UNIVERSITETET I BERGEN
Forskningsadministrativ avdeling

Norges forskningsråd

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Deres ref	Vår ref	Dato
	2008/5052-ANNFJ	08.10.2014

Nasjonal satsing på forskningsinfrastruktur (INFRASTRUKTUR)- Universitetet i Bergens prioritering av søknader

Vi refererer til Forskningsrådets *INFRASTRUKTUR* utlysning med søknadsfrist 15. oktober 2014. Universitetet i Bergen bekrefter med dette at det stiller seg bak 8 søknader med UiB som vertsinstitusjon. Fire ulike fakultet er vert for de åtte søknadene, og fakultetene har, etter ønske fra universitetsledelsen, rangert sine søknader *(Tabell 1).* UiB stiller seg bak rangeringen, men har etter nøye vurdering, valgt og ikke rangere prosjektene utover dette.

Tabell 1: Fakultetene har foretatt følgende rangering av egne søknader:

Fakultet	Prosjektnavn	Rangering	ESFRI
MN	European Plate Observing System (EPOS)-Norway	1	EPOS
	EMBRC Norway - The Norwegian node of the European Marine Biological Resource Centre	2	EMBRC
	FARLAB (Facility for Advanced isotope Research); an advanced laboratory for reconstructing and monitoring weather, climate, and biogeochemical cycling.	3	-
	Norwegian Marine Robotics Facility – II: Autonomous Underwater Vehicle (AUV) for Marine Research	4	-
MOF	Norwegian Mass Cytometri Infrastructure for Single Cell Analysis in Immunology and Cancer Biology – CELLMASS	1	-
	Norwegian Mouse Phenogenomics Centre (NMPC): a Norwegian Strategy for Animal Model Research	2	INFRAFRONTIER
PSYK	Translational sleep and chronobiological laboratory	1	-
SV	The Norwegian Opinion Lab: An advanced digital data-generating infrastructure for the social sciences and multi-disciplinary research	1	-

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UiB er også partner i søknader som koordineres av andre institusjoner. UiB stiller seg fullt bak alle og bekrefter at de forpliktelser som ligger til UiB vil bli fulgt opp ved eventuell innvilgelse.

Tabell 2: Søknader som koordineres ved andre institusjoner og der UiB er partner

Prosjektnavn	**Vertsinstitusjon**
Enabling LHC Physics at Extreme Collision Rates (NorLHC)	**UiO**
LIDAR Windscanner	**SINTEF**
Euro-BioImaging Norwegian Molecular Imaging Node	**NTNU**
Nasjonalt Infrastruktur for FiskehelseSTudier" (NIFST)	**HI**
NORCRYST - Norwegian Macromolecular Crystallography Consortium	**UiT**
Unmanned surfac vehicle infrastructure (USVI)	**CMR**
The Norwegian Primary Care Research Network	**UNI**
National Consortium for Sequencing and Personalized Medicine	**Oslo universitetssykehus**
SIOS	**UNIS**

UiB er i tillegg partner i 6 investeringsklare prosjekter på *Norsk veikart for forskningsinfrastruktur 2014*[1] (Tabell 3). UiB stiller seg fullt bak alle 6 og ønsker fortsatt at de skal delta i konkurransen om finansiering. UiB stiller seg også bak søknader som representerer oppgraderinger av veikartsprosjekt som er under etablering/drift (som Biobank Norway, NorStore og Notur).

Tabell 3: Investeringsklare søknader på veikartet som støttes av UiB

Prosjektnavn	**Vertsinstitusjon**	**Partnere**
AQUAFEED-Aquafeed Technology Centre	**Nofima**	UiB, UNI, University of Nottingham
EATRIS* Centre Norway – A Norwegian Node for the European Advanced Translational Research Infrastructure in Medicine	**UiO**	UiB, NTNU, UiT, Oslo Universitetssykehus, St. Olavs hospital, Haukeland universitetssykehus og Universitetssykehuset Nord-Norge.
ICOS*-Integrated Carbon Observation System	**Uni Research**	NILU, Bioforsk, UiB, NIVA, NINA, IMR, UMB, CICERO og ALOMAR)
LoVe-Lofoten-Vesterålen Cabled Observatory	**HI**	(Forsvarets forskningsinstitutt, CMR, UiB, Uni Research, UiT, NERSC, SINTEF IKT, Statoil og NCS SubSea, som er en klynge med rundt hundre bedrifter og organisasjoner med virksomhet knyttet til undersjøisk industri
NALMIN-Norwegian Advanced Microscopy Imaging Network	**UiO**	UiB, NTNU, UMB og Oslo Universitetssykehus)
NOR-OPENSCREEN* – the Norwegian EU-OPENSCREEN Node	**UiO**	UiT, SINTEF, UiB, EU-OPENSCREEN)

*ESFRI

[1] http://www.forskningsradet.no/prognett-infrastruktur/Artikkel/Samlet_oversikt_over_veikartprosjekter/1253995493903

Alle søknader er forankret i fakultetenes og UiBs forskningsstrategi. Å oppnå økte ressurser til vitenskapelig utstyr og annen forskningsinfrastruktur, er nedfelt i UiB sin strategi. Samtidig anerkjenner UiB nødvendighetene av å utvikle storskala infrastruktur i nært samarbeid med eksterne partnere og Norges forskningsråd.

