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Cultivating Future Clinician Scientists

In Regard to Vapiwala et al



To the Editor: Vapiwala et al (1) make numerous excellent points regarding training the next generation of clinical scientists. However, by reserving the Holman pathway for residents pursuing “bench research” (1), the authors perpetuate a stereotype, presumably unintentionally, that careers in laboratory sciences require more nurturing and are more relevant to the long-term health of our specialty than other sciences. This classist view of medical science is what we should find concerning, not the increase in trainees publishing studies using observational datasets. Entry in the Holman pathway “implies a commitment to basic science or clinical research” (2), yet individuals pursuing careers in bench sciences compose the vast majority of its participants (L. Wilson, personal communication, May 5, 2015). This likely follows from imbalances in the Medical Scientist Training Program, which disproportionately prioritizes the development of laboratory researchers, inviting recent calls for change (3). At many universities, clinical and laboratory

scientists “drink from different fountains,” in terms of protected time, promotion tracks, and opportunities for tenure. It may be easier to generate low-grade clinical science publications, but these are like low-energy photons: you can accumulate as many as you want, but they will never penetrate very far. Producing high-grade clinical science is challenging, resource-intensive, and requires equivalent nurturing. Though the authors seem to acknowledge this, they do not mention that many incoming residents already have graduate degrees in disciplines relevant to clinical sciences and should be encouraged to develop their careers along this trajectory through the Holman pathway. How residency programs allocate those positions is up to them, but we should be honest about which direction the scales tilt.

The radiation oncology community also should be skeptical of efforts to prioritize specific scientific disciplines. Although advancing biology is clearly crucial, the diminishing returns argument applies to it just as well. For some cancers, the biology is nicely understood, and the most pressing scientific questions are socioeconomic. Biology will not necessarily provide better answers for key issues such as access to radiation, cost-effectiveness of technologies, health disparities, and survivorship care. If we are bemoaning the depreciation of scientific fundamentals, consider applied mathematics, where increased emphasis is badly needed to solve troubling inefficiencies in our health system. Maximizing output from our labor market requires diversification, not the attitude that some disciplines are more equal than others. If laboratory innovation is the right arm of medical science and clinical testing the left, then a biology-centric approach will leave our field swimming in circles.

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In Reply to Mell



To the Editor: We appreciate the author underlining points raised in our editorial (1, 2), which focuses on the importance of providing resources and opportunities for talented radiation oncology trainees to expand their research horizons in various domains, basic science being just one of them. We agree that progress in cancer care does not and