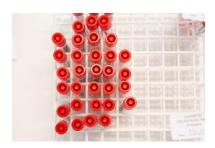




PLAN FOR RESEARCH AND INNOVATION 2023-2026







Adapted after translation by ChatGPT

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Purpose

This plan aims to concretize the goals outlined in the hospital's Development Plan 2022-2035, particularly Goal 1 - to be a leader in patient care, medical development, research, and education. Simultaneously, the plan is based on national guidelines from the mandate document from the Ministry of Health and Care Services, the management document from Western Norway Regional Health Authority (Helse Vest RHF), the National Budget, the Health and Care 21 strategy, the National Action Plan for Clinical Studies 2021-2025, the Strategic Action Plan 2021-2023 for the National Service Environment for Medical Quality Registries, reports from the Auditor General, and several other national guidelines.

Five focus areas for research and innovation are presented in the plan: 1) Organization of Research, 2) The Clinical Trials Hospital, 3) More and Better Use of Health Data and Biobanks, 4) Innovation, and 5) Collaboration and Infrastructure for Research and Innovation. The plan was approved by the Board of Directors on March 28, 2023, and is valid for the period 2023-2026.

Introduction

Research is one of the four main tasks of the hospital, along with patient care, education of healthcare professionals, and training of patients and their families. The primary goal of research and innovation activities at the hospital is to improve healthcare services for the population.

We are the country's second-largest university hospital, with a comprehensive focus on medical and healthcare research and innovation. We have several specialized research environments at a high international level, and we believe that the breadth of research is also important. As a regional hospital with many specialized functions and high expertise, we have a particular responsibility for conducting research-based patient care, education, and training of healthcare professionals. This sub-plan is ambitious and aims to lay the foundation for strengthening and improving research and innovation at the hospital from 2023 to 2026.

The demand for healthcare services is expected to increase in the future. The hospital will face challenges posed by changing demographics and disease burden, new treatment possibilities, high demands and expectations, competition for healthcare personnel, and tighter financial constraints. In the face of these challenges, investment in research and innovation will be crucial to developing sustainable services with less personnel use, prioritizing effectively, and adopting new and better methods for the benefit of patients. Success requires time and resources and effective collaboration between leaders, employees, occupational health services, representatives, patients, and their families.

Research and innovation at the hospital should be clinically oriented and contribute to providing patients with a safe, good, and outstanding healthcare service. Our patients should have access to experimental treatment through clinical trials. Offering new methods and innovations in healthcare, including pharmaceuticals, medical equipment, diagnostics, and patient pathways, will be motivating for healthcare providers while developing competence and interest in research and innovation throughout the organization.

Research and innovation are important for all clinical disciplines at the hospital. Within mental disorders, substance abuse disorders, and cancer, there may be specific needs for research efforts. These areas often involve patient groups with complex medical conditions requiring services from multiple units and various types of healthcare professionals at the hospital, emphasizing the

significant need for new knowledge to provide better treatment. Haukeland University Hospital is a significant research and development player, and collaboration with other healthcare institutions, the university and college sector, and the business community is crucial for generating new knowledge for the benefit of healthcare services.

Focus Areas for the Plan

1. Organization of Research

Research must be organized to benefit patients and clinical practices in both somatic and mental health. As the institution responsible for research, the hospital is accountable for ensuring that medical and healthcare research activities are well-organized, taking into consideration ethical, medical, healthcare, scientific, and privacy considerations.

Research at the hospital should have academic breadth, while also investing in the best research environments. Academic breadth for the hospital means there should be research activity in all areas where the hospital provides healthcare services. Fundamental research is also essential for the hospital. Building strong research environments takes time, and they are often dependent on a few individuals as driving forces. If these driving forces disappear, it can be challenging to maintain the excellent environment that was established. Therefore, the hospital must contribute to ensuring that the best research environments receive necessary support for their sustainability.

