Developing a Career in Pediatric Infectious Diseases

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This article presents an overview of the Career Development session at the 17th Annual St. Jude/PIDS Pediatric Infectious Diseases Research Conference. This annual conference discusses key academic skills, such as grant writing and negotiating for protected time for research and academic endeavors, as well as highlighting the many career options available in infectious disease. This year’s session included discussions about basic science, public health, health outcomes research, and private practice pediatric infectious disease careers. The combination of practical career advice, mentoring, and inspiration offered in the career-development track talks at the St. Jude/PIDS Pediatric Infectious Diseases Research Conference this and every year helps trainees to faculty navigate the path to building a satisfying career in pediatric infectious disease.

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Each year, the St Jude/Pediatric Infectious Diseases Society (PIDS) Pediatric Infectious Diseases Research Conference attracts students, residents, fellows, and faculty from throughout the United States and the world. In addition to offering the opportunity for attendees to hear cutting-edge scientific presentations and interact with a variety of physician-scientists in the pediatric infectious diseases field, the conference has included sessions on career development since its inception in 2002. The PIDS Research Affairs Committee and leaders at St Jude Children’s Research Hospital recognize the importance of highlighting the scientific excellence to which trainees and young faculty might aspire while also providing the skills and resources that will allow them to pursue their own academic success. Physician-scientists represent an increasingly smaller portion of the research workforce; numerous barriers to an academic research career, such as increased educational debt, increased training time, and uncertainties regarding research funding, were reported in the National Institutes of Health (NIH) Physician-Scientist Workforce Working Group report [1]. To address these concerns and highlight the potential for professional success and satisfaction for physicians in a research career, the PIDS Research Affairs Committee and St Jude Children’s Research Hospital support the career-development track at the St Jude/PIDS Pediatric Infectious Diseases Research Conference each year. Over the years, presentations have included providing strategies for grant writing and establishing research programs, designing and implementing clinical trials, developing leadership skills, writing and publication, mentoring, and many more topics that are consistently rated highly by the attendees. The topics and speakers for these sessions are planned on the basis of changes in the field and feedback from our members and attendees. The 17th annual St Jude/PIDS Pediatric Infectious Diseases Research Conference built on this tradition of excellence by hosting a series of discussions that emphasized the breadth of academic and professional options available to pediatric infectious diseases physicians, the wealth of mentoring available in the pediatric infectious diseases community, and the strength of the pediatric infectious diseases workforce.

Janet Gilsdorf, MD, past president of the PIDS, launched the career-development session with an inspiring recounting of the history and future of pediatric infectious diseases in her presentation, “The Changing Face of Pediatric Infectious Diseases.” Dr Gilsdorf is a tireless advocate for the value of pediatric infectious diseases as a specialty and demonstrated this advocacy yet again as she took the audience through the history of infectious disease, from the smallpox vaccine to the Broad Street water pump and the advent of penicillin. In more recent years, the pediatric infectious diseases specialty has forged new paths in antimicrobial stewardship and utilization, transplant medicine, quality improvement, and infection prevention [2–4]. Through it all, we have remained leaders in education, clinical care, and scientific advancement. Dr Gilsdorf emphasized that the skills needed to identify the source of a cholera outbreak in 1854 and those needed to manage and prevent multidrug-resistant infections and identify novel strategies for diagnosing and treating emerging viral infections are the skills instilled from the earliest stages of pediatric infectious diseases training; these skills include gathering and interpreting data, communicating with multiple audiences, and always staying open to new possibilities. Dr Gilsdorf reminded us of the power and promise in those attributes of pediatric infectious diseases physicians and the number of doors that can be opened to those in our profession because of those attributes.
This theme of opportunity and diversity in the field of pediatric infectious diseases was reinforced in the “career pathways brief talks” that followed Dr Gilsdorf’s presentation. Over the past several years, the career pathways brief talks have included a variety of presenters, each of whom has represented one of the many possible specialization pathways in a pediatric infectious diseases career, from becoming a clinician-educator or transplant specialist to addressing antimicrobial stewardship, among many others. These presentations are recorded and published on the PIDS website (http://www.pids.org/resources/video-library. html) to highlight the breadth of our field. This year, presenters included George Liu, MD, PhD, of Cedars-Sinai Medical Center (representing basic science research), Kari Simonsen, MD, of the University of Nebraska Medical Center (representing outcomes research), and Stephanie Stovall, MD, of Golisano Children’s Hospital of Southwest Florida (representing private practice). Each of these speakers gave a brief talk about their career path in infectious diseases and echoed Dr Gilsdorf’s theme of highlighting the attributes of pediatric infectious diseases training that prepare us for future success in a variety of fields. Dr Liu emphasized the importance of physician-scientists in basic science in trying host-pathogen interactions in the laboratory together with the clinical care we provide to children in hospitals. Dr Liu studies host antimicrobial factors that control infections caused by *Staphylococcus* spp and the immune-evasion mechanisms used by these bacteria. Dr Simonsen explained how her experience as a pediatric infectious diseases consultant, who must gather and analyze data and communicate impressions to other providers and patients’ families, translates to the public health world. She shared examples consulting on tuberculosis and measles outbreaks and the planning for pediatric management of emerging infectious diseases such as Ebola virus. In her role with a local public health department, she provided medical guidance on each of these infectious diseases and assisted with public communication via media outreach, local meetings, and other forums. Dr Lee shared the story of her career, which evolved from individual research to instigating system-wide change in outcomes research; her story provides a valuable example of the evolution that can occur in an academic career as interests and opportunities change. Her current research focuses on a variety of quality indicators in health outcomes, such as the economic effects of hospital-acquired conditions and value-based purchasing policies and the development of revised definitions of pediatric ventilator-associated events. Her career path highlights the value of our experience in interacting with many components of the healthcare system as infectious diseases physicians in improving care on a large scale. This theme of communication and interprofessional collaboration within the healthcare system was elaborated further by Dr Stovall in her talk about her path to leadership within the private-practice realm. After moving from academia to private practice, she continued her work in infection prevention and antimicrobial stewardship. Her leadership in these realms readily translated to other hospital leadership roles, including executive committees and the medical staff presidency. All of the speakers reiterated Dr Gilsdorf’s message that the strength of pediatric infectious diseases physicians lies in our ability to thrive as scientists, communicators, and collaborators.

