



## Just a few steps from laboratory to clinic

2011

Cardiovascular Research Center at Copenhagen University Hospital, Gentofte, is striving to ensure the best treatment for its patients, as well as the best research and education for new cardiologists. Thanks to the close-knit relationship between research and clinical practice, it is possible to apply the latest knowledge from the laboratory extremely quickly to the clinical treatment of approximately 7000 patients each year, explains Professor Christian Torp-Pedersen from the University of Copenhagen.

### What is the objective of your work – and how do patients stand to benefit?

- We are working towards discovering better treatment for familiar and common cardiovascular diseases, with a view to improving the patient survival rate after cardiac arrest and to finding better medical treatment in the case of heart failure and atrial fibrillation as well as narrowing of the coronary arteries. Our overriding goal is to increase the patients' chances of survival and their quality of life.

### How is your work/cooperation structured and organised?

- At the Centre for Cardiovascular Diseases we carry out intensive medical research. We perform controlled, clinical examinations and epidemiological examinations; in other words, we examine the origins of the diseases and the associated risk factors. We work closely with partners not only from Denmark but from across the world, including other European countries and the United States. At the same time the Centre offers treatment, and our research is closely tied to our clinical practice. This means that we are in a position to speedily apply the new knowledge gained from our studies and put it into practice in the clinical treatment of the patients.

### What has been the Centre's greatest achievement in recent years?

- We have joined in and conducted a large number of projects in recent years, which has also led to international breakthroughs. For example, we carried out a study at the Centre showing that certain types of painkillers can be dangerous for heart patients. Similarly, we performed another study that found that certain medicine used for weight loss can also be unsafe for heart patients.

Patients with several different cardiovascular diseases are typically administered blood thinners; however, a study carried out at our Centre has found that blood thinners can cause general bleeding and thus be risky to the patients.

Finally, I would also like to mention a study conducted here at the Centre a couple of years ago that found that the vast majority of defibrillators in public areas had been placed in the wrong kinds of locations. To employ defibrillators sensibly, they ought to be placed where there are very large crowds, such as at the main train station, stadiums or airports. Prior to our study, defibrillators were typically to be found in company premises as reassurance for employees – whereas there was not a single apparatus to be found at the main train station.

### What do you hope will be the next step?

- Right now we are in the process of building up one of the world's largest databases to investigate genetics and heart diseases. The database stores patient blood and information. It is being developed in close cooperation with other hospitals in the Capital Region of Denmark – and we expect it to yield significant research results in the future.

### Why they received the award

The Cardiovascular Research Center at Gentofte is highly specialised and strives to ensure optimal treatment, optimal education and training and optimal research in order to spearhead the development and improvement of the treatment of heart disease.

Previous research from the unit has been instrumental in shaping some of the world's most important advances in the last 15 years within the treatment of conditions such as heart failure and coronary thrombosis.

The Department is able to translate the new knowledge gained from research into clinical practice. Consequently, the research flows into treatments and has an impact on clinical guidelines.

In addition to this ability to create synergies between recognised research and clinical practice, innovation is another area in which this environment of expertise excels and collaborates with business and industry both on a national and international scale. Active within development, the Department is exceptional in its level of cooperation with business and industry in connection with new treatments.

### Facts

The Cardiovascular Research Center is at Gentofte Hospital and has a staff of about 200 employees, of whom 42 work specifically within research. They treat over 7000 patients per year, in addition to approx. 12 500 outpatients.

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