Clinical units are the ones most familiar with the research needs within their areas of expertise. They have insights into what should be researched and what is achievable with the resources at their disposal. Central to this plan is that all clinical units at the hospital should define research goalsfor their areas of expertise. The goals should align with the unit's needs and capacity, as well asnational guidelines. The measures to reach these goals will vary from unit to unit, but all units shoulddevelop a plan for how they intend to achieve their goals.

Most clinical units cannot conduct research solely with their own resources. In clinical trials involving the testing of drugs, medical equipment, technology, or diagnostic, treatment, and rehabilitation methods on humans, interdisciplinary collaboration is often necessary, involving laboratory services and medical imaging, along with various other specialties. Additionally, there is a need for systematic collection, organization, and analysis of health data, requiring good and functional infrastructure, analytical capacity, and expertise. This necessitates the organization of research across clinical units and support units.

The responsibility for planning, conducting, and concluding research in the units in accordance with legal requirements and governing documentation lies within the leadership of the level 2 unit where the project leader, as per the Health Research Act, is employed. Before a research project can commence, the level 2 leader or the leader delegated with the task must assess whether it is possible to conduct the research as planned, taking into account patient base, expertise, infrastructure, and capacity, and ensure that resources are made available if necessary. Throughout the process, leadership should ensure that research procedures are followed. The Research and Development Department should ensure that governing documentation is up-to-date and accessible, supporting leaders and researchers by providing guidance on research protocols and study designs, research grant applications, budgeting, collaboration agreements, contract negotiations with industry, various approval processes, and monitoring in clinical trials and other areas.

Further, the hospital must engage in systematic competence development for all those contributing to medical and healthcare research. There is a need for targeted training and courses in clinical trials, especially for study nurses, but also for other professional groups participating in clinical trials, such as radiographers, pharmacists, and biomedical engineers.

The hospital will promote an inclusive research culture, allocating time and resources to research and ensuring that research is valued. Leadership can build a strong research culture by focusing on research and facilitating competence building and career paths in research. Employees involved in research are crucial for creating an inclusive research culture where research work is discussed and shared. This is important for building strong and resilient research environments capable of conducting both researcher-initiated and commissioned studies.

Medical and healthcare research depend on trust from society and from patients and their families who participate in research. It is essential to adhere to research ethical norms, laws, and regulations, and the hospital must foster a culture of research ethical reflections. Additionally, the hospital must have robust systems and infrastructure for privacy and the handling of health data in research.

Research projects must ensure that the foundation for informed consent is in place for individual patients and their families participating in the research. Participants must receive oral and written information, time, and the opportunity to ask questions and evaluate their participation compared to other treatment options.

There should be user involvement in all medical and healthcare research at the hospital, and we should have good guidelines and tools for such involvement. User involvement can benefit the research itself and provide users access to new knowledge within the research field.

Priorities and Measures 2023-2026

The level 2 clinical units at the hospital are most knowledgeable about the academic knowledge needs. All units should set research goals for their areas of expertise and develop plans to achieve these goals. Units should have robust procedures for the implementation and internal control of research. The Research and Development Department should formulate and maintain enterprise-wide governing documents and competence plans for research activities and provide advice and leadership support.

To achieve this, the following measures will be implemented:

- T1.1 All level 2 units should develop research plans and measures for their areas of expertise.
- T1.2 All level 2 units should have procedures ensuring that the hospital's frameworks for research projects are implemented.
- T1.3 All leaders should contribute to an inclusive research culture where employees can actively participate.
- T1.4 The hospital should have effective systems for the administration and financial management of research projects.
- T1.5 The hospital should establish and operate a network for leadership support in research (research coordinators, research administrative support).

2. Clinical Trials Hospital

The concept of the Clinical Trials Hospital is a crucial initiative to integrate research and innovation intopatient care throughout the entire hospital. The Clinical Trials Hospital should serve as a framework andfacilitation mechanism, aiming to stimulate experimental treatment and innovations by making iteasier to conduct clinical trials and testing innovations in a safe and effective manner, benefitingpatients, healthcare providers, and researchers.

