

## A Novel Approach to Fostering the Development of Future Physician Scientists

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**Learner Audience:** Medical students interested in pursuing a career in academic medicine.

**Background:** Preparing medical students for a career in academic medicine and clinical investigation has become a primary focus of research institutions in the United States. Clinical Research Training Programs (CRTP) were developed to address the seemingly imminent extinction of the physician scientist in the next generation by providing students with the chance to partake in clinical research during their medical school education. Intertwining the experiences of medical school with those of early exposure to clinical research is of vital importance. In the past many students often waited until after medical school or residency to begin their research training. The increasing age at which a first independent NIH grant is awarded has made the involvement of young investigators a priority. The curriculum presented here is based on my experiences as a medical student between third and fourth year.

**Needs Assessment:** The AAMC called for the integration of mandatory education on clinical and translation research in 2006. While CRTPs include didactics and seminars they may lack hands-on approach to education with regards to clinical research. Although medical schools across the country have recognized the value of educating future physicians in the principles and methodologies of translational and clinical research few programs have granted students the opportunity to fully delve into the role of a researcher prior to graduation.

**Hypothesis:** As students become more aware of opportunities in clinical research there should be programs in which they are able to further explore their interest while gaining practical knowledge of the intricacies of a clinical research career. Suggested components of CRTPs do not include the business of running a research team and how research can be integrated into careers without removing oneself from the clinical milieu. Students should be integrated into a research team in order to gain a more complete knowledge of the practice of clinical research.

**Curriculum Design:** Students wishing to engage in two years of full emersion in clinical research will spend the first year learning its practical aspects and the second will incorporate didactic lectures in clinical design, statistics and scientific writing. Each student will select a mentor in their field of interest who spends time in both clinical setting and research endeavors. Students will integrate themselves into the fellow's team and participate in the didactic sessions. In addition they will be expected to participate in monthly journal clubs and biweekly research meetings. Involvement in every aspect of the study design, IRB approval, and data collection and interpretation as warranted is also expected.

**Outcome:** The structure of this fellowship is novel in its approach to foster the development of future physician scientists. While not based in the rhetoric of biostatistics and EndNote it is a practical approach to introducing students to the realm of clinical research. This approach combined with the curriculum outlined by the AAMC's Clinical Research Task Force will provide a solid foundation for those interested in pursuing a career in clinical research in a more practical fashion.