The Robert Koch Institute: one of the world's oldest biomedical institutes

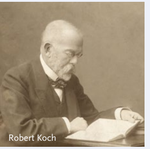

Staff members, 1920


1947


New laboratory building, 1980


BSL-4 laboratory


Health monitoring


Robert Koch

1891 On 1 July, the "Royal Prussian Institute for Infectious Diseases" takes up its work. Robert Koch heads the institute until 1904.

1900 Relocation to a new building on the Nordufer in Berlin-Wedding, still RKI headquarters to this day.

1905 Robert Koch is awarded the Nobel Prize in Medicine.

1910 Robert Koch dies and is laid to rest in a mausoleum at the institute.

1933 After the National Socialist takeover, Jewish scientists are forced to leave the institute (see erinnerungszeichen-rki.de/en). During the Third Reich, RKI is heavily involved in National Socialist strong-arm tactics. RKI's role under National Socialism has been deeply investigated in a research project.

1942 The institute becomes an independent Reich institute called the Robert Koch Institute. It now focuses on research into infectious diseases that threaten military striking power.

1945 Parts of the institute have been destroyed during the war. With the help of the Allies, work is resumed.

1952 RKI becomes part of the newly-founded Federal Health Office.

1960 The institute starts producing the only yellow fever vaccine licensed by the WHO in Germany. Production continues until 2002.

1978 A new laboratory building is inaugurated on the Nordufer, one of the most modern in Europe.

1982 When the first cases of AIDS occur in Germany, RKI establishes an AIDS register.

1990 After German reunification, various GDR authorities are integrated in RKI, including parts of the Institute for Experimental Epidemiology in Wernigerode in the Harz region. The Wernigerode site is still a branch of RKI.

1994 The Federal Health Office is dissolved. RKI merges with the AIDS Centre, which had been founded in 1988, and the Institute for Social Medicine and Epidemiology in Berlin-Tempelhof—the latter specialising in non-communicable diseases.

1998 RKI conducts its first comprehensive study on the state of health and health behaviour of adults in Germany.

2001 Protection against Infection Act (Infektionsschutzgesetz, IfSG) enters into force. The registering and control of infectious diseases are fundamentally modernised, RKI's responsibilities are extended.

2001 RKI becomes the central point in Germany for recognising and addressing bioterrorist risk situations.

2002 The institute acquires an additional site in Berlin-Wedding: Seestrasse.

2003 RKI introduces the KiGGS Study: for the first time, comprehensive data on the health situation of children and young people are collected nationwide.

2006 Together with the Federal Statistical Office, RKI is tasked with health reporting for Germany.

2007 RKI is officially charged with health monitoring. The institute thus continuously collects data on disease incidence and risk behaviour amongst all age groups of the population in Germany.

2008 The Bundestag decides to develop RKI into a modern public health institute ('RKI 2010'). Staffing numbers are increased.

2014 In West Africa, 50 members of RKI's staff help to contain the largest Ebola Virus Disease outbreak in history.

2015 A new office and laboratory building is inaugurated at the Seestrasse site, including a laboratory with the highest safety level (BSL-4).

2019 RKI gets its own Centre for International Health Protection.

2020 During the COVID-19 pandemic, RKI provides extensive situation assessments and recommendations.

2021 RKI gets its own Centre for Artificial Intelligence in Public Health Research located in Wildau.

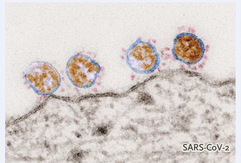
2023 More than 1,500 people from 50 nations with 90 different occupations are employed at RKI, half of them scientists.

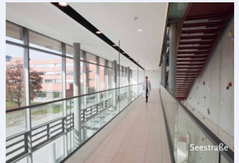

Nordufer, 1900


Producing vaccine against spotted fever, 1940s


Yellow fever laboratory, 1960


Microbial strain collection, Wernigerode


SARS-CoV-2


Seestraße

- More on the institute's history: www.rki.de/history
- From 1891 to today – all presidents of RKI: www.rki.de/presidents

Robert Koch's legacy: museum and mausoleum

Robert Koch's scientific legacy, which includes 1,100 letters, certificates, manuscripts and notes, microscope slides, lab equipment, numerous photos and Koch's scientific library, is preserved at the Robert Koch Institute.

