University of Toronto
Terrence Donnelly Centre for Cellular and Biomolecular Research
TORONTO, CANADA

ARCHITECTS
architectsAlliance
Toronto, Canada
Behnisch Architekten
Stuttgart, Germany and
Los Angeles, California

GLAZING CONTRACTOR
Ferguson-Neudorf
Ontario, Canada

FEATURED PRODUCTS
Modified 2500 PG Wall™ Curtain Wall System
GLASSvent™ Windows for Curtain Wall
526 Thermal Windows

Photography: © CJ Berg
BRINGING A 12-STORY “GLASS BOX” TO LIFE
AT THE UNIVERSITY OF TORONTO

The facility that would become the Terrence Donnelly Centre for Cellular and Biomolecular Research (TDCCBR) Canada’s foremost human genome research center, needed to be impressive enough to aid in the recruitment of top scientists, but also respectful of the historic buildings and cityscape that surrounded it. The structure, a fully glazed, 248,378-square-foot facility resembling a glass box, married these ideals while also creating an environment that fostered collaboration and interdisciplinary research. The final result is a structure that possesses an indoor-outdoor sensibility, with a soaring glass atrium, lush interior gardens and an overall impression of light and transparency.

Completed in November 2005 with a budget of $86 million (USD), TDCCBR was recently named a winner of the Business Week/Architectural Record “Designed for Success” award. The project team included architectural firms architectsAlliance (Toronto) and Behnisch Architekten (Germany, Los Angeles), glazing contractor Ferguson-Neudorf (Ontario), and design engineers/product manufacturer Kawneer North America.

DESIGN HIGHLIGHTS

- Constructed with unitized curtain wall, each elevation of the “box” features a unique design and custom glazing elements, from a double-skinned curtain wall to a spot-colored façade glazed to mimic the pattern of DNA code.
- To relate to the scale of the surrounding community, a break in the building’s height was introduced at the seventh floor with a reduced floor plate and enclosed area to house the lower floors’ mechanical functions. The result presents the impression of a belt cinching a waist.
- Several “bump-outs” from the curtain wall were featured on the west and south elevations. Designed to expand the space and allow for multi-story gardens, staircases and conversation areas, these bump-outs required the construction of a custom stick curtain wall, which were anchored to architecturally exposed steel to handle the large spans in these areas.

CHALLENGES

Painstaking design engineering was necessary to make the building completely airtight and watertight. Because there were numerous points throughout the structure where the unitized curtain wall would be interrupted, all the design needed to be completed up front.