The new supercomputer will bring Denmark at the forefront of research within lifescience with the enormous volumes of biological health care data.

"The supercomputer will benefit health research in Denmark and ultimately patients. The computer can for example help us to develop drugs that can be tailored to the individual patient. It can make treatment more effective, because we can give patients just the medicine that is right for them," said Health Minister Nick Haekkerup (S) who believes that the supercomputer will strengthen Denmark’s position in health research.

"In the future, each patient will be characterized by means of DNA data describing our heredity, and how it changes through life. It requires a powerful computer to get something out of these data and in particular to get them integrated with the health data which Denmark has been outstanding to collect over many years. With our new supercomputer it will be possible to analyze data much faster than before, so that findings will benefit the individual patient in time," says Søren Brunak, professor and center director at DTU.

DNA-based diagnostics could potentially help change the way you treat diseases. The dosage of medication can be much better tailored to specific DNA structures and allows the supercomputer to help make the medication more effective and based on individuals.
BOOM IN GROWTH & JOBS

With the acquisition of the new supercomputer is simultaneously also created a unique platform for growth and new jobs in the pharmaceutical and life sciences industry. At DTU, it is estimated that up to 500 users from around the world will use the supercomputer and its processing power. Peter Longreen, senior consultant at DTU and one of the leaders behind the supercomputer, expects that supercomputing on new data in the long term will help create many new jobs in the health sector.

“When supercomputers like this is really moving into the health sector, we expect that it will create many new jobs. It will be a mixture of job functions across IT and health. Software solutions are typically developed in private, but partnerships with the public sector will also gain ground,” explains Peter Longreen.

At the University of Copenhagen is also looking favorably on collaboration between the many parties that will enable both the research community, health and business can benefit greatly from the computer:

“In our training of candidates and ph.d.’s in bioinformatics, it is important for us to have access to powerful computers. The graduates will also have the opportunity to use the computer when they later get a job in a hospital or in a business. In this way, the entire environment for good,” says Anders Krogh, Professor of Bioinformatics at the Department of Biology at the University of Copenhagen.

DeIC – Danish e-Infrastructure Cooperation – aims to support Denmark as e-Science nation through the delivery of e-Infrastructure for research and research-based teaching. Again, we are proud to be helping to finance the important project:

“The ability to use High Performance Computing is important for Danish research – not least in the Life Science area. From DeIC’s side, we are happy to help to support and coordinate a major national effort, and turn it into a facility for the benefit of all researchers in this important area,” says Børge Obel, Chairman of DeIC, Aarhus University.

Follow Assistant Professor in Bioinformatics Bent Petersen’s blog on DTU’s Computerome:

DeIC - Danish e-infrastructure Cooperation visits Brazil:
Read about DeIC’s visit to Brazil, where Computerome was calculating a huge dataset in only 10 days:
http://www.deic.dk/node/710

WATCH DeIC’s video about Computerome
DeIC has created a short video to introduce Computerome and the purposes behind the supercomputer. See the video here: http://www.deic.dk/node/620

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EMC Computer Systems A/S
Linde Allé 9A, 2850 Nærum
T: 7010 6878
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