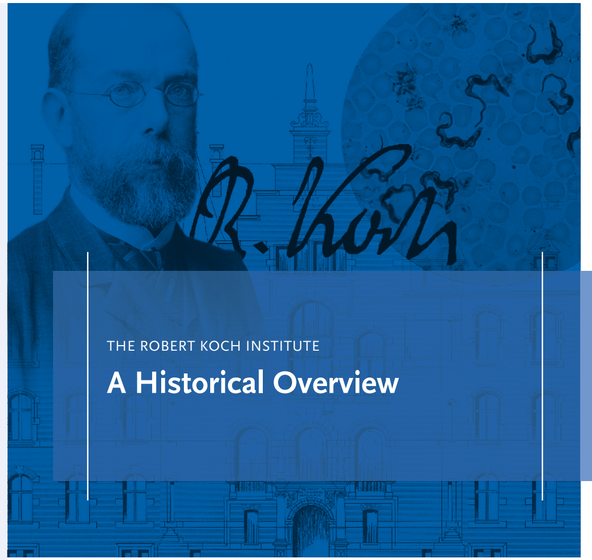

Museum at RKI

Some items can be seen in RKI's Museum at the Nordufer site—such as an incubator, scientific drawings and a steamer in which culture media were sterilised by jets of steam up to 120° Celsius. Re-designed in 2017, the exhibition showcases how the institute investigates risks and protection factors for the health of the population in the 21st century as well as the importance and current relevance of the discoveries made by Robert Koch and his students.

The mausoleum in which Robert Koch's ashes were laid to rest can also be visited.

- Opening hours and guided tours: www.rki.de/museum-en

ROBERT KOCH INSTITUT



THE ROBERT KOCH INSTITUTE

A Historical Overview

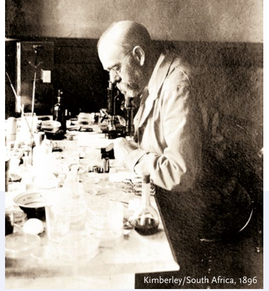
Robert Koch: A life for research

In the 19th century, diseases like tuberculosis, diphtheria, wound infections and cholera were the most common cause of death worldwide. In Germany alone, hundreds of thousands of people died of them every year. This was the time when the doctor, Robert Koch, discovered that diseases of this kind were caused by tiny organisms—bacteria. He and his colleagues in Berlin managed to identify many pathogens and infection paths and thus pave the way for therapies and preventive measures. Together with Louis Pasteur, Robert Koch is now thought of as the pioneer of microbiology.

» *Only when it was known what the pathogens themselves were, was it possible to fight them directly.«*

As a young doctor in 1876, Robert Koch managed for the first time to prove that micro-organisms caused infectious diseases—the test object was the anthrax pathogen. In 1878, he discovered the bacteria that lead to wound infections. And in 1882, he identified the tuberculosis pathogen for

German East Africa, 1906



Kimberley/South Africa, 1896

which he was awarded the Nobel Prize in Medicine in 1905. All this was thanks to new scientific methods, such as systematic animal experiments, the cultivation of micro-organisms on solid culture media, microphotography and dyeing techniques, which made it possible not only to trace the pathogens but also to visualise them. Scientists from all over the world travelled to Berlin to learn about "Koch's methods". In 1891, Koch was given his own research institute, the Royal Prussian Institute for Infectious Diseases, in Berlin-Wedding. But he did not manage to fulfil his primary objective of finding a remedy for or vaccine against tuberculosis: "tuberculin", the drug he developed, was a failure.

Egypt, 1896

Koch and Kitasato in Japan, 1908

In the course of his career, Robert Koch investigated and fought infectious diseases worldwide, including malaria in Italy and New Guinea, plague in India, rinderpest and East Coast fever in South Africa—and cholera in Egypt and India. In the 19th century, the "Asiatic hydra" had repeatedly broken out in Germany, too, especially in the big city slums.

» *I consider it my duty to go and work where I can be of greatest use to science.«*

In 1892, Robert Koch helped to contain a serious cholera outbreak in Hamburg—not least because he insisted drinking water should be boiled. In 1906/1907, Koch and colleagues travelled to German East Africa to investigate sleeping sickness. They tested an arsenic-based drug on patients, but many of them went blind and some even died. Koch's final expedition was thus also the darkest chapter of his career. His last big journey in 1908 took him, amongst other places, to Japan. He died during a subsequent stay at a sanatorium in Baden-Baden in 1910. The urn containing his ashes was laid to rest in a specially constructed mausoleum at his institute.

- More about Robert Koch: www.rki.de/robertkoch-en
- Koch's work, journeys and congresses: www.rki.de/rk-table-en
- Literature: www.rki.de/rk-literature