The National Action Plan for Clinical Studies aims for five percent of all patients to be offered participation in a clinical study by 2026, with a 50 percent increase in the number of clinical studies. This increase should come through collaboration with the business sector and as independent initiatives from research environments. To succeed, competence and capacity for clinical trials must increase both in clinical units and support units. The hospital has developed competence plans for research to ensure awareness of medical and healthcare research and enhance knowledge about conducting clinical trials.

The Clinical Trials Hospital encompasses all types of clinical trials, including the testing of drugs, medical equipment, technology, or diagnostic, treatment, and rehabilitation methods on humans, including the use of machine learning and artificial intelligence in various clinical contexts. It will also have especially equipped facilities for advanced studies involving, for example, genetically modified organisms or radioisotopes. The Clinical Trials Hospital should have competent personnel, technological solutions, digitalized processes, and other infrastructure, including suitable clinical areas.

The execution of clinical trials requires collaboration between various units in the hospital, especially for laboratory sciences and medical imaging, but also for specialized examinations at clinical units such as the Heart, Eye, and Lung Departments. In such projects, there must be a well-organized division of responsibilities and tasks, resource allocation, and logistics between the unit that owns the project and the collaborating units. If there is a need to increase capacity in radiology, it may be relevant to request that the Western Norway Regional Health Authority includes research objectives in procurement agreements with private suppliers.

Although clinical trials should be integrated into daily clinical practice, and most clinical trials should be conducted there, it may be challenging for studies with high risks. This is particularly true for studies testing entirely new drugs in the early phases, which may demand high levels of expertise and logistics. In these studies, researchers can seek assistance from the Clinical Trials Unit for Adults and the Clinical Trials Unit for Children. These research units have experienced study nurses and facilities suitable for studies with many procedures and prolonged study visits.

The Central Block is undergoing renovations, and on the second floor near the outpatient clinics, there will be the co-location of the Clinical Trials Unit for Adults with the Intervention Center. This will be a crucial infrastructure that will make it easier to test new methods. When the Children and Youth Clinic, the Clinical Trials Unit for Children, and the Women's Clinic move together with Child and Adolescent Mental Health Services and surgical services for children in the Glass Blocks, new opportunities for interdisciplinary clinical research will arise. The newly established laboratory for Ex-vivo cell production in the Laboratory Clinic can produce advanced therapies for use in clinical trials, such as cell therapy or stem cells, becoming a vital infrastructure in the Clinical Trials Hospital.

Studies involving a particularly large number of participants, such as population studies, may be challenging to conduct in daily clinical practice. In such cases, assistance can be sought from the Research Unit for Health Surveys, operated in collaboration between the hospital and the University of Bergen in suitable facilities at Årstadvollen. The unit has study nurses and technicians providing

services for clinical studies with lower risks, where proximity to specialized hospital functions is not required. Examples of such studies could include nutrition studies and studies in physiotherapy.

To attract more industry-funded clinical trials to Norway, the government has established NorTrials. Six NorTrials centers with different thematic areas have been set up, one at each university hospital. Haukeland University Hospital, in this initiative, is responsible for the NorTrials Brain center, working towards a national increase in clinical trials in the field of brain health.

The Technology Plan describes how the hospital will utilize technological solutions, digitization, and other infrastructure going forward. With technological advancements and other measures, more clinical trials could be decentralized, allowing patients to be included and monitored at their nearest hospital or even from home. This will reduce the need for study visits to the regional hospital.

The Research and Development Department provides research support by facilitating clinical trials, including Good Clinical Practice (GCP) courses, data handling tools, quality control (monitoring), and assistance with negotiations, agreements, budgets, and applications. The hospital leads the national research support network NorCRIN. Through NorCRIN, many nurses have completed a national course in study nursing. Additionally, the hospital has established a scholarship program for practice in study nursing at the research units. The goal is to provide study nurses with practical experience in handling particularly demanding clinical trials. After completing the internship, study nurses bring their expertise back to their jobs in the clinical units.

