

*Strategic Design of a
Pediatric Genomics Institute:*

Partnerships and Differentiation

By Rand Haley and Roger Roux



Following an intensive, iterative design process, in August 2014, Rady Children's Hospital-San Diego announced the establishment of the Rady Pediatric Genomics and Systems Medicine Institute. Bolstered by a \$120 million philanthropic donation

from the Ernest Rady family, along with a commitment of \$40 million from the Hospital, the Institute will "encourage the ambitious research and innovation that will accelerate the process by which discoveries are made and translated into cures," as

stated by Ernest Rady in the press release.¹ This article introduces some of the Institute's strategic design considerations and highlights the importance of partnerships and differentiation in Institute design.

What is the Institute trying to do, and what differentiates it?

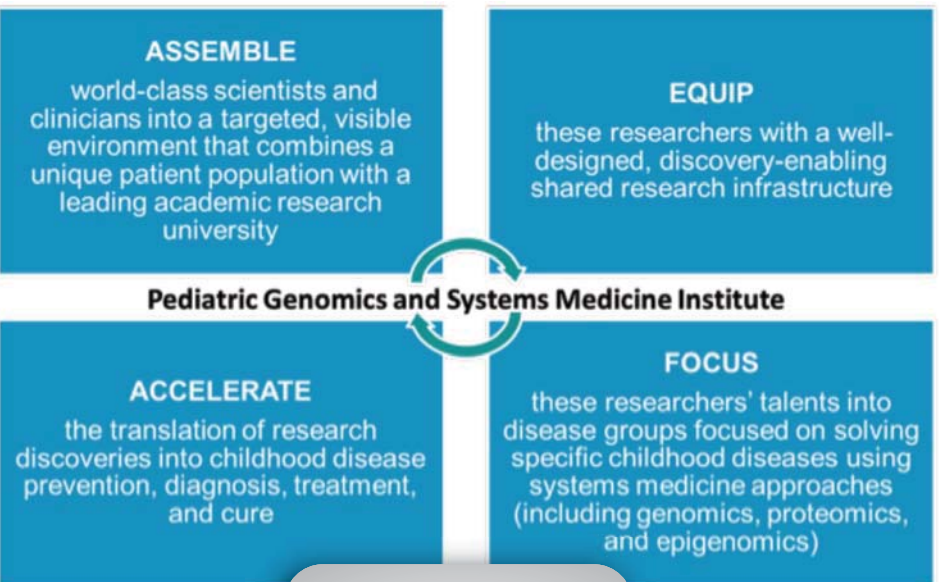
Strategic Design

The initial Institute idea was conceived by Rady Children's Chief Scientific Officer, Dr. Gabriel Haddad, who also serves as the Hospital's Physician-in-Chief and as Chair of the Department of Pediatrics at the University of California at San Diego (UC San Diego or UCSD). The Institute's design process was overseen by a Task Force of Rady Children's Board of Trustees, which included leaders from UCSD and biotechnology firms in the San Diego area. A core team of Hospital leadership, specifically, the President, Chief Scientific Officer, and Chief Financial Officer (co-author R. Roux), assumed the charge of designing an Institute finely tuned with strengths and opportunities at Rady Children's. Hospital leaders from information technology (IT), development, legal, and other domains were involved at selected design stages. An experienced strategy and management consultant (co-author R. Haley) was retained to bolster the team and drive the Institute design process and the development of a business plan for the new Institute.

As summarized in the press release announcing the Institute's establishment:¹

"After more than one and one half years of evaluating the design and mission of an Institute at Rady Children's, this Institute will assemble a team of world class scientists, researchers and clinicians who will focus their talents on preventing, diagnosing, treating and curing childhood disease through genomics and systems medicine research," said David F. Hale, Chairman of the Board. "The Institute will work closely with UC San Diego and establish relationships with other academic and research institutions, companies involved in genomics research and other children's hospitals to advance the mission of the Institute," said Hale.

Early in the design process, efforts were made to develop a strong, shared understanding of the international landscape of pediatric genomics institutes and related research organizations, and energies were invested in learning as much as possible about a wide range of innovative, academic and non-academic ways of productively organizing and managing research activities. Parallel self-examination activities



were undertaken to better understand the strengths and opportunities prevalent at Rady Children's and enabled by its numerous research, clinical, and other collaborations with

diverse institutions. Desired Institute design characteristics emerged during the process—including targeted research foci and investments, operational agility, high research productivity expectations, and access to UCSD graduate students, postdocs, and shared research infrastructure—and served to direct additional analysis into "lessons learned" or "best practices" from successful independent research institutes, universities, hospitals, firms, and affiliations between entities. In sum, these activities were helpful in both affecting Institute design decisions and demonstrating to internal and external stakeholders that sufficient investigation and due diligence had been conducted throughout the multi-faceted design process.

