INSTITUTE FOR CANCER RESEARCH

ANNUAL REPORT 2021

EXCELLENCE IN FIGHTING CANCER

Oslo University Hospital

HELSE SØR-ØST

UiO : University of Oslo

“Uniting biological and medical research to cure cancer”

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The photographic theme of this year’s Annual Report is Humans at ICR.
- The most important part of ICR is by far its human resources and our collective competence.

PAPER: 150/300 Profimatt
CIRCULATION: 800

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Dedicated to Cancer Research

I am happy to present our Annual Report for 2021. With less text than before we think it effectively communicates the key features of what we do. The twelve key topics of the report encapsulate the work and output from our research organisation, the Institute of Cancer Research (ICR). With outstanding research, the ICR should also excel in recruitment, training and career development, translation and innovation, dissemination and public outreach, and in collaboration in Norway and abroad (all covered in the following chapters). In addition, members of the institute at work are presented, and the report also features the architecture of the wonderful building that houses the ICR.

One aspect of the present report is that we now visualize that in addition to the 6 research departments, the 24 research groups and 6 core facility units, the ICR has a whole layer of scientifically independent project groups (31 on total) within the research groups bringing the number of PIs to well over 50 on total (chapter 4). In the same spirit, you can read about our efforts in training and career development in chapter 11.

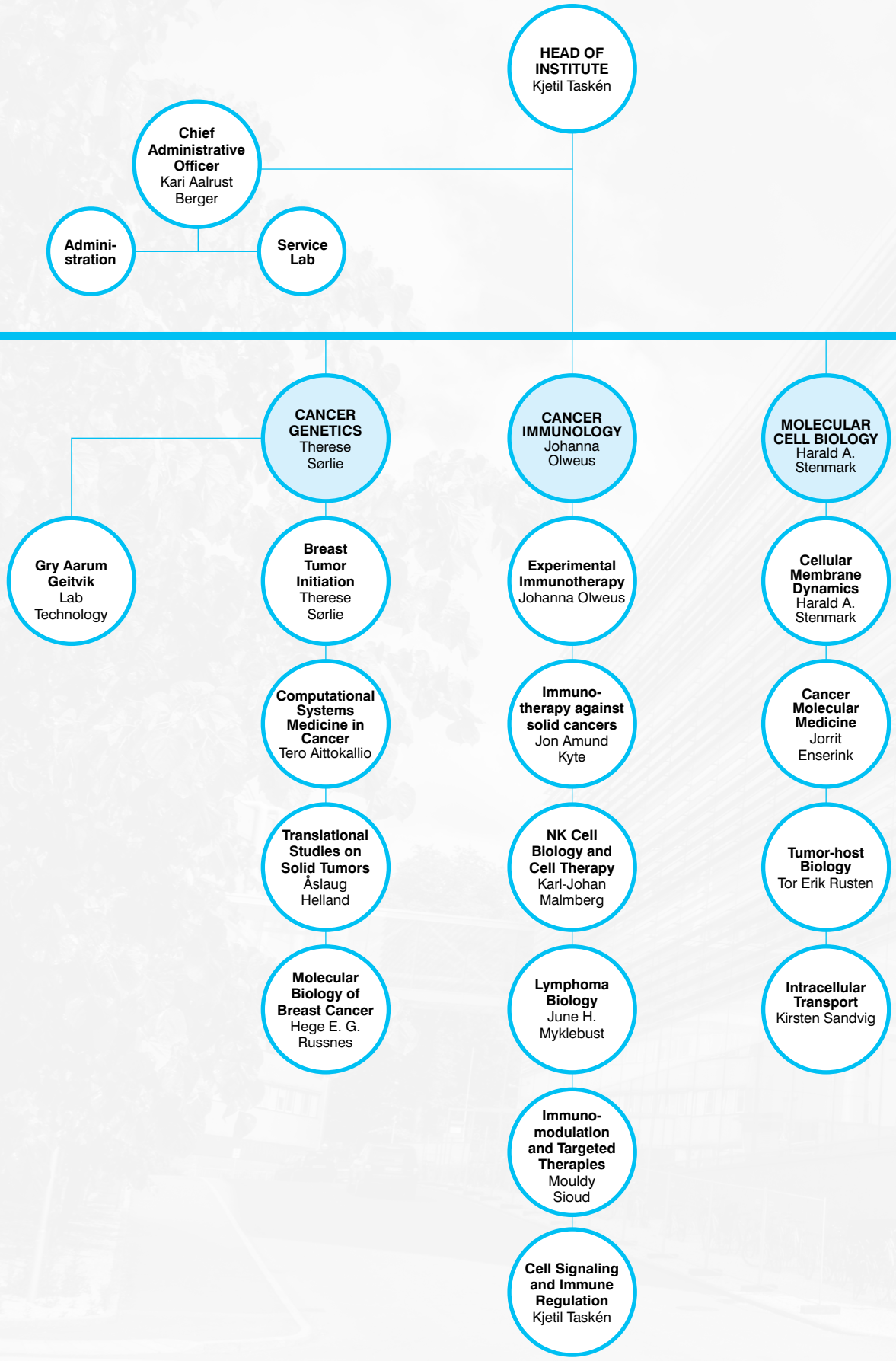
I encourage you to go through the report and read highlights from our exciting research. In line with our vision, values and objectives, the ICR sets out to maintain the excellent science and to further contribute to the grand challenges in cancer medicine and to position the ICR in national and international alliances and consortia.