Priorities and Measures 2023-2026

Investment in clinical trials must be integrated into the plans of each level 2 unit. Increased capacity and competence in clinics are prerequisites for a successful initiative, and all clinical units will need doctors and study nurses to conduct studies. Leaders should allocate competence requirements and competence plans to personnel involved in clinical trials. Furthermore, training study nurses to meet increased needs is necessary. It is also essential to secure sufficient capacity and good logistics for laboratory sciences, medical imaging, and other units that support clinical studies. The Clinical Trials Hospital concept encompasses these initiatives.

To achieve this, the following measures should be implemented:

- T2.1: All clinical level 2 units should integrate clinical trials into their research plans and follow the requirements outlined in the action plan for clinical trials.
- T2.2: All clinical level 2 units should have access to study nurses who can support clinical trials.
- T2.3: The hospital should ensure that research competence plans are pedagogically tailored to different groups, updated, and accessible for allocation in the Competence Portal, with a particular emphasis on training study nurses.
- T2.4: All clinical level 2 units should allocate competence plans for research to relevant leaders and employees involved in clinical research, ensuring that the plans are followed.
- T2.5: Revenues from clinical trials commissioned by private entities should be used to build competence and capacity for investigator-initiated studies.

3. Enhanced and Better Use of Health Data and Biobanks

Norway possesses extensive and historically complete health registers of international stature. It has central health registers, medical quality registers, data from population-based health surveys and screening programs, and many biobanks. Clinical studies, observational studies, and quality projects can all use information from health registers and biological material from biobanks. The reuse of health data and biological material can provide quicker answers to health research questions and a basis for innovations with minimal intervention.

As of the end of 2022, Norway has 59 national medical quality registers, and Haukeland University Hospital is the data controller or data manager for 18 of these. The quality registers are organized in clinical units and receive earmarked support for operations and development from the Western Norway Regional Health Authority (Helse Vest RHF). Additionally, several local and regional registers have been established.

National medical quality registers contain structured information about patients within various disease groups or treatment types. These registers have scientifically based criteria for inclusion and classification of data on diagnosis, treatment, and follow-up, as well as the outcomes of diseases and treatments, including patient-reported data. Almost all relevant patients are included, and they are followed over an extended period. Hence, quality registers have large amounts of unselected patient information, suitable for clarifying results of diseases and treatments through clinical studies, observational studies, quality projects, and innovations. Register data can also be used as a basis for clinical studies, including registry-based randomized clinical trials (R-RCTs). R-RCTs can provide high quality at lower costs because the relevant patient population is well-defined, and the work of data collection and preparation has already been performed. Some registers have biobanks associated with them, making the data even more valuable.

Haukeland University Hospital has established a comprehensive and robust infrastructure for biobanks, including the investment in Biobank Haukeland in collaboration with the University of Bergen. Furthermore, the hospital is in the process of establishing the Norwegian Diabetes Biobank and actively participates in the Biobank Norway 4 project funded by the Research Council of Norway. Emphasizing the establishment and use of general research biobanks for various research projects will be relevant moving forward, see focus area 5.

Data from quality registers should be used for the purpose in quality projects, contributing to improving the quality of healthcare services. For these projects to be as beneficial as possible, it is essential that they are published, preferably through peer review in scientific journals. Several journals have developed new guidelines for publishing quality projects; an example is SQUIRE.

Not all patient groups and treatment types should or can have their own quality registers. Routine data from patient journal systems can be studied to analyze the course and results of treatment for these and all other patient groups. The internal treatment-oriented register in the hospital, the Pathway Database, can also be used for quality improvement and operational management. In research, one can also combine data from journal systems and quality registers.