In Koch's footsteps in Berlin

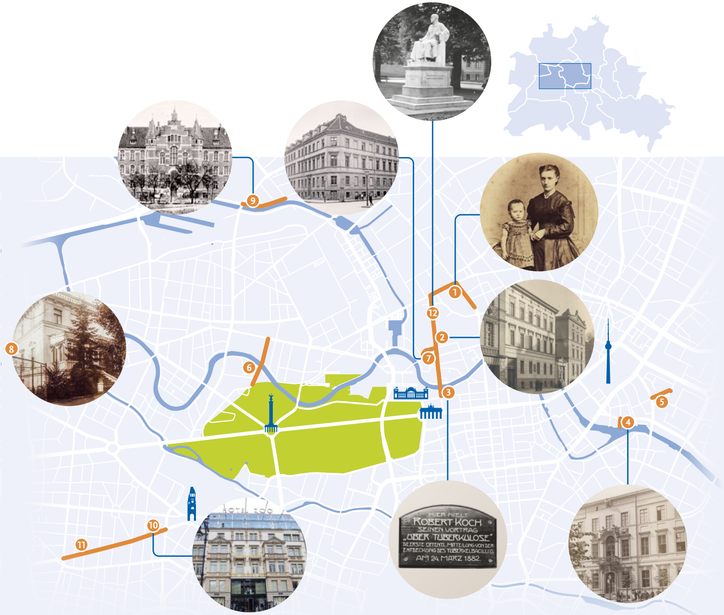
In summer 1880, Robert Koch, his wife Emmy and their daughter Gertrud moved into their first home in **Chausseestraße 118** 1 in Berlin-Mitte. At the time, it was an industrial area, but only a short walk from Koch's workplace, the **Kaiserliche Gesundheitsamt (Imperial Health Authority) in Luisenstraße 57** 2. It was here that he discovered the tuberculosis pathogen in 1882. Today, the building houses, amongst others, the Institute of Sexology and Sexual Medicine that is part of Berlin's Charité.

On 24 March 1882, Koch held his lecture on the "Aetiology of Tuberculosis", which gained him world fame, at the Physiological Society of Berlin in **Dorotheenstraße 96** 3. This is now the Robert Koch Forum that belongs to the Berlin universities and Charité.

In April 1885, Koch became the first professor in the new **Hygiene Institute** at Friedrich-Wilhelms-Universität in **Klosterstraße 36** 4. Here he developed the ineffective remedy, tuberculin. From 1882 to 1891, the family lived in **Magazinstraße 16** 5, later in **Brückenallee 39** 6.

The **Royal Prussian Institute for Infectious Diseases** opened its doors on 1 July 1891, initially in a converted residential building at the corner of **Charité-/Schumannstraße** 7. Due to its shape it was known as the "triangle".

Together with his second wife, Hedwig, Robert Koch moved into a house in **Ahornallee 30** 8 in Berlin-Westend in 1894. Looking back in 1928, Hedwig wrote that Koch "was happy as a sandboy



lying in the sun between grass and flowers on the flat roof of the house, playing the zither or (...) frightening the greedy sparrows that plundered the fruit trees in the garden with a fowling gun."

In 1900, the Royal Prussian Institute for Infectious Diseases relocated to a new building, partly designed by Koch, at **Nordufer 20** 9 in Berlin-Wedding, which is still the headquarters of the Robert Koch Institute to this day.

From 1901 to 1904, Robert and Hedwig Koch resided at **Kurfürstendamm 25** 10, today's Hotel Zoo Berlin. From 1904 until his death, they lived at **Kurfürstendamm 52** 11.

On 27 May 1916, a monument was unveiled to the citizen of honour at Luisenplatz in Mitte—known since 1932 as **Robert-Koch-Platz** 12.

Robert Koch's students

Emil von Behring, immunologist and serologist. Developed antisera against diphtheria and tetanus; founded the Behring-Werke in Marburg. Nobel Prize in Medicine, 1901.

Paul Ehrlich, doctor and researcher. Founder of chemotherapy; developed drugs against syphilis and an antiserum against diphtheria. Nobel Prize in Medicine, 1908. The Paul-Ehrlich-Institut, the Federal Institute for Vaccines and Biomedicines, was named after him.

Paul Frosch, bacteriologist and co-founder of virology. Isolated the foot and mouth disease pathogen and fought malaria, plague, typhus.

Georg Gaffky, bacteriologist and hygienist. Cultivated, amongst others, typhus pathogens in pure cultures. As a close colleague of Robert Koch, he contributed to Koch's discoveries.

Shibasaburo Kitasato, bacteriologist. Investigated tetanus and diphtheria, demonstrated the efficacy of antisera. Founder of today's Kitasato Institute in Tokyo.

Friedrich Loeffler, physician. Discovered the glanders and diphtheria pathogens, investigated foot and mouth disease. Co-founder of virology and founder of today's Friedrich Loeffler Institute for Animal Health on Riems Island.

Bernhard Nocht, harbour physician and tropical medicine specialist. Founder of today's Bernhard Nocht Institute for Tropical Medicine. Helped to contain the cholera epidemic in Hamburg in 1892.

Lydia Rabinowitsch-Kempner, microbiologist. Demonstrated, amongst other things, that tubercle bacteria are transmitted in cow's milk. First woman in Berlin to hold the title of professor.

1890