March, 2022

Kjetil Taskén
Head of the ICR

"the ICR sets out to maintain the excellent science and to further contribute to the grand challenges in cancer medicine"

The Institute

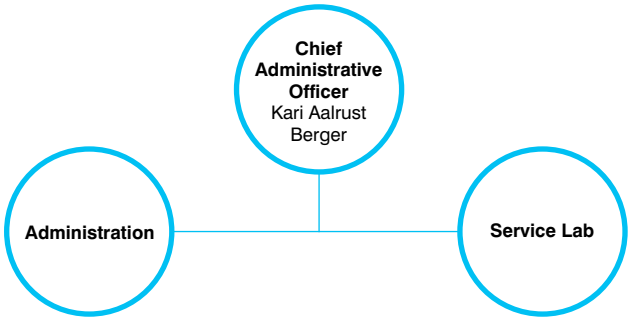


The Institute for Cancer Research is organized in 6 research departments with 24 research groups, and one Department of (6) Core Facilities.

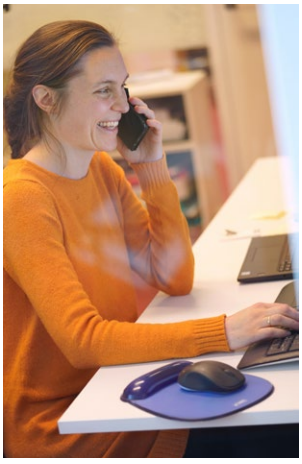
The Institute

Administration

Kari Aalrust Berger, Mona Hagen, Marit Osland Haugli, Linda Uv Mjøen, Ikram Mahnin, Gro Live Fagereng, Helene Wold Ranum. Absent: Yong Fang Po, Yili Gan, Peter Wiedswang



EMPLOYEES: **10**



Under the leadership of Kari Aalrust Berger, the ICR administrative unit of ten people provides support on a wide range of tasks:

- Budgeting and accounting for around 400 externally funded projects
- Support in application processes and grant writing
- Handling all HR-related tasks
- Health, Safety and Environment and management of technical installations in the building
- Public relations and ICR web site, coordinating the ICT-support group
- Responsibility for ICR conference and meeting facilities
- Operating Service Lab with washing and autoclaving facility for the building

“Serving to let our scientists excel at the ICR”

The Institute

Scientific Advisory Board members

Professor Carl-Henrik Heldin
Department of Medical Biochemistry and Microbiology, Uppsala University, Sweden. SAB Chair
READ MORE

Professor Carl Figdor
Head, Dept of Tumor Immunology, Institute for Molecular Life Sciences, Radboud UMC, The Netherlands
READ MORE

Professor Margaret C. Frame
FRSE, FmedSci, OBE, Professor of Cancer Research and Director, MRC Institute of Genetics and Molecular Medicine, University of Edinburgh, UK
READ MORE

Professor Ruth Palmer
Institute of Biomedicine, University of Gothenburg, Sweden
READ MORE

Professor Karen-Lise Garm Spindler
Department of Experimental Clinical Oncology, University of Aarhus; Consultant Oncologist, Aarhus University Hospital, Denmark
READ MORE

Professor Giulio Superti-Furga
Scientific Director, Research Center for Molecular Medicine (CeMM) of the Austrian Academy of Sciences, and Professor for Medical Systems Biology, Center for Physiology and Pharmacology Medical University of Vienna, Austria
READ MORE

Evaluation report by the Scientific Advisory Board

The Scientific Advisory Board (SAB) of the Institute met January 18-19, 2021. They reviewed vision, research strategies and future plans as well as performance of the Institute and its different departments.

From the written SAB evaluation:

- "Overall, the SAB was very impressed by the excellent standard of the scientific activities at ICR.
- The Institute houses some internationally leading groups and excellent papers reporting significant scientific discoveries have been published.
- ICR is very well organized …. The ICR Director and Leadership Team are to be congratulated on their excellent leadership, and to be commended for the formulation of a vision for ICR emphasizing quality, integrity and teamwork.
- There has been a noticeable development of ICR during the last few years."