To increase the number of research, quality, and innovation projects based on data from registers and biobanks, it is important to ensure good competence in data analysis. Linking data from various health registers and biobanks in research projects can increase the value of both data and biological material. Furthermore, it is crucial to make it easy for researchers and other data users to access data safely and predictably, and that they can understand the context in which data is collected. This

means that the hospital must have good advisory services, routines and systems for access to data, as well as a secure infrastructure for data management.

Priorities and Measures 2023-2026

To achieve the goals of increased and improved use of health data and biobanks, the hospital must better facilitate the utilization of such sources in research, quality improvement, and innovation. This responsibility primarily lies with the units overseeing registers and biobanks, working in collaboration with the Research and Development Department.

The following measures will be initiated to achieve this:

- T3.1: All level 2 units should encourage the use of health data and biobanks when applying for research funds and various seed funds, etc.
- T3.2: The hospital should develop robust systems for publishing and maintaining metadata (data about data) in health registers and biobanks. Guidelines should be established on how researchers and other data users can access data and materials securely.
- T3.3: The hospital should facilitate training in the use of register data for research, for example, through courses and workshops.
- T3.4: The hospital should promote awareness of publication requirements for quality projects.
- T3.5: The hospital should facilitate the use of routine data and data from the Pathway Database in medical and health research.

By implementing these measures, the hospital aims to create an environment that supports and encourages researchers and other stakeholders to effectively utilize health data and biobanks in their work. This includes providing the necessary infrastructure, guidelines, and training to ensure the safe and predictable handling of data. The emphasis is on fostering a culture that values and actively promotes the use of these valuable resources for the advancement of medical and health knowledge, ultimately benefiting patient care and outcomes.

4. Innovation

The hospital needs innovation to address the challenges outlined in the introduction. The development of knowledge and technology makes it possible to create a sustainable healthcare service that can meet the needs of the population. The hospital will focus on innovation to improve the quality of healthcare services, resource utilization, and collaboration among stakeholders.

Effective innovation systems contribute to reducing the distance from knowledge to services and products that can be used in healthcare. It is necessary to assess the entire innovation process in the innovation chain to succeed with innovation. One must consider whether the innovation represents something new, useful, and can be utilized. There is a need for frameworks and tools to develop a culture of innovation. Meeting places, networks (Eitri, Alrek, and other clusters), and the use of the hospital's tool for registering and following up on ideas (Idemottaket.no) are good examples of this.

The hospital will particularly focus on service innovation, aiming to provide new and improved services through new methodologies, processes, and work methods. These innovations may contribute to building the healthcare services of the future, such as digital healthcare services and

home hospitals. Dissemination, management, and further development of service innovation are crucial for others to adopt what we develop and renew. This requires close collaboration on innovation with other hospitals in the region, hospital pharmacies, Health West ICT, external technology suppliers, primary healthcare services, and the surrounding municipalities.

Product innovation involves innovations with commercial potential, and the primary responsibility for developing these innovations has been transferred to Vestlandets Innovasjonsselskap AS (VIS), the hospital's entity for the commercialization of innovations, which we jointly own with the University of Bergen and others. In this process, it is crucial to establish routines and frameworks for rapid development, allowing us to benefit from innovations in clinical practice.

Research-based innovation enhances competitiveness and value creation. Collaboration with the business sector is essential for developing new services and products, as well as finding solutions to problems and bottlenecks in healthcare, known as needs-driven innovation. It is crucial to utilize the mechanisms available both nationally and internationally for funding and assistance. The Testbed Hospital (see focus area 2) is a fundamental concept for succeeding in testing and implementing innovations, both our own and those developed by others.

Priorities and measures 2023-2026

The hospital aims to establish a strong culture of innovation so that innovation becomes a natural part of the work. At the same time, the hospital must facilitate a faster adoption of innovative innovations that can provide better and more efficient healthcare services. The hospital seeks more dialogue and collaboration with the business sector and other partners to compete successfully for funding from the Research Council of Norway and the EU. To achieve these goals, the hospital must increase competence in innovation throughout the organization.

