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Biomedicum

KAROLINSKA INSTITUTET

CF	MØLLER
ARCHITECTS	

Contents

Biomedicum, Karolinska Institutet	4
Architecture that Invites Collaboration	6
Artistic Stairwell	11
Characteristic Façade	13
Positive Process	14
Flexible Building	16
Modern and Efficient Labs	17
Core Values	24
Company Profile	25
Contact	27

Biomedicum, Karolinska Institutet

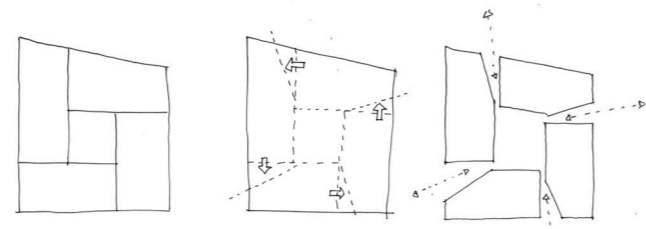
Biomedicum is a new, state-of-the-art laboratory building that will be a collective powerhouse for research at one of the world’s leading medical universities, Karolinska Institutet (KI) in Stockholm.

Biomedicum offers the Karolinska Institutet a concentrated environment for future research, thanks to flexibly designed laboratory and office facilities that act as a catalyst for unlimited collaboration between the various research and study environments. The laboratory will be one of the most modern in Europe and will attract employees from all over the world.

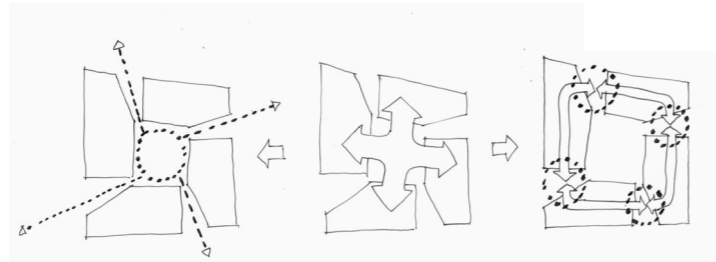
FACTS	
Address: Karolinska Institutet Campus Solna Nobels väg 5, 171 65 Solna, Stockholm	Collaborators: Interior: Nyréns Arkitektkontor, Beräkningskonsulterna AB, Svensk Läsprojektering AB
Client: Akademiska Hus (client), Karolinska Institutet (tenant)	Size: 65000
Architect: C.F. Möller Architects	Year: 2010-2018
Landscape architect: Landskapslaget AB	



Architecture that Invites Collaboration



The buildings' geometry is subdivided into four units, opening up to the surroundings and making it an urban geometry



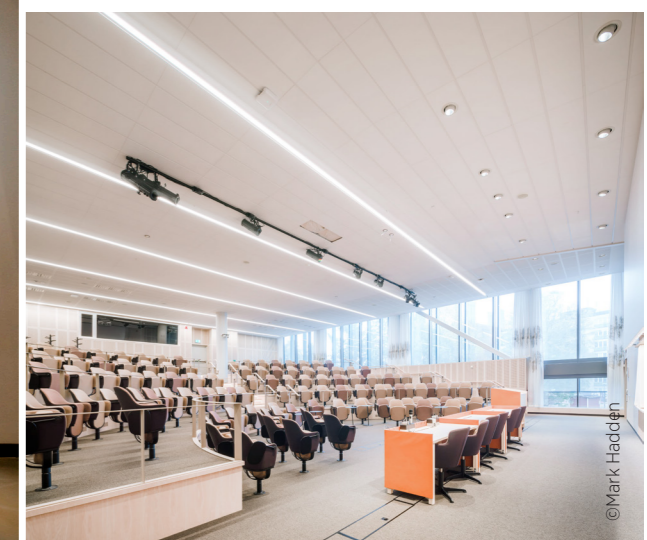
The building is equipped with common infrastructure and advanced technological platforms, as well as equipment that can be utilised by multiple researchers. The laboratory also has a direct connection to BioClinicum, the clinical research environment at Karolinska University Hospital, through a physical, glazed connection pathway across Solnavägen.

Biomedicum has an inviting public entrance floor with access to the atrium, café, auditorium, conference rooms and public exhibition rooms. This also creates new contact with the park and therefore opens the Karolinska Institutet up towards both the city and the new university hospital, Nya Karolinska Solna (NKS), which is located next door.

