

HEALTHCARE

 **NORWAY**

-YOUR PARTNER IN RESEARCH AND DEVELOPMENT





WHY CHOOSE NORWAY?

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- Unique and accessible health registries and biobanks 3
- A great location for clinical trials with a history of delivering on time and quality, a population that is willing to participate in trials and a systematic and transparent regulatory approval process 4
- A strong player in biomedicine with excellent academic research environments 5
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PHOTO: ISTOCK

A HEALTHCARE SYSTEM WITH GREAT OPPORTUNITIES FOR RESEARCH

The healthcare policy in Norway is controlled centrally and the government has the overall managerial and financial responsibility for the hospital sector. Most hospitals in Norway are public, funded and owned by the state. A small number of hospitals are

privately owned, but most of these are also funded through the public healthcare system. All Norwegian citizens have their own, unique personal identification number; this system creates unique opportunities for research on the Norwegian population.



PHOTO: HUNT

BIOBANKS AND HEALTH REGISTRIES - UNIQUE RESOURCES

Well in advance of others, Norway began prospective population screening in the 1970s to assess and improve the public health status of the nation. New technology ensures that the application of these biobanks and health registries steadily increases, and there is a large potential for research and innovation.

Test sampling and mapping of disease is among the most resource-intensive parts of modern biomedical research, and long-term work with biobanks and health registries has given Norway a competitive advantage internationally.

The screening has taken place in specific geographical regions, e.g. the Tromsø Study and the Health Survey of Nord-Trøndelag (HUNT). Oslo has also carried out a Mother and Child Cohort study involving nearly 300.000 individuals. The Norwegian biobanks are nationally coordinated through the Biobank Norway project, a national consortium representing all major population-based and clinic-based biobanks in Norway.

Increased competence in genetics, data management, high-throughput analytic approaches, automated technical solutions and ethical guidance has placed Norwegian epidemiology and biobanks in the international frontline of biobank research. Norwegian biobanks are increasingly contributing to a number of

cutting-edge international research projects within e.g. lung cancer, type 2 diabetes, atrial fibrillation and schizophrenia, and new projects are in the planning.

Two large research biobank centres have been established. Together the two centres store biological samples from more than 500.000 individuals, which correspond to about 10% of the Norwegian population. The data are linked using the 11-digit personal identification number that is issued to every Norwegian at birth. The company Lifandis (formerly HUNT Biosciences) has been established to make several of the registry and biobank resources commercially available.

The wealth of data that can be drawn from the health registries and biobanks provide unique information for performing clinical research in Norway and make the Norwegian patient material particularly well suited to be stratified for clinical trials with a narrow target population.

A GREAT ENVIRONMENT FOR CLINICAL TRIALS

- The willingness of the Norwegian population to participate in clinical trials is high (60-80%), making it easy to recruit and obtain consent from eligible study participants
- Established clinical trial networks and close collaboration with the other Scandinavian countries ensures increased patient access
- The personal identification number ensures that patients can be tracked throughout the study period, and few are lost to follow up, making Norway a great location for long-term studies
- Regulatory submission for clinical trials is transparent and within regulated timelines
- Ethics committee approval occurs through electronic submission to one address, and one committee approval covers the trial at all sites in Norway
- Norway has a history of delivering on time and with quality, and has outstanding ethical standards, reinforced by the professional CROs, the effective contract process and the competent investigators
- The public healthcare system invests in academic research and infrastructure, making sure that Norwegian hospitals include great clinical environments with top researchers and GCP-trained health professionals
- As much as 1 billion Euro is invested in health research each year, and the government is working to increase the investments in clinical research even further



PHOTO: OSLO CANCER CLUSTER/LINDA CARTRIDGE



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A STRONG PLAYER IN BIOMEDICINE

Biomedicine is Norway's strongest research field. About 60% of all Norwegian publications are within medicine, health and natural sciences. A number of international evaluations have highlighted the excellence of Norway's science and research, particularly in medical and environmental biotechnology and informatics.

A range of result-oriented governmental schemes to support and encourage research exist, including Norwegian Centres of Excellence (CoEs) and Centres for Research-Based Innovation. Out of the 21 CoEs currently in operation, eight are within life sciences. The purpose of the centres of research-based innovation, which are located in academic or research

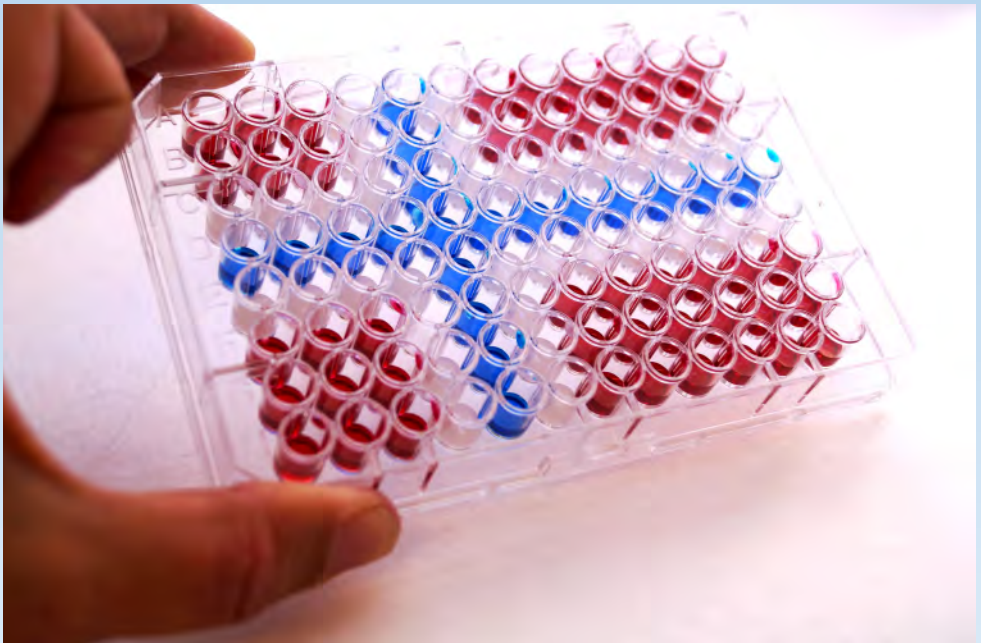
institutions, is to build up and strengthen Norwegian research groups that work in close collaboration with partners from innovative industry and innovative public enterprises. The centres are also open to and encourage participation from international companies. Out of the 21 centres, four are in life science or medicine.

THE NORWEGIAN BIOMEDICAL MODEL IS WELL ADAPTED FOR DELIVERING THE PHARMACEUTICALS OF THE FUTURE

The development of new technologies for drugs and diagnostics in Norway starts mainly in academia, through research at hospitals or universities.

Scientists at Norwegian hospitals and universities often split their time between research and clinical practice. The Norwegian workforce is highly educated, and Norway benefits from a high proportion of international scientists. Most Norwegian research groups and companies collaborate internationally, e.g. through EU programs like Horizon 2020, in which

Norway is eligible to receive funding. Since the turn of the millennium the commercialization process from hospitals and universities has been professionalized. Technology Transfer Offices (TTOs) assist innovators and enterprises in the commercialization process and offer a professional framework for partnering with international companies.



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