An Institute "business plan" served as a concrete, iterative document in which to organize and present the design elements of the evolving Institute. Major sections of the business plan included: Institute Differentiators, Organizational Design, Research Strategy, Institute Operations, Financial Pro Forma, and Risk Management. Within each of these sections,

specific Institute strategic design elements were presented. As an example, the Organizational Design section focused on elements including the legal structure, governance, leadership, employment, and physical location of the Institute. The Research Strategy

section presented the approach to selecting research foci, organizing research and clinical personnel into disease-specific research groups, and making significant and differentiating research investments in areas such as recruitment, core facilities, collaborative research, and translation to patient care. The Institute Operations section addressed the approaches anticipated to be employed by the Institute to address its operations and administration needs in areas including research administration, intellectual property



(IP) management, facilities, human resources, safety, and security.

Partnerships

The importance of partnerships spanned the Institute design process. Existing partnerships between Rady Children's and other organizations served to define the current state and suggest ways to build upon the collaborations. Most notably, the affiliation between Rady Children's and UCSD, especially the University's Pediatrics Department, served as a central relationship around which Institute design would take place. The Department of Pediatrics is the second largest department in UCSD's School of Medicine and has rapidly expanded its faculty body and research enterprise in recent years, the latter of which more than doubled over a six year period.

Other existing Rady Children's partnerships include collaborations with leading research institutes in the area such as the Sanford-Burnham Medical Research Institute, Sanford Consortium for Regenerative Medicine, Salk Institute for Biological Studies, Scripps Research Institute, and La Jolla Institute for Allergy and Immunology. Geographically, it is difficult to envision a stronger home for the Institute, and a number of Institute design elements sought to capitalize on the locational aspects of research and clinical care. For example, the Institute's design includes the utilization of two strategically-selected physical locations: one adjacent to the main campus of Rady Children's and one in the Torrey Pines area of San Diego/La Jolla, the so-called Research Mesa, proximal to the UCSD campus and numerous research institutes, including those mentioned above.

Partnerships within Rady Children's – particularly the connections between research and patient care – helped to define expectations related to the translation of research findings to improved care. The rapidly evolving relationship between genomics research and IT at the organization helped to define the necessary strategic research investments in bioinformatics and related research IT core support for significant Institute research productivity.

Also a part of the Institute's design process were explorations of new research partnerships—in addition to expansion of existing partnerships—that would serve to accelerate the Institute's progress toward its research and clinical missions. Discussions with a number of companies and not-for-profit organizations were conducted during the design process and continue following the Institute announcement. As an example, a potential partnership between the Institute and the newly formed, La Jolla based firm, Human Longevity, Inc., led by genomics pioneer J. Craig Venter, offers intriguing opportunities to enhance the Institute's research and clinical outcomes.

Differentiation

As described above, a key element of the design process involved developing an intimate, thorough understanding of the complex environment in which the Institute would operate and compete for external research funding, highly-talented researchers, and other assets key to its success. Rady Children's significant market share of the region's patients, the opportunity to significantly build upon existing collaborations with UCSD, and the opportunity to further develop linkages with leading research institutes and firms in San Diego's biotech innovation ecosystem served as differentiators contributing to Institute design.

Analysis of similar organizations, the state of genomics and systems medicine (and related research and technology enablers), and the role of robust research enterprises within healthcare organizations provided further information helpful in designing a differentiated Institute.

Communication of the Institute's differentiators was also important, both internally and externally. The schematic diagram was developed relatively early in the design process—and iterated throughout—to quickly convey the Institute's key elements and differentiators and to remind stakeholders of the agreed, core design framework. Not surprisingly, partnerships within and outside the Institute and Hospital feature prominently in the schematic.

Implementation

Following the official announcement of the Rady Pediatric Genomics and Systems Medicine Institute, the focus shifted to implementation. An implementation plan has been developed and is being carried out—with a continued emphasis on the importance of partnerships and differentiation on Institute success. As examples, three elements of the Institute implementation plan are: (1) recruitment – with a link to differentiation via efforts to attract the best and brightest researchers to the Institute; (2) sustaining partnerships; and (3) operations and administration – with a goal of partnering with existing hospital operations when advantageous while also striving for a differentiated agility that best supports the Institute's research and clinical care aspirations. ■



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