Biomedicum thus becomes a new hub in the area - a distinct icon for the world-class research that Karolinska Institutet stands for.



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The building's transparent design, with many common spaces, creates the conditions for spontaneous meetings in everyday life, collaboration across scientific boundaries and an exchange of experiences.



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Artistic Stairwell



As a guide, the four stairwells, one for each block, are distinct in the corners facing the atrium. An illuminated wall covered with mouth-blown glass extends up the entire staircase and creates beautiful lighting in the stairwells, inviting use and movement. The glass comes from Lamberts Glashütte in Germany. Both installation and lighting were completed by Derix, steered by C.F Møller Architects.



Characteristic Façade

Biomedicum's green double-shell facade creates transition between the neighbouring Aula Medica and Widerströmska buildings, and at the same time, it has its own distinct identity and design language

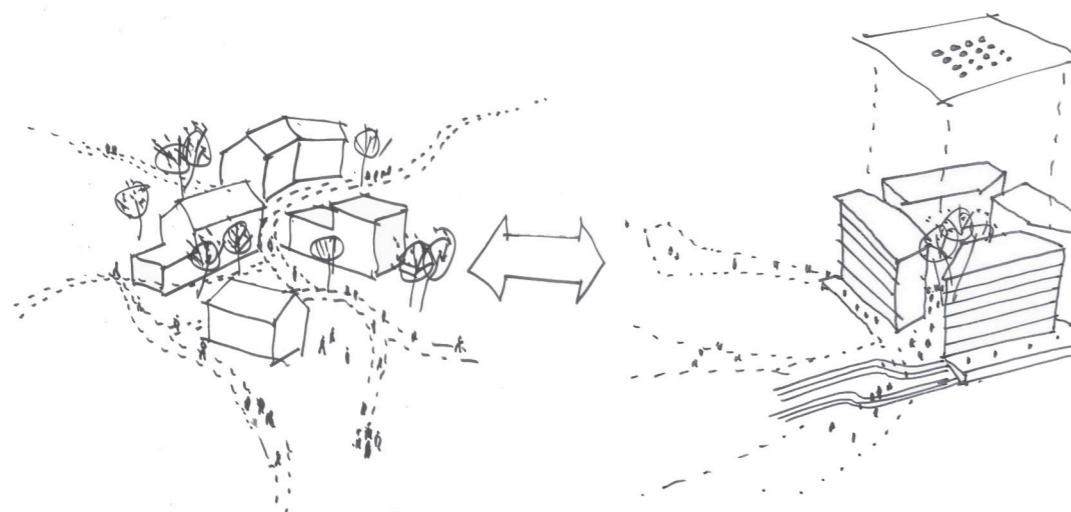
Each glass section in the double shell is angled to create life in the facade. This means that the facade can be perceived differently from different angles. From the front it is almost completely transparent; from one side green and closed; and from the other side almost completely glazed and mirrored. Between the buildings, the slits' intersections come forward with a more transparent single-shell facade.

Positive Process

In order to keep to the timetable but still give KI the opportunity to wait as long as possible with definitive placement, a division of the building was made in Bashus och Hyresgästanpassning (Basic building design and Tenant customisation), where the tenant customisation was system walls, laboratory fittings and other things within the laboratory quarter. The rest of the project was designed and built while the tenant customisation was being carried out.

As the form of contract, Akademiska Hus chose collaboration with a general contractor. When the systemic actions began, Skanska and an expanded construction management team joined the design process. This meant that many questions were well analysed before production began.

In the early stages, a test building with model rooms was also built. This was very helpful in all stages of the project. Solutions and detail design could be tested which then made joint decisions easier. This was an important process, in order to establish assembly arrangements for critical rooms and paths. The test building was also an important asset to visualise the future workplace for tenants.



"Buildings in the park"

"Park in the Building"

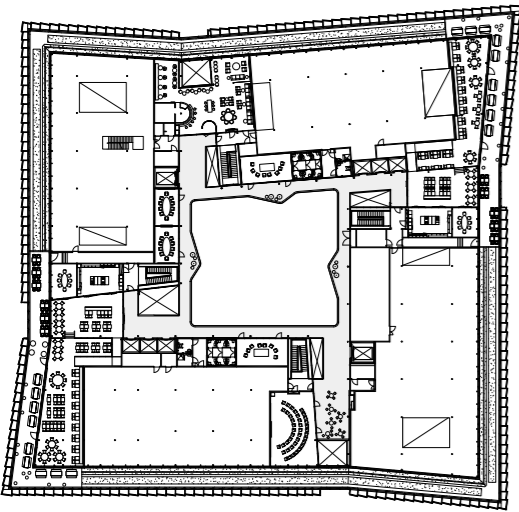


Flexible Building



Modern and Efficient Labs

The new building is for experimental research across disciplinary boundaries and for cooperation with clinical research. Everything aims at facilitating the transition from basic research to clinical studies.
The laboratories are designed to be adaptable to change as new scientific opportunities emerge in the future.



