Cancer Research—The CCR Way!

More than 15 years ago, I joined the NCI Center for Cancer Research (CCR) as an eager and idealistic junior investigator. What attracted me to CCR were the stellar reputation of the NIH Intramural Program, the availability of state-of-the-art technology, and the certainty of having world-class colleagues by my side as I embarked on building my research program. While these are features common to most cutting-edge research institutions, I also recognized that CCR was a truly special place to do cancer research. My view has not changed a bit.

The scientific endeavor is driven by the free-ranging curiosity and creativity of individual basic and clinical researchers. CCR is one of very few institutions in the country where investigators can still freely pursue discovery, unencumbered by the need to justify our ideas in research grants. The CCR approach is complementary to many of the activities in academic institutions and allows us to pursue the most important, challenging, and provocative ideas in cancer research.

We have, for example, a long history of groundbreaking technology and methods development which, by definition, is high-risk and requires multiyear institutional commitments. Recent CCR breakthroughs include cryo-electron microscopy, which visualizes unprecedented detail in the structure of individual proteins to allow the identification and design of precisely binding, small-molecule inhibitors; and, UroNav, a magnetic resonance imaging method that enables high-precision prostate biopsies.

The intellectual liberty given to CCR investigators comes with responsibilities. It is our obligation as individual investigators, and as an institution, to take full advantage of our freedom to pursue the big questions in cancer research by creatively using our resources to push the boundaries of biomedicine and cancer research—across the spectrum from basic discovery to clinical practice and, increasingly, by building bridges between disciplines.

As the articles in this issue of *CCR connections* show, the CCR approach has been highly successful over the years. As CCR alum Bernard Fox, M.D., describes in "A Broader View of Immunotherapies," CCR was instrumental in pioneering some of the earliest immunotherapy strategies based on efforts to elucidate the fundamental mechanisms of how the immune system functions. Curiosity-driven studies laid the groundwork for the widespread use of this revolutionary therapeutic intervention. Similarly, the Human Papilloma Virus (HPV) vaccine, developed within CCR and now used routinely across the nation to prevent cervical cancer, was inspired by the curiosity to understand the life cycle of the virus. Now, CCR Investigator Christian Hinrichs, M.D., describes his use of immunotherapy to treat advanced HPV-related cancers in "Expanding the Use of Adoptive Cell Therapies, One Cancer at a Time."

(Photo: R. Baer)

Tom Misteli, Ph.D., CCR Director

We are continuing our tradition of doing impactful cancer research the CCR way. In "Inhibiting the Epidermal Growth Factor Receptor," we learn of three widely different approaches to understanding the network interactions and cell biology of this important cancer target, with a view to improving upon therapeutic strategies. In "The Secret Lives of Neurotrophin Receptors," we follow Lino Tessarollo, Ph.D., and the unexpected insights from his quest to understand a receptor family first identified here in Frederick as a fusion oncoprotein.

In the years since I joined CCR, my appreciation for the uniqueness and the importance of how we do things in CCR has only grown. Going forward, we will make every effort to ensure that we continue to do cancer research like nobody else!