Kort omtale av søknadene som koordineres av UIB (i alfabetisk rekkefølge):

1. EMBRC Norway - The Norwegian node of the European Marine Biological Resource Centre

Project manager: Daniel Chourrout, Sars International Centre for Marine Molecular Biology

EMBRC Norway will serve as a national platform to facilitate a broad spectrum of marine biological research conducted by scientists from the academic and private sector in Norway. The facilities and services provided by EMBRC Norway will enable Norwegian and international researchers to take advantage of the opportunities provided by the diversity of marine life for new discoveries in basic and applied research, and to meet the scientific challenges posed by environmental changes. As part of the ESFRI project European Marine Biological Resource Centre, EMBRC Norway will promote the scientific interaction and exchange with the marine biology research community across Europe and improve the international visibility of Norwegian research. In Norway, basic marine biological research is a central element of the national research strategy while applied marine biological research, mainly related to aquaculture, has high economic impact. The quality of the marine stations is central to the research and innovation in both areas and it is the goal of EMBRC Norway to improve this quality.

2. European Plate Observing System (EPOS)-Norway

Project manager: Kuvvet Atakan, Department of Earth Science

“The goal of EPOS is to promote and make possible innovative approaches for a better understanding of the physical processes controlling earthquakes, volcanic eruptions, unrest episodes and tsunamis as well as those driving tectonics and Earth surface dynamics. Integration of the existing national and trans-national RIs will increase access and use of the multidisciplinary data recorded by the solid Earth monitoring networks, acquired in laboratory experiments and/or produced by computational simulations. Establishment of EPOS will foster worldwide interoperability in Earth Sciences and provide services to a broad community of users” http://www.epos-eu.org/ One of the main objective of the Norwegian Node (EPOS-Norway) will be to integrate all the multidisciplinary solid Earth data into a single e-infrastructure. This will be combined with significant development of processing, visualization and modelling tools to allow Earth scientists to benefit from the variety of data sets in solving complex problems associated with the earth's deformation. There is an urgent need for improved observational capacity in the Arctic and the proposal therefore has an important component addressing this through new instruments to be placed in selected areas in the Arctic.

3. FARLAB (Facility for Advanced isotope Research); an advanced laboratory for reconstructing and monitoring weather, climate, and biogeochemical cycling.

Project Manager: Ulysses Ninnemann, Department of Earth Science

Norway has developed internationally leading research in the field of (paleo)climate through the Bjerknes Centre for Climate Research (BCCR) (awarded as National Centre of Excellence from 2002 through 2012) together with strong climate and paleoclimate groups throughout Norway.

- The stable isotope laboratory at UiB was a founding laboratory of BCCR and remains a cornerstone for paleoclimatic, oceanographic, geobiological (CGB) and carbon cycling (GFI/UNI/SKD) research within Norway.
- The recent development of 1) new methodologies (clumped isotopes) provides previously unobtainable data on past temperatures and water cycling and 2) new technologies (laser spectroscopy) allows unprecedented spatial and temporal coverage of water isotope monitoring through field based analyses. Both techniques provide crucial data for model validation (global climate models as well as weather prediction models).
- We propose a new isotope facility for these and other techniques not yet available in Norway but that have broad potential user groups and applications—bringing Norway to the forefront of isotope geochemistry. In addition, the facility will take an internationally leading role in improving and expanding the applicability these emerging techniques through method development for minimizing sample requirements (clumped isotopes) and improving the calibration of off-the-shelf spectrometers.

4. Norwegian Marine Robotics Facility – II: Autonomous Underwater Vehicle (AUV) for Marine Research

Project Manager: Rolf-Birger Pedersen, Centre for Geobiology

In this infrastructure project we apply for an autonomous underwater vehicle (AUV) that is capable of diving to 6000 m and travel more than 500 km underwater. It will carry a range of acoustic, physical and chemical sensors that provide data of importance to all the marine sciences. Leading Norwegian research institutions in marine science and marine technology join forces in this project. We do this because we are convinced that AUV's with capabilities beyond the present state-of–the-art will have a national importance and will have significant impact on: 1) frontier research; 2) marine value creation; and 3) marine management and monitoring. Around this infrastructure we also link three centres of excellence at different institutions. We expect that the collaborations that will be developed around this infrastructure will generate synergies and result in new collaborations across institutional and disciplinary boundaries. An exciting perspective related to the new infrastructure is linked to the extended range of the coming generations of AUVs. This it is one of a few emerging technologies that has the potential to provide a wealth of new data in a cost-effective way, and further development of the technology can change the way marine science and monitoring is being performed. The vision of the project is to spearhead this process.