To achieve this, the following measures will be implemented:

- T4.1: The hospital will build an innovation culture through communication, network establishment, and the use and visibility of available tools.
- T4.2: The hospital, together with other hospitals in the region, hospital pharmacies,
 Health West ICT, external technology suppliers, primary healthcare services, and the
 surrounding municipalities, will focus on service innovations with new and improved use
 of digital solutions.
- T4.3: The hospital will further develop excellent services for innovation activities with assistance from VIS, such as strategies for intellectual property rights for commercial innovation projects.
- T4.4: The hospital will use and further develop meeting places for innovation, such as Eitri Medical Incubator and Alrek Health Cluster.
- T4.5: All level 2 units will have a plan for improvements that can become innovations in services.

5. Collaboration and Infrastructure for Research and Innovation

Collaboration across disciplines, units, and institutions makes it easier to succeed in research and innovation. It requires ambition and must be developed over time through collaboration with leading researchers at other institutions.

The hospital has initiated the process of seeking accreditation as a Comprehensive Cancer Center (CCC) to establish an organization with requirements for high quality at every stage: from diagnosis through treatment and rehabilitation – including research and innovation at all levels. In this effort, all units dealing with cancer patients will increase collaboration and focus more on quality, research, and innovation to become a strong cancer hospital both nationally and internationally.

For Haukeland University Hospital, the University of Bergen (UiB) and the Western Norway University of Applied Sciences (HVL) are crucial collaborators. The hospital has bilateral collaboration forums with UiB, HVL, and VID Scientific College, where top management meets to discuss matters of overarching and strategic importance for collaboration.

For medical and health research, collaboration with the Faculty of Medicine at the University of Bergen is particularly important. Here, we can contribute to the entire value chain from biomedical research to clinical trials. The hospital and the university have many areas of shared expertise and resources, often with employees in combined positions, as well as in joint projects, research centers, and infrastructure. The hospital and the Western Norway University of Applied Sciences also share areas of expertise and resources, including machine learning and artificial intelligence, and the scope of collaboration is increasing.

In collaboration with external partners in clinical research involving our patients as participants, the hospital has a special responsibility for patient care and ensuring that research projects adhere to research ethical norms, laws, and regulations. The hospital then becomes the research responsible institution, preferably with the project leader employed by the hospital.

Together with the University of Bergen, the hospital has established Eitri Medical Incubator, primarily designed as a platform for startups and entrepreneurs originating from both institutions, but also to develop close collaboration with the business sector and other innovation environments. For the hospital, the incubator should also be an ecosystem for innovation where employees can participate and develop innovative ideas. Alrek Health Cluster is another important collaboration arena, especially in research and innovation involving primary healthcare.

As a regional hospital, we have a special responsibility for collaboration with other health trusts in the region and with the university and university college sector, including through the Regional Cooperation Body for Research and Innovation. The hospital also actively participates in national collaboration with other health regions, including through the Regional Health Trusts' strategy committee for research and the National Collaboration Group for Research with the universities.

The establishment of centers and larger research projects with a national focus is fundamental to increasing the quality and scope of clinical treatment studies. The Research Council of Norway's major programs and initiatives for strong research environments through the Research Center for Clinical Treatment (FKB) and the Center for Research-Driven Innovation (SFI) are effective tools for improving existing treatment routines and developing new ones.

International collaboration highlights the quality of research and innovation through the ability to work with high-quality professional communities and to compete for external funding. Participation in international cooperation is a crucial factor in recruiting highly qualified personnel to the hospital.

The EU's Horizon Europe program focuses on health in its research program, and cancer is one of five selected thematic priorities cutting across all themes. Collaboration through international projects contributes to strengthening and further developing outstanding and innovative research and innovation environments at the hospital, and employees are actively involved in EU funding applications.

