basic Science on USMLE Steps 2 and 3; Teaming Up the Physician and the Basic Scientist; Documenting Faculty Achievement in the 21st Century; Techniques for Small Group Teaching of Basic Sciences; How to Define Relevance in the Basic Sciences; and How to Design Multiple Choice Tests That Go Beyond Trivial Recall*. These were then followed by two featured conference events.

The first was a presentation/demonstration and discussion of plans for the computerization of the United States Medical Licensing Examination (USMLE), presented by **Robert Galbraith, M.D.** (National Board of Medical Examiners). The title of his presentation was *Computerized USMLE Tests: Theory and Practice*. Computerization of assessment is not without certain problems, but importantly it brings significant advantages. Clearer visuals which enhance histological and pathological specimens and X-rays, audio capability, and even animation are only some of the benefits available through computers. This method will also provide for increased flexibility of USMLE scheduling, and individualized assessment.

Our second feature that morning was a Point-Counterpoint Debate which addressed the question *Curriculum Governance in the 21st Century: Centralized vs. Departmentalized?* The session was organized and moderated by **Jane Scott, Ph.D.** (Wright State University). Debaters were **Ted Groshong, M.D.** (University of Missouri-Columbia) speaking on behalf of Centralized Governance, and **Harry Margolius, M.D., Ph.D.** (Medical University of South Carolina) supporting the position of Departmentalized Governance. Excerpted versions of both Tuesday morning features will be appearing in the next issue of the *Basic Science Educator*. In addition, direct full length transcripts of these and all Plenary Session presentations will be printed in the Conference Proceedings document (see p. 17).

The purpose of this conference was to begin addressing some of the topics which we, as faculty, undeniably will encounter in the future, and was predicated upon issues familiar to many of those in attendance. Such

issues drew inquiries from the medical faculty of 20 countries expressing interest in contributing and participating in this conference. Although financial constraints for many ultimately reduced participation to only 11 countries, this level of interest is further evidence of the global need for information to be shared among all medical science faculty, regardless of discipline or geographic boundaries. One decision unanimously resolved by conference participants during the BSEF Business Meeting was to open these conferences to more participants, yet still retain a limited number per school. However, instead of that limit being four individuals per school, it was agreed the number should be increased to six per school. In the future, as we become more accustomed to orchestrating larger conferences, it is inevitable that this last restriction will also be abolished.

These new procedures will be implemented at our next Biennial International Conference, which has been scheduled for June 19-22, 1999. The site, host institution, and theme for this conference will be finalized this spring. If you would like to nominate your school to host this event, or would like to participate in organizing it, please contact Roger Koment before May 1, 1998. Watch for announcements of this and other events, including availability of Conference Proceedings, in future issues of the *Basic Science Educator* and posted on our website at <http://www.usd.edu/IAMSE>

NB: The Conference Directors and Organizing Committee are pleased to recognize those who provided financial support toward this conference and displayed their latest educational products.

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Strategies for Teaching Medical Sciences in the 21st Century

Hosted by the Medical University of South Carolina

Charleston, South Carolina, U.S.A.

June 21-24, 1997

This conference was directed toward all faculty who teach within a medical environment, with particular focus on those responsible for the basic sciences. Methods for teaching and learning are rapidly changing as we approach the 21st Century and many new circumstances arise: dissolution of traditional departmental boundaries, centralized governance of medical courses restructured under exotic new names, new roles for faculty but fewer numbers, changing student demographics and learning styles, and everywhere the influx of computer technology. How can we, as faculty, embrace and guide these changes for the benefit of our students and expand our own abilities for the task of producing physicians for the 21st Century?

These and other issues concerning the future were addressed in plenary session presentations and panel discussions, small group sessions and breakfast workshops. This year also featured a point-counterpoint debate on Centralized vs. Departmentalized Governance of the Medical Curriculum, and a special presentation by the National Board of Medical Examiners on the future of computerized USMLE testing.

SATURDAY June 21, 1997

- 3:00 - 6:00 pm REGISTRATION
6:00 - 9:00 pm CONFERENCE RECEPTION and SOCIAL
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SUNDAY June 22, 1997