5. Norwegian Mass Cytometry Infrastructure for Single Cell Analysis in Immunology and Cancer biology – CELLMASS

Project manager: Bjørn Tore Gjertsen, Department of Clinical Science

Single cell analysis is critical for understanding aging, immunity and cancer. CELLMASS aims to provide state-of-the-art multi-parametric single-cell analysis, based upon the novel mass cytometry, to investigators from all sectors across Norway. CELLMASS will establish novel capacities for drug screening, biomarker development, patient profiling and time-course analysis, leveraging national efforts in “Bioprospecting”, Chemical Biology, clinical translation of biomedical research as well as initiatives to strengthen Norwegian biotechnology. The CELLMASS infrastructure will be distributed over four strategic sites in Norway, harboring world-class research and innovative environments within the fields of cancer and immunology research. It will take advantage of established organizational structures, advanced competence in flow cytometry and a centralized data analysis and service platform. Alliances with pan-European infrastructures and a competitive R&D portfolio will provide Norway with a strategically important position in the full development of a highly advanced life science technology.

6. Norwegian Mouse Phenogenomics Centre (NMPC): a Norwegian Strategy for Animal Model Research

Project manager: Elon Donald Gullberg, The Department of Biomedicine

This proposal aims at correcting a fundamental weakness in biomedical science in Norway, namely the lack of a national strategy for work with genetically modified (GM) mouse models. With the availability of new techniques to generate advanced genetic manipulation in mice there is an increased demand to offer good facilities to analyze and utilize the possibilities that new animal models offer for biomedical research.

We outline a strategy whereby Norway will be represented in the ESFRI Research Infrastructure (RI) program Infrafrontier and thus will be able to take advantage of recent developments in the animal model field. We also outline the organization of national phenotyping centres with a focus on increasing competence around using GM mice as animal models.

7. The Norwegian Opinion Lab: An advanced digital data-generating infrastructure for the social sciences and multi-disciplinary research

Project manager: Elisabeth Ivarsflaten, Department of Comparative Politics

Large parts of the social sciences are becoming increasingly similar to the natural sciences in their need for large-scale collaboration among researchers of diverse specialties, data-collection infrastructures, and methodological and digital competences. We propose to build an advanced data collection environment—including a gold-standard population representative research-purpose internet panel and an active lab facility—that will create maximal opportunities for scientific innovation and collaboration in social science and multi-disciplinary research.

The proposed state-of-the art facilities take advantage of changes in technology and research methodology that combine to bring laboratory research and survey studies ever closer together. The result is a vibrant emerging multi-disciplinary research field including psychologists, economists, political scientists, sociologists, linguists, public health researchers, and media and communications scholars that take a new look at almost every aspect of individual preferences, attitudes, and causality in societal and political processes.

Such an integrated, internationally linked and university-led set of facilities will fill important gaps in Norwegian social science infrastructure and generate new knowledge on important and prioritized research themes.

8. Translational sleep and chronobiological laboratory

Project manager: Ståle Pallesen, Department of Psychosocial Science

Sleep is vital for optimal development, health and the ability to function. Thus research on the negative consequences of poor sleep, identification of factors that can impair sleep and studies on how best to intervene to improve sleep and treat sleep disorders are strongly warranted. Unfortunately, no national research infrastructure related to sleep exists. With the current application we aim to seek funding for the establishment of a national sleep laboratory for translational sleep research. The new research infrastructure entails both basic and human equipment. Much of the equipment will be portable, allowing for multicentre studies and an optimal geographical spread. The new infrastructure comprises among others the world's first national polysomnography registry. Linkage of sleep data to other registry data, studies of the effects of season on sleep and studies of shift work in special settings (e.g., offshore) are other examples of sleep research of which we have unique opportunities to conduct in Norway. The planned national infrastructure is directly in line with the strategy plan of The Faculty of Psychology that emphasizes research on health, education and working life.

UiB står til disposisjon dersom Forskningsrådet ønsker ytterligere informasjon om søknadene til INFRASTRUKTUR

Vennlig hilsen

Dag Rune Olsen
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Dokumentet er elektronisk godkjent og har derfor ingen håndskrevne signaturer.

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