I want to extend my congratulations to the graduating class of 2008. You have all worked hard to earn your Clinical Research Degrees or Medical Education Degrees. You have made a commitment to a career in academic medicine and clinical research at a time that is both exciting and challenging. The time is exciting because there has never been a better era for clinical investigators to have an impact on the lives of millions of people in promoting evidence based practice, developing new drugs and devices and bringing many new interventions to practice of medicine and to patients. We are closer than ever to the goal of delivering the right care to the right patient at the right time and at the right place. The NIH goal of predictive, personalized and preemptive medicine is what the goal of health care should be and no one is in a better position to implement that goal than you who have achieved the training to do that.

But there are also challenges ahead as well. The mistakes of our government in Iraq, Afghanistan, and elsewhere have resulted in shifting of priorities from peace to war and research funding has suffered. As you begin your careers, you will require greater creativity in funding your research and sustaining your careers. I am totally confident that you
will succeed. Success will, however, necessitate looking for sources of diverse including NIH, foundations, industry, and other federal government agencies such as the Department of Defense and the CDC. You may need to look to State- and county-level agencies for funding and even your own health system. These challenging times also provide new opportunities. I believe diversifying your portfolio of funding for research is a great opportunity even if NIH funding levels improve in the future. I recommend you seriously plan for funding similar to long term investments and always think of diversification of portfolio.

I’d like to spend a few minutes with you today to talk about clinical and translational research and what it takes to be a successful academic investigator. In 1871, Louis Pasteur said, “There is science and the application of science, like the fruits of a tree." This metaphor is appropriate when discussing clinical and translational research. As a tree bears fruit, the results of translational research bring forth new ways of medical practice. However, in order to succeed in this endeavor, there has to be true communication and collaboration between basic and clinical researchers. One of our great challenges now is to reduce and hopefully
eliminate the gap between the clinical and basic research worlds. We need to reach a point where all researchers speak the same language and adopt similar goals. It no longer makes sense to “do” science for the sake of science. We, basic and clinical researchers alike, have to remember that there is, at the end of our research, a person whose health and health care will improve as a result of our investigations. My challenge to you is to make this happen.

This brings me to the second topic of what it takes to be a successful academic investigator. Despite the more challenging funding environment today, the core elements of success are the same today as they always have been.

It’s important to know that success is rarely a matter of luck (although luck is always good to have); success doesn’t drop into your lap—you need to work for it. In my view, success is entirely or mostly dependent on only one person—it is you! There is a famous proverb that says, “The best way to predict the future is to invent it.” There are some steps that you can take to help ensure your future success as a investigator. You have already taken the first step in training. You have found good mentors. I believe that mentorship is essential to the development of mature independent
researchers. While it may be possible to achieve success without mentorship, it is much more difficult. Mentors—good mentors—will provide you with guidance in your development and conduct of research and advice about your career path. Good mentors are like good parents: they look after your best interests. They facilitate your professional socialization and serve as role models, teachers, advocates, and allies as you negotiate your way in academic medicine. So work with your mentors and define your short-term and long-term goals and expectations. As opposed to child-parent relationships, the mentor-mentee relationship need not be permanent. Try to identify bad relationships early and terminate them. Bad mentors can ruin careers as good mentors can enhance them.

Next, success in research is about focus and focus and focus—find a substantive or methodological focus that you are passionate about. The most successful investigators are those who identify a research area and stick with it over time. By focusing on one area over time, you begin to find a community; you begin to ask relevant questions and work toward solutions. By focusing, you will become known beyond your institution as the expert in that area. This is
critical to a successful career. You need to develop a track record of sustained research in a given domain. Ideally, a 1\textsuperscript{st} generation question should lead to a 2\textsuperscript{nd} generation question, and then to a 3\textsuperscript{rd} and so on. And this becomes your research career and, as you gain expertise, you will mentor those that follow and create cohorts of researchers in your area. So, find something you are passionate about and be sure that it is something that matters.

Next, find a supportive environment for your research. This means more than finding a well-equipped lab or research program. You want to surround yourself with good people: mentors, colleagues, and staff. It is often through the serendipity of casual conversations with colleagues that great ideas are conceived. You want to find an environment where there are people with whom you can collaborate, with whom you can share thoughts, discuss issues, and brainstorm ideas. A supportive environment also means one in which your time is truly protected so you can conduct your research. You want to find an environment where the figure in authority—your chief or chair—understands and appreciates research and the guards your protected time to carry it out.
Another thing, write. A lot. The only way to have impact on health of patients and people is by dissemination. Papers and ideas that have not been published do not exist and cannot have an impact on health. As you plan your research, consider the papers that may be associated with the project. Create writing schedules and milestones and stick to them. First-authored papers and publications with impact are critical to getting funding as well as national recognition, promotion and tenure.

There are other things you can do, too, to help ensure a successful career:

- Continue with your learning and training. We live in a time of such rapid change and advancement in science that it’s critical to keep pace.

- Work closely with your mentors but at the same time work towards independence. Be assertive. You need to empower yourselves to take on new responsibilities and meet new challenges.
• Think ahead. These days, grants may take three, four or more years to be funded. With your mentors, create rational and practical short-term and long-term plans and goals and review them frequently.

• Be creative. Creativity in determining your research focus may allow you to find or develop answers for an entirely new question—new areas of science are being discovered everyday, and maybe you will be the one making one of these discoveries.

• You must persevere. Especially these days. Don’t lose hope if your grant isn’t even scored on the first submission. Right now, many are not. Read your pink sheets and use those to measure the issues the reviewers had with your work, and be responsive to them. A successful research career requires total commitment to achieving your goals. You will, in the course of your career, have to deal with failure or rejection but persevere. In the end your commitment and passion will be rewarded.

• And finally, whatever you do, try to have balance in your life. Yes, work hard in a research career, but also
work hard outside your career. Life is short. As Einstein said, “I never think of the future—it comes soon enough.” Devoting time to family, making friends, working in the community, helping others, and making others happy fulfills our lives and creates a balance that can help you nurture your careers.

While there are challenges and setbacks, a successful research career is extraordinarily rewarding. There are few other careers, I believe, that can impact so many people as a career in medical and health research. Again, I want to congratulate you on your accomplishments and wish you all the best. Please remember that by being part of our program, you will be considered part of us for ever in the future. Please maintain contact, communicate and interact with us. Tell us about your successes and your challenges. We will be looking forward to learning about your careers and your academic lives with a lot of excitement, similar to what proud parents do. Thank you.