

pattern inspired by the DNA bar code sequence.<sup>2</sup>

The centre focuses on 3 main research *themes*, rather than disciplines: bioengineering and functional imaging, integrative biology, and models of disease. These themes dictate which scientists co-exist in the building. For example, a researcher who studies transcription factors and transcript localization in the *Drosophila* model<sup>3</sup> has a laboratory in the same building as a scientist whose work focuses on designing a nerve regeneration system utilizing polymer synthesis.<sup>4</sup> Previously, such researchers were unlikely to be found in the same department, let alone the same working environment. Physically bringing together researchers from diverse but complementary specialties may stimulate a synthesis of ideas and allow them to forge new research directions that they otherwise may not have had the opportunity to explore.

To promote chance encounters and this possibility of interdisciplinary exchange, the architects incorporated a variety of interactive social spaces, including coffee bars on every floor, as well as several winter gardens, resplendent with trees, on the building's south corners. The ground floor includes a large open staircase leading through a 6-story high atrium, densely planted with 25–30 foot high bamboo. This impressive space invites contemplation and reflection.

Incorporating social spaces into a laboratory setting with the goal of fostering scientific creativity recalls the Salk Institute for Biological Studies in La Jolla, California, which was designed by Louis I. Kahn, one of the most recognized architects of the 20th century. The Salk Institute was established in the 1960s by Dr. Jonas Salk, developer of the first polio vaccine. His goal was to establish an institute that would make it possible for biologists and others to work together in a collaborative environment, encouraging them to consider the wider implications of their discoveries for the future of humanity.

"Architecture is used here. Some people pursue science for human use, in contrast to science for the sake of

## One thousand words



Dam de Nogales

"The sculpture attempts to capture not only the activity of the research centre, but the very spirit behind this research. There is in medicine and in art a unique connectivity of subject and subject matter ... this work attempts to capture this ... the figure is in unison with the protein structure, mimicking its every twist and turn ... there in his reach is anticipation, hope and a sought objective ... discovery within grasp." — Veronica and Edwin Dam de Nogales, commenting on their bronze sculpture *Spirit of Discovery*, located in the forecourt of the Terrence Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Toronto, Ont.

science. This architecture is for human use, to serve a purpose."<sup>5</sup> In planning the design of the Salk Institute, Kahn recognized the importance of informal and social spaces by separating the studies from the laboratory spaces and creating green areas: "The gardens became outdoor spaces where one can

talk. Now one need not spend all the time in the laboratories."<sup>6</sup> Salk's vision of research is experienced within this new Toronto facility.

The Terrence Donnelly Centre for Cellular and Biomolecular Research sets a standard for the future of research facility design, and perhaps