After the career pathway brief talks, an open question-and-answer panel was held, in which the presenters gave candid and thoughtful advice on issues that ranged from dealing with failure in research to negotiating start-up packages and maintaining a healthy work–life balance, among many others. The importance of mentors (including the many peer and senior mentors present at the meeting), persistence, and flexibility were emphasized repeatedly as keys to professional success and satisfaction. The transparency of the panelists in describing the steps, setbacks, and successes they navigated along the way contributes to bridging the trainees in the audience to the future leaders of our field who they will become. Each of these panelists inspired trainees and faculty alike with their support of others in our field and enthusiasm for their work in the pediatric infectious diseases field.

The topics that arise in the career pathway question-and-answer sessions, which are facilitated through both live audience questions and the use of an anonymized app, frequently inform career-development sessions at future meetings. One such question recently arose regarding how one might need to understand the concept of an academic full-time equivalent (FTE) to negotiate an academic career. Drs Simonsen and Stovall led a small-group discussion during the lunchtime breakout sessions entitled “How Jobs Are Pieced Together: Elucidating the Black Box of Pediatric Infectious Disease FTEs” to address these questions. As institutional leaders, Drs Simonsen and Stovall have negotiated the time allocation of many pediatric infectious diseases physicians. Concerns about protected time for academic endeavors are cited frequently by the meeting’s attendees as a challenge when considering a career in academic medicine. Understanding the balance of clinical time (or FTE) with protected time for research, educational, and administrative activities is essential for junior faculty to negotiate a position that ensures professional success. This group discussed that variation in time allocations at various institutions, depending on the size of the institution, patient complexity, support staff available, type of institution, and a variety of other factors. They also strategized possible methods for increasing protected time, such as taking on a formal educational or institutional role. Negotiation for time also must include considerations such as monetary support, additional staff, space, and access to needed equipment to ensure that the time allotted is maximized. Providing trainees and junior faculty with the “behind-the-scenes” knowledge of how a physician’s position is funded and structured can empower them to negotiate or create a position that suits their career goals.
For many junior faculty and fellows who attended the St Jude/PIDS Pediatric Infectious Diseases Research Conference, the concept of protected time is tied directly to their goals of obtaining an NIH Career Development Award, such as a K08 or K23 grant. These awards allow for significant protected time to develop a physician-scientist's research program, including time to gain research skills and actually perform their research. The other 2 lunchtime breakout sessions at the 2018 St Jude/PIDS Pediatric Infectious Diseases Research Conference focused on K awards and included a session led by Betsy Herold, MD, of Albert Einstein College of Medicine, and Paul Spearman, MD, of Cincinnati Children's Hospital Medical Center, who discussed the scoring criteria for K awards, and a session on the key elements of K award and loan repayment program applications lead by Scott James, MD, of the University of Alabama at Birmingham, and Jessica Snowden, MD, of the University of Arkansas for Medical Sciences. In Dr Herold's session, “How Grants are Graded: Understanding the NIH Criteria,” participants were able to discuss the key differences between a career-development award and an independent research grant, such as the R award. Dr Herold's extensive experience as a grant reviewer was invaluable as she walked participants through the importance of highlighting a candidate's potential for success as a physician-scientist, the strength of the candidate's mentor and mentoring relationship, and the institution's support of the candidate and their research in addition to evaluating the quality of the proposed science. In the K award and loan repayment program session, Drs James and Snowden reviewed the elements of the applications and common pitfalls of both. The presenters fielded questions about identifying mentors, negotiating for institutional support, and addressing challenges encountered by grant writers in the audience. The K awards and the loan repayment program are crucial tools for overcoming barriers to beginning a research career, such as the need for mentors to guide the physician-scientist in balancing competing educational, research, and clinical demands and the financial constraints imposed by longer training periods [5]. The program session on K awards and loan repayment has been held in most years of the St Jude/PIDS Pediatric Infectious Diseases Research Conference, and the questions encountered in these talks frequently appear in future meetings, such as Dr Herold's session on grant scoring and other sessions on negotiating resources for starting a research career.

The St Jude/PIDS Pediatric Infectious Diseases Research Conference represents a significant investment by the PIDS and St Jude Children's Research Hospital in the future success of the pediatric infectious diseases specialty. This year's career-development track presentations highlighted the great potential of pediatric infectious diseases physicians to advance science, education, and healthcare. Our training in communication, interprofessional collaboration, scientific principles, and clinical reasoning uniquely position us to serve as leaders in a changing healthcare environment [2–4]. The combination of practical career advice, mentoring, and inspiration offered in the career-development track talks at the St Jude/PIDS Pediatric Infectious Diseases Research Conference this and every year helps all of us, from trainees to faculty, navigate the path toward becoming a pediatric infectious diseases luminary.

Note

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