

CONNECT Interview: Dr. Gary S. Firestein, Director of UC San Diego's Clinical and Translational Research Institute.

CONNECT recently spoke with Dr. Firestein about CTRI, its history, its mission and its entrepreneurial character.

For those outside the research and medical community, a question often asked is “what exactly is ‘translational research’”? According to Dr. Gary S. Firestein, Director of UC San Diego's Clinical and Translational Research Institute, it is all about “translating basic science and scientific discovery into interventions that will improve health.”

As Dr. Firestein tells it, “UC San Diego has been involved in translational medicine since the 1990's, although we didn't have that name for it. At the University, where basic sciences are so strong, there has long been a need to move that science out of the lab to serve the citizens who support us with public funding from the NIH and elsewhere.”

A bit of history. Dr. Firestein joined the faculty of UC San Diego in 1988, focusing on immunology in general and the pathogenesis of rheumatoid arthritis (RA) in particular. Dr. Firestein's laboratory helped define the synovial cytokine profile of RA, which contributed to the development of the highly effective anti-TNF approaches in RA. Hence, early in his career, Dr. Firestein saw a path from the academic lab to commercialization that resulted in novel therapeutics such as etanercept and infliximab. In 1992, Dr. Firestein left academia for a stint in the biotech startup world and noted that “the experience in the marketplace completely changed my approach to research.” The change that his research took centered on two models of behavior that weren't then-and aren't now- prevalent at most academic research institutions: entrepreneurship and collaboration.

In 2008, Dr. Firestein took on the Directorship of CTRI and was named Dean of Translational Medicine at UC San Diego. The mission of the Institute: to create an environment that advances health care through interactions between basic scientists, clinical investigators, community physicians, and patients.

“Environment”. “Interaction”. Words not often associated with the hierarchical structures typical within academic medicine and clinical research. As Dr. Firestein describes this Institute however, “At CTRI we reach out to as many people in as many disciplines as possible and partner with other institutions. We want to be at the epicenter of translational research activity”. Firestein also makes the point that CTRI is a resource for all of San Diego and draws its members not only from the UC San Diego research community but from other local institutes as well. According to Firestein, the goal of the CTRI is to create a common infrastructure for all CTRI members so that researchers can avoid creating and recreating vertical silos of redundant activity and unnecessary cost.

If the CTRI is atypical in its focus on interaction and collaborative culture, it is also different in its methodology. As Dr. Firestein puts it, “The sweet spot for us, what makes us different-if not unique-is our focus on collaborating with the private sector and our use of technology. We use biomarkers and imaging technologies to get an early read on the outcomes we might expect with proof of concept studies based on clinical outcomes”. This focus on the private sector comes with a certain risk and varies from the approach taken by organizations devoted purely to investigative research. It is an

approach that entrepreneurs recognize and one that San Diego fosters. According to Firestein, “One interesting aspect of San Diego is that we aren’t dominated by one or two big institutions, with world recognized research institutes and hundreds of local biotechs all within a couple of miles of each other; it changes the way that research is performed. You have to cross boundaries. You have to collaborate”.

Ultimately the Clinical and Translational Research Institute is yet another powerful resource for San Diego’s life science community; one that intends to address the barriers that inhibit productivity and the rapid translation of research progress into new therapies.

Gary S Firestein, MD, is Director of the Clinical and Translational Research Institute (CTRI), Professor of Medicine and Chief of the Division of Rheumatology, Allergy and Immunology and Dean of Translational Medicine at UC San Diego.