The LMB provides an unsurpassed environment for both new and established researchers. Our scientists are drawn from all over the world, creating a lively international community for the exchange of ideas and technical innovation. Many are inspired by the knowledge that discoveries made at the LMB have made a difference to the world, and will continue to do so.”

Jan Löwe, Director

Over 800 scientists and support staff work at the LMB, representing over 50 different nationalities and consisting of approximately:

- 50 Group Leaders
- 400 postdoctoral/support scientists
- 100 PhD students
- 200 support staff
- 70 scientists in the University of Cambridge Molecular Immunity Unit

The LMB’s origin dates back to 1947, when the MRC funded a unit aiming to determine the structure of proteins.

Work by LMB scientists has received numerous awards, including 12 Nobel prizes, for example:

Francis Crick and James Watson, 1962 - discovery of the structure of DNA

Richard Henderson, 2017 - development of electron cryo-microscopy

What do we do?

World-leading research dedicated to expanding our knowledge of important biological processes at the level of atoms, molecules, cells, and organisms

Tackle important, difficult, long-term, problems

Why do we do it?

To understand complex systems such as the immune system and the brain

To solve key problems in health and disease

LMB research greatly benefits the UK economy and has generated over £700 million in commercial income
A number of emerging areas of pioneering LMB research are set to benefit human health

**NEW APPROACH TO TREAT ASTHMA**
Work by Andrew McKenzie’s group identified a new immune cell type that controls the start of allergic asthma, providing a critical first step in developing new treatments.

**BODY CLOCKS AND WOUND HEALING**
John O’Neill’s group discovered that wounds incurred during the active phase of the circadian cycle (daytime for humans) heal more rapidly.

**USING “MINI-BRAINS” TO STUDY HUMAN BRAIN DEVELOPMENT**
Madeline Lancaster’s group aims to improve our understanding of disorders like autism, by studying cerebral organoids.

**INVESTIGATING THE IMMUNE RESPONSE**
Patrycja Kozik’s group is studying the processes behind T cell activation by dendritic cells - key in immune responses against pathogens and tumours.

**UNDERSTANDING AGEING**
Researchers in Rebecca Taylor’s group are investigating how and why misfolded proteins accumulate during ageing, which is important in many diseases.

**ABERRANT PROTEINS AND ALZHEIMER’S DISEASE**
Working together, Michel Goedert’s and Sjor Scheres’ groups have solved the structures of the abnormally folded proteins that are associated with disease.

**IMPROVED ANTIBIOTICS FROM RIBOSOME RESEARCH**
Work from Venki Ramakrishnan’s group helped to solve the structure of the ribosome and is informing work to develop new antibiotics.

**UNDERSTANDING AGEING**
Researchers in Rebecca Taylor’s group are investigating how and why misfolded proteins accumulate during ageing, which is important in many diseases.

**NEUROBIOLOGY**

**STRUCTURAL STUDIES**

**CELL BIOLOGY**

**PNAC**

**IMPRESSED**

**ABERRANT PROTEINS AND ALZHEIMER’S DISEASE**
Working together, Michel Goedert’s and Sjor Scheres’ groups have solved the structures of the abnormally folded proteins that are associated with disease.
Over 60 years of discoveries at the LMB

1953: Double-helical structure of DNA elucidated
1959: First atomic resolution map of a protein, myoglobin
1961: Demonstration of the triplet nature of the genetic code
1968: First 3D models of protein structures from electron microscopy
1975: Monoclonal antibody methodology invented
1977: Method for sequencing DNA developed
1986: C. elegans is the first animal to have its entire nervous system mapped
1988: First patient treated with humanised antibody, Campath-1H
1989: Forward movement
1990: Backward movement
1993: Sensory Neurons
1994: Command Interneurons
1995: Motor Neurons
2010: Discovered that antibodies fight viruses within infected cells
2017-2018: Structures of tau filaments from Alzheimer’s and Pick’s disease solved
1998: C. elegans is the first animal to have its genome sequenced
1997: Composition of Parkinson’s disease-associated lesions identified
2010: Discovered that antibodies fight viruses within infected cells
2017-2018: Structures of tau filaments from Alzheimer’s and Pick’s disease solved

The LMB and its scientists regularly participate in public events, such as the Cambridge Science Festival and the Royal Society Summer Exhibition

For more details of forthcoming activities see http://mrc.io/lmbevents

“For me, the best thing about the LMB is the collaborative ethos that surrounds the lab. I feel very lucky to be part of an institution with so many people willing to invest both time and effort into helping me achieve my goals.”

Alison Inglis, PhD student 2014-2018

“Being in the LMB is eccentric and prestigious. Since my first day I have felt that I should grasp every opportunity to challenge myself and to stretch my potential. Walking down the same hallways as several Nobel laureates and seeing the handwriting of Sydney Brenner on the wall have made me feel even more privileged to do science.”

Soudabeh Imanikia, MRC Career Development Fellow

“It’s the combination of stable long-term funding and technical expertise along with a collaborative spirit and a reputation for curiosity driven research that make the LMB a magnet for the world’s best talent”

Venki Ramakrishnan, Group Leader, winner of 2009 Nobel Prize for Chemistry