

The Netherlands Centre for Electron Nanoscopy (NeCEN) has two of the most advanced cryo-transmission electron microscopes (cryo-TEMs) worldwide. The centre is specialized in using the technology for biological research. With our technology and expertise, we support research of research institutes and companies.

Partners and grants

Eleven partners collaborated in order to realize the centre. They were aware that joining forces was the best way to make a major step forward in cryo-TEM. The partners are supported by local and national governments and companies and successfully applied for two grants.

Meeting place for science and industry

The centre is housed by the Cell Observatory, a multidisciplinary meeting place for scientists of Universiteit Leiden. NeCEN will be a meeting place for Dutch and European scientists from research institutes and companies.

Benefits for biomedical research

The new technology can increase efficiency of biomedical research by enabling researchers to visualize incredibly small details of living systems. This may lead to improved diagnostic methods, new drug delivery methods and new products for prevention against diseases.

More information

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Two microscopes, two specialties

One of the microscopes is optimized for visualizing cellular structures in 3D with nanometer precision. The other microscope is equipped for analyzing single particles with even more detail (atoms of a virus have been visualized with comparable technology). It takes many months to build and test such advanced microscopes. Therefore scientists will not have full access before 2012.

Microscope facts

In cryo-TEM, samples are fixed by rapid freezing. This technique allows scientists to study protein structures in a near-native state. The microscopes are almost 4 m tall and are custom made by FEI. They can be controlled remotely by scientists all over the world.

Shorter R&D projects

The microscopes of NeCEN can shorten many research and development projects. This reduces costs and test subjects while providing very detailed information on the functions of compounds.

Potential for new technologies

The new microscopes open doors to developing new technologies based on cryo-transmission electron microscopy.

Netherlands Centre for Electron Nanoscopy

NeCEN is supported by:



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