Envisioned as a place of discovery and healing, the Hess Center for Science and Medicine (CSM) is shaped by its translational mission and its urban context. Located in Upper Manhattan, the 420,000 sf facility integrates clinical and basic science research with an ambulatory care center and image facility. The building unites scientists, clinicians and educators in a unique and collaborative way.

The primary objective was to create an environment that would be functional and inspiring for researchers and clinicians as well as gracious and calming for the patient who motivate and benefit from their work.
Mount Sinai Hess Center for Science and Medicine
New York, NY

Case Study Format Developed By:

Campus Language

Viewing the building as the latest evolution of the campus language, the exterior envelope is a masonry solid that articulates both the 2-story sectional organization and plan modulations of the interior. The rhythm established in the window placement is an outward expression of the rigorous planning modules established for the laboratories, exam rooms and offices. In detailing the exterior, the vertical stacked brick bond serves to reinforce the building geometries and the system of the pre-cast panels with half-brick facing responds to concerns of cost and schedules.

SITE PLAN

Located on the edge of Spanish Harlem and the Upper East Side, the Mount Sinai Campus is situated on the fault line between some of the poorest and wealthiest New Yorkers. The campus extends from 98th to 102nd Street and is bracketed by Central Park to the west and low-income housing projects along Madison Avenue to the east.

While Mount Sinai’s medium-scale brick campus is dominated by a 31-story modern research tower of corten steel, it is the buff-masonry and heavy, punched-window aesthetic of I.M. Pei’s hospital pavilion that has influenced subsequent Sinai buildings and established, in the Institution’s eyes, a campus style. The design team responded to the mixed nature of the neighborhood by creating a contextual building that comfortably mediates between the two different worlds that meet at its doorstep.

Mount Sinai’s request that the CSM be an integrated campus building with a sense of “quiet dignity” and free of ostentation, led the design team to a process that distilled the building to its most basic and essential nature.
Mount Sinai Hess Center for Science and Medicine
New York, NY

DEPARTMENTAL KEY PLAN:

GROUND LEVEL:

SECOND FLOOR PLAN

KEY SPACES:
- Office (113 nsf)
- Lobby (8896 nsf)
- Staff Work core (104 nsf)

DEPARTMENTAL GROSS SQUARE FOOT TAKE-OFFS

<table>
<thead>
<tr>
<th>Department</th>
<th>Net</th>
<th>Gross</th>
</tr>
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<tbody>
<tr>
<td>Office</td>
<td>6394 SF</td>
<td>8090 SF</td>
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<tr>
<td>Lobby</td>
<td>2762 SF</td>
<td>2762 SF</td>
</tr>
<tr>
<td>Core/Mechanical</td>
<td>13449 SF</td>
<td>13449 SF</td>
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</table>

Note: Departmental Square footages take-off based on Analysis of Departmental Area in Contemporary Hospitals calculation methodologies & Design Factors Report, 2014
Mount Sinai Hess Center for Science and Medicine
New York, NY

DEPARTMENTAL KEY PLAN:
- Laboratories
- Lab support
- Offices
- Collaboration
- Public Circulation
- Core/Mechanical

TYPICAL RESEARCH PLAN:

IMAGING AND RADIATION THERAPY CENTER

DEPARTMENTAL KEY PLAN:
- Imaging/RadOnc/Nuclear Medicine
- Research/support
- Public Circulation
- Core/Mechanical

DEPARTMENTAL GROSS SQUARE FOOT TAKE-OFFS

KEY SPACES:
- Office (95 nsf)
- Laboratories (1666 nsf)
- Staff Work core (223 nsf)

Note: "Departmental Square Footages take-off based on Analysis of Departmental Area in Contemporary Hospitals calculation methodologies & Design Factors Report, 2014"
Clinical Areas
Clinical Support
Offices
Collaboration
Public Circulation
Core/Mechanical

DEPARTMENTAL KEY PLAN:

TYPICAL CLINICAL PLAN:

TRAVEL DISTANCE ANALYSIS

DEPARTMENTAL GROSS SQUARE FOOT TAKE-OFFS

<table>
<thead>
<tr>
<th></th>
<th>Net</th>
<th>Gross</th>
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<tbody>
<tr>
<td>Clinical area</td>
<td>7,815 SF</td>
<td>13,289 SF</td>
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<tr>
<td>Offices</td>
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<td>4,401 SF</td>
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<tr>
<td>Collaboration</td>
<td>3,395 SF</td>
<td>4,535 SF</td>
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</table>

Note: "Departmental Square footage take-off based on Analysis of Departmental Area in Contemporary Hospitals calculation methodologies & Design Factors Report, 2014"
A Collaborative Environment

The layout is based on the translational model of care embedded in the overall design of the Hess Center.

The building is organized vertically into a series of two-story "neighborhoods," allowing for the interaction and collaboration between researchers, clinicians, and educators. The design team created a vertical "interaction network" of formal and informal spaces. The network is composed of three parts:

- **Atrium** (multi-purpose lobby with café, conference/education center, and patient waiting areas)
- **Interaction Spine** (convenience stair with adjacent lounges, pantries, conference rooms)
- **Rooftop Pavilion** and **Rooftop Garden** (potential future phase)

While the design creates ideal conditions for both clinical and research activities, most importantly, it emphasizes the connection between the two. By highlighting the ties between the patients and researchers exploring cures to their diseases, the Hess Center creates a profound sense of immediacy.
Patient-Centered Care

As a continuation of the translational model at the Center for Science & Medicine, both the Tisch Cancer Institute and Imaging Center and Radiation Oncology Center are co-located within the Hess Center.

The Tisch Cancer Institute occupies the 3rd and 4th floors and provides an outpatient facility where the latest oncology treatments can be applied and evaluated. Clinical programs reside alongside a chemotherapy pharmacy that will produce both conventional and experimental products. The facility provides a research continuum that connects the laboratory to the bedside.

The Institute comprises 46 exam rooms and 54 infusion bays. The large waiting areas overlooking the atrium space provide a comfortable environment for the patients, and easy patient flow into the exam and infusion suites.

Located in the sub-basement, the Radiation Oncology suite, with two linear accelerator vaults and adjacent CT Simulator provides a cutting-edge outpatient treatment experience.

By incorporating the full spectrum of radiation therapy components in direct adjacency the patient experience is streamlined, wait time is reduced, and medical staff gain workspace efficiencies.

The linear accelerator vault features LED chromatography ceiling panels that are customizable to each patient’s preferences for color therapy during treatment session.

The facility offers a research continuum that connects the laboratory to the bedside, which is the sine qua non of translational research.

AIA/AAH DESIGN AWARD WINNER

Category B: Built: More than $25 million (construction cost)

JURY COMMENT

▶ This project is an understated and beautiful response to the difficult functional program of translational medicine. The needs of academic research, clinical medicine and community on an iconic campus were thoughtfully combined with this design.

▶ In a context sensitive urban setting, this facility creates a bench to bed (or clinic exam room) facility that will accommodate a wide variety of research efforts that is still welcoming to the patients.

▶ Material selection exterior and interior are sophisticated and technical while imparting a comfort and warmth. This is an exemplary solution of how design can foster interdisciplinary collaboration between departments and research teams.