- 7:00 - 8:30 am BREAKFAST
8:30 - 9:00 am WELCOME and CONFERENCE OVERVIEW
Roger Koment, Ph.D., BSEF Executive Director
Gabriel Virella, M.D., Ph.D., Conference Host and Site Director
Layton McCurdy M.D., Dean, College of Medicine, Medical University of South Carolina
- 9:00 - 10:30 am **PLENARY SESSION I**
The Physician of the 21st Century: Knowledge, Skills, & Attitudes
Thomas Viggiano, M.D. (Moderator), Rbee Fincher, M.D., and Allen Neims, M.D., Ph.D.
- 10:30 - 11:00 am COFFEE BREAK
- 11:00 - 12:30 pm **PLENARY SESSION II**
Determining and Evaluating the Science Curriculum for the 21st Century
Roger Koment, Ph.D. (Moderator), Elizabeth Simons, Ph.D., and Gabriel Virella, M.D., Ph.D.
- 12:30 - 2:00 pm LUNCH
- 2:00 - 6:00 pm POSTERS and EXHIBITS
- 2:00 - 3:30 pm **CONCURRENT BREAKOUT SESSIONS**
Session A1 Science and Physician Attitudes *Allen Neims, M.D., Ph.D.*
B1 Teaching Science for Knowledge and Problem-Solving Skills *E. Pat Finnerty, Ph.D.*
C1 The Team Approach to Learning Science *Charles Puglia, Ph.D. and Angelo Pinto, Ph.D.*
D1 Integrating Science Throughout the Curriculum *Norman Levine, Ph.D.*
- 3:30 - 4:00 pm COFFEE BREAK
- 4:00 - 5:30 pm **CONCURRENT BREAKOUT SESSIONS**
Session A2 Science and Physician Attitudes *Anthony DeLucia, Ph.D.*
B2 Teaching Science for Knowledge and Problem-Solving Skills *Henry Mandin, M.D.*
C2 The Team Approach to Learning Science *Susan Watson, Ph.D.*
D2 Integrating Science Throughout the Curriculum *Adrienne Rogers, M.D.*
- 5:30 pm BSEF BUSINESS MEETING
6:30 pm DINNER ON YOUR OWN

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MONDAY June 23, 1997

- 7:00 - 8:30 am BREAKFAST
- 8:00 - 5:00 pm POSTERS and EXHIBITS
- 8:30 - 10:00 am **PLENARY SESSION III**
Technology and Medical Education in the 21st Century
Michael Schmidt, Ph.D., (Moderator), Tom Basler, Ph.D., Tom Nosek, Ph.D., and Jim Swierkosz, Ph.D.
- 10:00 - 10:30 am COFFEE BREAK
- 10:30 - 12:00 pm **PLENARY SESSION IV**
The Impact of Downsizing on Medical Education and the Basic Sciences
John Burdick, Ph.D. (Moderator), James Buggy, Ph.D., and Donna Murasko, Ph.D.
- 12:00 - 1:30 pm LUNCH
- 1:30 - 3:00 pm CONCURRENT BREAKOUT SESSIONS
- Session E1 The Future of Problem-Based Learning in an Era of Downsizing *Charles Eldridge, Ph.D.*
F1 Developing Information Resource and Life-Long Learning Skills *Richard Kriebel, Ph.D.*
G1 Getting Basic Science into the Clerkships and Beyond *Loice Swisher, M.D.*
H1 Applications of Computer Technology *Robert Ogilvie, Ph.D.*
- 3:00 - 3:30 pm COFFEE BREAK
- 3:30 - 5:00 pm CONCURRENT BREAKOUT SESSIONS
- Session E2 The Future of Problem-Based Learning in an Era of Downsizing *Elizabeth Simons, Ph.D.*
F2 Developing Information Resource and Life-Long Learning Skills *Arnold Smolen, Ph.D.*
G2 Getting Basic Science into the Clerkships and Beyond *Denise Ferrier, Ph.D.*
H2 Applications of Computer Technology *Nehad El-Sawi, Ph.D.*
- 6:30 pm CHARLESTON HARBOR DINNER CRUISE (social event)

TUESDAY June 24, 1997

- 8:00 - 9:30 am CONCURRENT BREAKFAST SESSIONS
1. Basic Science on USMLE Steps 2 and 3 *Robert Galbraith, M.D.*
 2. Teaming-Up the Physician and the Basic Scientist *Thomas Viggiano, M.D. and Kenneth Somers, Ph.D.*
 3. Documenting Faculty Achievement in the 21st Century *Jay Menna, Ph.D.*
 4. Techniques for Small Group Teaching of Basic Sciences *Walter Myers, Ph.D.*
 5. How to Define "Relevance" in the Basic Sciences *Kanchan Rao, M.D. and Henry Mandin, M.D.*
 6. How to Design Multiple Choice Tests That Go Beyond Trivial Recall *Gabriel Virella, M.D., Ph.D.*
- 9:30 - 10:30 am **SPECIAL PRESENTATION**
Computerized USMLE Tests: Theory and Practice *Robert Galbraith, M.D.*
- 10:30 - 11:00 am COFFEE BREAK
- 11:00 - 12:00 pm **POINT-COUNTERPOINT DEBATE**
Curriculum Governance in the 21st Century: Centralized vs. Departmentalized
Harry Margolius, M.D., Ph.D. and Ted Groshong, M.D. (Jane Scott, Ph.D., Moderator)
- 12:00 pm CONFERENCE CLOSURE *Roger Koment, Ph.D. and Gabriel Virella, M.D., Ph.D.*

CONFERENCE ORGANIZING COMMITTEE

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