

# Integration of Basic Sciences and Clinical Sciences in a Clerkship: A Pilot Study

John C. Sakles, M.D.<sup>1</sup>, Renee J Maldonado<sup>2</sup> and Vijaya G. Kumari, M.B.B.S., Ph.D.<sup>3</sup>

<sup>1</sup>Department of Internal Medicine, <sup>2</sup>Office of Curricular Support and <sup>3</sup>Department of Cell Biology and Human Anatomy

University of California Davis, School of Medicine,  
Davis, CA 95616, U.S.A.

Phone: (+)1-530-752-3202

Fax: (+)1-530-752-8520

Email: [vgkumari@ucdavis.edu](mailto:vgkumari@ucdavis.edu)

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## ABSTRACT

Limited formal mechanisms exist for exploring basic sciences during the clinical clerkships in many medical schools. This study was designed to create a model for integrating basic and clinical sciences in a fourth year clerkship. Fifty-eight fourth year students enrolled in the Emergency Medicine clerkship participated in the study, undertaken by the clinical director of the clerkship and a basic scientist. Expert basic scientists were invited as discussants. Clinical presentations commonly encountered in the Emergency Department were selected for a case-based approach. Students researched and discussed both basic science and clinical questions that arose from the case discussion. They completed a questionnaire at the end of the session. More than 50% of the participants reported that the sessions enabled them to achieve a deeper understanding of the basic science principles relevant to clinical problems and improved their ability to evaluate and manage another comparable patient. They noted that this approach would motivate them to explore the basic sciences in the future and agreed that understanding basic science principles would contribute to better patient care. They reported that the availability of a basic science expert facilitated the integration and that they would recommend the model for other fourth year clerkships. Our results suggest that the incorporation of a structured basic science inquiry related to a patient problem in a fourth year clerkship could be an effective approach to encourage the exploration of the relevant basic science principles. Presence of a basic science expert, along with a clinician, enhanced the reported effectiveness of the integration.

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