

# HRH The Princess Royal opens new UKHSA lab at Colindale

The National Collection of Type Cultures (NCTC) is one of the largest and oldest collections in the world of bacterial samples, housing over 6,000 strains made up of over 900 bacterial species. They are used by scientists and researchers around the world to develop new medicines and understand more about new infectious diseases.

The collection includes samples from Alexander Fleming and from the site of the battle of the Somme. The Princess Royal officially opened the new facility named in honour of the NCTC's first Deputy Curator, Mabel Rhodes.

The NCTC Mabel Rhodes Centenary Laboratory is a molecular biology laboratory. It will be utilised mainly to extract and analyse DNA from NCTC strains and will be extremely beneficial to the collection.

The NCTC is one of 4 culture collections operated by the UK Health Security Agency (UKHSA), along with National Collection of Pathogenic Viruses (with 500 viruses, including Zika virus), the National Collection of Pathogenic Fungi (including 4,000 fungi of clinical significance) and the European Collection of Cell Cultures (containing animal and human cell lines).

Together, these collections form one of the world's largest biological resources, and they are uniquely placed to draw on a wealth of expertise throughout the organisation to ensure that the collections can continue to further scientific advancement.

Dr Jenny Harries, Chief Executive of the UK Health Security Agency, said:

It was a privilege to welcome The Princess Royal to UKHSA today and officially open the Mabel Rhodes lab which will be used to learn even more about the DNA from the NCTC strains we have.

The bacterial samples we hold are responsible for many monumental scientific discoveries over the past century such as the addition of the Oxford Staphylococcus strain which helped develop penicillin, the first modern antibiotic.

The work we undertook has resulted in penicillin still being used to this day. It is still widely used as an antibiotic sensitive control, which helps to ensure that penicillin can fight the bacteria it is being taken for.

Dr Sarah Alexander, NCTC Curator said:

It was an honour to commemorate the centenary of the NCTC by

hosting a visit from The Princess Royal. NCTC is one of the oldest bacterial strain collections in the world and having the opportunity to showcase its historical legacy alongside the opening of our new state of the art laboratory was magnificent.

Mabel Rhodes was the NCTC's first deputy curator. The collection grew during Mabel's tenure, where she focused on bacteria of medical importance and oversaw the first freeze drying experiments on strains, a technique still used today. Rhodes' scientific paper in 1950 gave an early insight into the survival of freeze-dried bacterial strains. These studies, along with countless other contributions, ensures the NCTC's relevance, survival, and value to the scientific community to this day.

The most notable 21st century development came from a collaboration between NCTC and the Wellcome Sanger Institute, working to decode and understand the DNA of more than 3,000 bacteria strains between 2013 and 2018. The long-read, whole genome sequencing work enabled scientists to better understand deadly diseases and learn how they become resistant to antibiotics.

The publicly available genomic maps can lead to the development of new diagnostic tests, vaccines or treatments and will help researchers for years to come.

The future looks bright as we move into NCTC's second century of providing vital information for scientific studies and developments that will help us all stay healthier and safer.