The results of research and innovation activities should lead to new knowledge that improves healthcare services for patients. High publication activity in scientific journals through international collaboration is crucial for the hospital and demonstrates collaboration with various stakeholders. Publications should be accessible through open access in line with national guidelines.

Having robust infrastructure and utilizing available infrastructure effectively is critical for seamless collaboration and high-quality research and innovation. The hospital has established several major infrastructures for research and innovation, characterized by the goal of providing access to as many researchers and research environments as possible.

The hospital often collaborates with the University of Bergen and others in the establishment and operation of larger infrastructures and core facilities for the benefit of academic communities. Some of the hospital's infrastructures, such as Biobank Norway, are established in collaboration with other research institutions and will be of great value for interdisciplinary research. The proton therapy centers to be established at Haukeland University Hospital and Oslo University Hospital are also national research infrastructures that will hold significant value for research in various fields and will have a considerable impact on patient care.

Selected Central Infrastructure at Haukeland University Hospital

- 1. Biobank Haukeland
 - Infrastructure providing a comprehensive solution for biobanking (advisory, planning, practical handling of collection, preparation, storage, and withdrawal of human biological material).
 - Established: 2019
- 2. Ex Vivo Laboratory
 - Cleanroom laboratory for cell production and manufacturing of cell products. Produces advanced medical therapy. Part of the Mohn Research Center for Regenerative Medicine.
 - Established: 2022
- 3. Research PACS (Picture Archiving and Communication System)
 - Archive and communication system for research images used in research projects.
 - Established: 2019
- 4. Forhelse Research Center for Digital Mental Health Services
 - Established: 2020
- 5. InPreD Haukeland
 - Infrastructure for precision diagnostics a national initiative for diagnostics in advanced molecular analyses.
 - Established: 2021

6. Clinical Trials Unit

- Physical post with doctors and research nurses, including a unit for children and youth and a unit for adults.
- Established: 2006/2007

7. Mohn Cancer Research Laboratory

- Translational cancer research laboratory at the intersection of basic/molecular biology and clinical research.
- Established: 2009

8. MMIV - Mohn Medical Imaging and Visualization Centre

- Competence center for linking medical imaging, visualization, image interpretation, and in vivo research.
- Established: 2017

9. NorCRIN - National Clinical Research Infrastructure

- National research support infrastructure for facilitating clinical studies. Secretariat located at HUS from 2022.
- Established: 2020

10. Proton Center

- Facility for particle radiation therapy, mainly proton therapy for cancer patients. With a particle accelerator, separate treatment rooms, and research rooms.
- Estimated Establishment: 2024

11. Center for Nuclear Medicine and PET

- Radiochemical laboratory with a particle accelerator for the production of radionuclides.
- Established: 2010

Priorities and Measures 2023-2026

Haukeland University Hospital aims to be a leading player in research and innovation. Through effective collaboration, research, and innovation should naturally be integrated into all levels of the organization. Strengthening collaboration by securing more funding from the Norwegian Research Council and the EU is a key focus. The hospital aspires to establish and lead several major initiatives such as Research Center for Clinical Treatment, Center for Research-Driven Innovation, and Center for Excellent Research, aiming to be an attractive partner in all types of research and innovation projects.

To achieve these goals, the following measures will be implemented:

- T5.1 Comprehensive Cancer Center Accreditation:
- The hospital will apply for accreditation as a Comprehensive Cancer Center to improve service quality and facilitate more research and innovation in the field of oncology.
- T5.2 Funding for Major Research Centers:

- The hospital, in collaboration with close partners, will apply for funding for larger research centers.
- T5.3 Active Participation in Research and Innovation Projects:
- The hospital will be an active participant, either as a coordinator or partner, in research and innovation projects with support from external sources.
- T5.4 National Research Infrastructure for Proton Therapy:
- The hospital will work towards establishing a robust national research infrastructure for proton therapy.
- T5.5 Infrastructure Development Advocacy:
- The hospital will drive the development and use of infrastructure in research projects.

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