CENTRE FOR DIGITAL LIFE NORWAY

What is the Centre for Digital Life Norway?

The Centre for Digital Life Norway (DLN) is a national centre for biotechnology research, education and innovation, established in 2016. DLN is composed of a portfolio of academic biotechnology projects led by universities and research institutes all over the country, connected together by a multi-site competence hub and research school that facilitate transdisciplinary collaboration and training.

DLN's vision is open science and convergence of biotechnology and life sciences with computer science, engineering, mathematics, physics, and statistics as well as with social sciences and the humanities. The research projects in the centre combine biotechnology with digital technology in health, aquaculture, agriculture, and industrial biotechnology.

At the heart of DLN is synergizing different ways of addressing the same problems within digital biotechnology and stimulating deep collaborations that go beyond traditional disciplinary approaches. We work towards building a culture for innovative thinking by connecting society, academia, and industry and by training a new generation of transdisciplinary life scientists.

Supporting academic digital biotechnology

Member projects have access to support from the dedicated DLN Competence Hub that provides guidance and resources for cross-disciplinary collaboration; data and models; commercialisation, innovation and industry collaboration; responsible research and innovation; communication; and education, training and career development.

Affiliated researchers may also apply for support for cross-project activities, training, events, innovation, data management, the DLN Industry Internship program, and annual awards recognizing research excellence. The Digital Life Norway Research School offers a year-round calendar of courses and events that cater to the unique needs of today's emerging biotechnology researchers.

In addition, the Research Council of Norway-funded "Roadmap for Academic Research-Intensive Innovation" is a a strategic initiative at the Centre to identify gaps in the biotech innovation ecosystem in Norway and test out potential solutions together with DLN projects.

Transforming biotechnology
The overall goal of the centre is to transform research, innovation and training in Norwegian biotechnology to foster transdisciplinary collaboration and contribute to sustainable value creation for Norwegian society.

DLN is an open centre!
Want to join DLN? Young researchers can apply to join the DLN Research School, and we welcome new projects to join the Centre. Scan the QR code and find more details on our webpage.
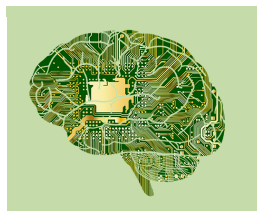
| Data & models | Communication | Innovation and industry collaboration | Responsible research and innovation | Education, training and career development |

The research projects in the centre combine biotechnology with digital technology in health, aquaculture, agriculture, and industrial biotechnology. The centre has more than 40 biotechnology projects led by universities and research institutes all over the country.

*NanoAI
Nanoscale artificial intelligence in microscopy and nanoscopy for life sciences (*NanoAI)
UiT

nanoRIP
Combining optical and mathematical systems to create a better nanoscope
UiT

DigiBiotics
Digital discovery of antimicrobial molecules from marine Artic resources with reduced risk of triggering resistance
UiT

SOLIS
Development of Real Volumetric Microscopy through Single Objective Light-Sheet Imaging System (SOLIS)
UiT

A Norwegian Earth BioGenome Project: the initial launch phase (EBP-Nor)
Sequencing Life for the Future of Life
UiO

Calinhib
Calcification inhibition – development of pharmacological treatment of calcification of heart valves and blood vessels
UiO

BEDPAN
Developing an environmentally friendly, low-cost method for making palladium (Pd) nanoparticles
UiO

FINALphagy
Final act of autophagy symphony: Whole organism orchestration of autophagy termination
UiO
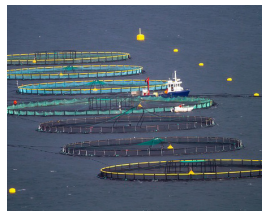
SmartSoil
Better soil health with digital diagnostic tools
UiO

PerCaThe
Personalised cancer therapy
UiO

DigiBrain
From genes to brain function in health and disease
UiO

BioZEment 2.0
Systems analysis and fundamental control of bacterial processes in the production of bio-concrete for construction purposes
UiO

AIRDEM and AI-Mind
Assessment of individual risk of dementia in epilepsy: multimodal brain-based precision prognostics and AI for dementia prevention
OUS

BigInsight
Big insight from big data
UiO & OUS

CellFit
T-cell immunotherapy manufacturing for cancer treatment
OUS

PINpOINT
Screening of cancer drug sensitivity data to predict cancer therapies.
OUS

EV-LiquidBiopsy
Categorising cancer through biomarkers in extracellular vesicles (EV)
OUS

DigiSal
Digital Salmon – from a reactive to a pre-emptive research strategy in aquaculture
NMBU

EcoGene
Biological, ecological and economic implications of gene editing in animal production
NMBU

OXYMOD
Optimized oxidative enzyme systems for efficient conversion of lignocellulose to valuable products
NMBU

INBioPharm
There is an urgent need to develop new drugs to combat antibiotic resistance. The solution can be surprisingly close, in microorganisms living in the Trondheim fjord
SINTEF

Cell4Chem
Engineering microbial communities for the conversion of lignocellulose into medium-chain carboxylates
NTNU

Listening to the patients
Listening to their gut to improve the lives of people with type I diabetes
NTNU

PROVIZ
Developing AI-based software to identify prostate cancer in MR images
NTNU

AUROMEGA
Microbial production of omega-3 fatty acids – a model based approach
NTNU

DIAP – Double Intraperitoneal Artificial Pancreas
An easier life with diabetes
NTNU

DrugLogics and PRESORT
Using computer modelling to find the best drug combination for each cancer patient
NTNU

Lab-on-a-chip
Biophotonic sensor platform for diagnostics
NTNU

ProstOmics
"Tissue is the issue": a multi-omics approach to improve prostate cancer diagnosis
NTNU

Res Publica
Responsibility, practice and the public good across Digital Life
NTNU

RESPOND3
Responsible early digital drug discovery – using machine learning to tackle a computational bottleneck in the drug discovery and development process
UiB

Future antibiotics
To discover and optimize new antibiotics
UiB

AHA!
Adaptive Heuristics and Architecture
UiB

AML_PM
Acute Myeloid Leukaemia by Personalised Medicine – improved treatments of acute myeloid leukaemias by personalised medicine
UiB

CCBIO
Centre for Cancer Biomarkers
UiB

ParkOme
A database to understand Parkinson's disease
UiB

LiceVault
Implementing a model organism for studying vault function and application as smart adjuvant for fish vaccination.
UiB

dCod 1.0
Decoding the systems toxicology of Atlantic cod
UiB

MedimML
Computational Medical Imaging and Machine Learning – developing machine learning and deep learning models that can analyze medical images and image-related data
UiB

MEDIATE
Improved monitoring and treatment of neurometabolic disorders
UiB

Wastewater-AMR
Spread of Antimicrobial Resistance in Wastewater Treatment Plants
UiS

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www.digitallifenorway.org