Plan level 10 - 1:1250

The flexibility of the modern laboratory lies in establishing a reasonable level of flexibility, generality, define the possibilities of the building and its limitations. A structure that enables an open lab as well as closed and more fixed units. This creates a sustainable building that allows for changes without disrupting ongoing research.

The requirement for a sufficient amount of daylight is a challenge in large buildings such as Biomedicum. Increased hygiene requirements and noisy equipment place high demands on creating a good working environment where the research and staff should have top priority.





The departments in Biomedicum are:

- The Department of Cell and Molecular Biology
- The Department of Physiology and Pharmacology
- The Department of Microbiology, Tumor and Cell Biology
- The Department of Medical Biochemistry and Biophysics
- The Department of Neuroscience.

Biomedicum is equipped with shared infrastructure, which means that advanced technology platforms and expensive equipment can be utilised by more people, and that research groups can collaborate to achieve results. The laboratory will be one of the most modern in Europe, and is intended to attract researchers from all over the world.

By bringing the scientific activities into separate disciplines together under one roof, the research lab provides new opportunities for crossover research. There are also a number of meeting nodes and a core of common facilities that make it possible to utilize more expensive equipment more efficiently. The design has enabled flexible, accessible and functional working environments in a natural meeting place in the form of a large central atrium.

Biomedicum includes a Biosafety Level 3 (BSL-3) laboratory is platform to develop research work within the HIV field. It has been built for work with microorganisms classified BSL-3, with potential possibility of conversion to a BSL-4 unit.

The Biomedicum flow cytometry core facility (BFC) is a shared resource laboratory that will provide researchers with the capability of performing a wide range of flow cytometry experiments.





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It (Biomedicum) was finished ahead of the designated deadline and well below the budget – several hundred million crowns (SEK).

Matti Nikkola,
Senior Lecturer at Biomedicum, Karolinska Institutet.

Company Profile

C.F. Møller Architects is one of Scandinavia’s leading architectural firms, with 90 years of award-winning work in the Nordic region and worldwide. Every day we create architectural quality based on innovation, experience and Nordic values. This assures sustainable and aesthetic solutions with lasting value for clients, occupants and society.

A UNIQUE DESIGN APPROACH

Our design solutions are methodically and holistically created following a rigorous analysis of the local context. We look to set new global standards by fostering a design approach which uniquely integrates urban planning, landscape, architecture and design of specific building components.

We regard environmental concerns, resource-consciousness, healthy project finances, social responsibility and good craftsmanship as essential elements of our work. This ethos is fundamental to all our projects, a thread which runs from masterplanning to detail design.

Since our founding in Denmark in 1924, we have contributed significantly to the development of welfare societies in Scandinavia and the rest of the world. We are continuously recognised and awarded internationally for setting new architectural standards, due to our strong focus on the functional, artistic and social value of architecture.

Today C.F. Møller has app. 300 employees. We have offices in Aarhus, Copenhagen, Aalborg, Oslo, Stockholm, Malmö, London and Berlin.



C.F. Møller Architects is owned by a partner group consisting of Klaus Toustrup, Lone Wiggers, Christian Dahle, Lone Bendorff, Klavs Hyttel, Julian Weyer, Mads Mandrup Hansen, Michael Kruse and Mårten Leringe.

Core Values

VISION

Our vision is to improve life for people and planet.

MISSION

Our mission is to holistically create solid, quality solutions based on Nordic values adapted to future global challenges.

ASPIRATION

We aspire to be global influencers by caring for the local context based on innovation, quality and sustainability.

PROMISES

We promise longevity and clever solutions in everything we create by delivering design that can pass the test of time and serve both clients and users with great value from start to finish.

SPIRIT

Our company team spirit is based on simplicity, clarity, honesty, openness and passion.

VALUES

Our values are strongly focused on professionalism, credibility, quality, innovation, agility and loyalty.



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New, cutting-edge laboratory building to provide a unifying powerhouse for research at one of the world's leading medical universities - the Karolinska Institutet in Stockholm.

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