The SAB provided feedback and recommendations to the Institute and each department. We have worked with SAB feedback and made plans for how to use and integrate the SAB feedback in our forward strategic work.

"Overall, the SAB was very impressed by the excellent standard of the scientific activities at ICR."

The Highlights

Institute researchers received 10 prizes and honors, including the Fridtjof Nansen Award for Excellence in Science to Harald Stenmark.

Institute researchers central in organizing the scientific program of >40 national and international scientific and popular meetings, including the EACR-OECI conference “Molecular Pathology”.

Institute researchers published >50 outstanding scientific papers with impact factor >10.

Institute investigator Prof. Åslaug Helland receives 128 mill NOK from the Research Council of Norway to lead a new clinical research centre, «MATRIX».

1

Institute researchers document >25 ongoing innovation projects and >10 industry collaborations, including renewed industry collaboration with Fate Therapeutics and six public-private collaborations for drugs and diagnostics to IMPRESS.

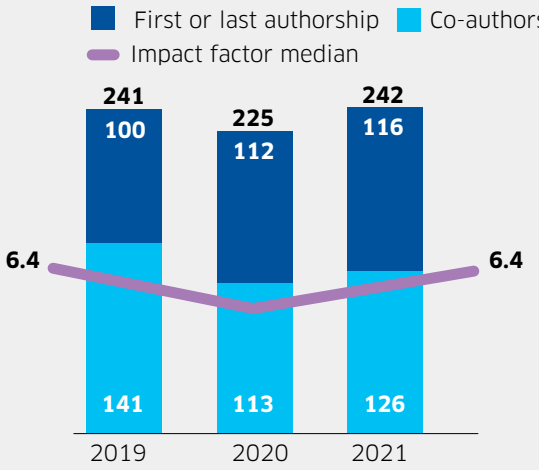
Institute Core Facilities accelerate their high throughput sequencing. Granted a NovaSeq6000 (Illumina) from the Norwegian Cancer Society and Radium Hospital Foundation.

IMPRESS NORWAY

Institute researchers in the management of IMPRESS-Norway, a national researcher-initiated precision cancer medicine intervention trial, that opened in 2021 (>200 patients screened in InPreD and >50 included in treatment cohorts by Jan 2022). 20 trials open for cancer patients that depend on key collaborations with the Institute scientists.

The Achievements

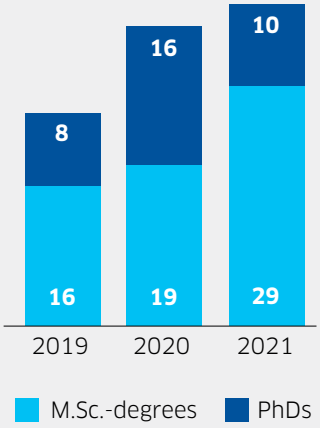
Articles published



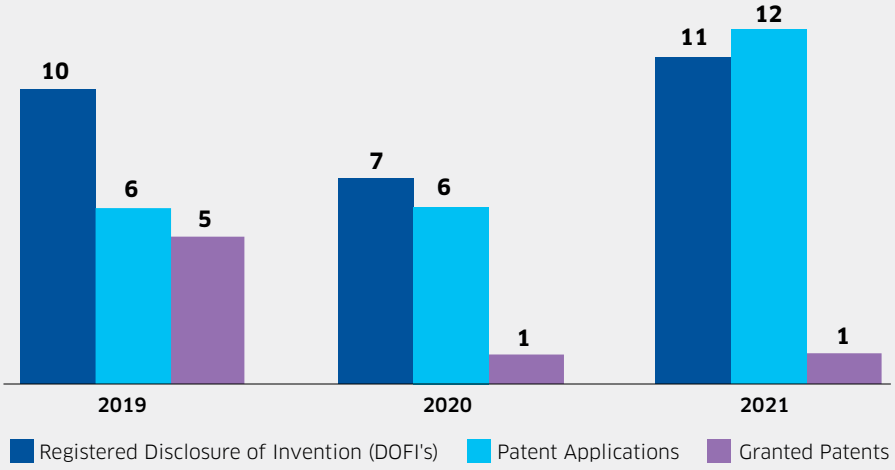
IMPACT FACTOR

	2019	2020	2021
Mean	8.5	7.6	8
Median	6.4	5.9	6.4

Completed PhDs and M.Sc.-degrees



DOFIs and Patent Applications



2

Selected papers with key authors from the Institute:

EMBO J 2021, 40:e107336 R. Khezri et al., and T.E. Rusten.
First and last author from Dept Molecular Cell Biology
Main finding: Host autophagy mediates organ wasting and nutrient mobilization that is utilized for tumor growth demonstrated in an in vivo model

Genome Medicine 2021 A. Sveen et al., and R.A. Lothe
First and last author from Dept Molecular Oncology
Main finding: The majority of somatic mutations in colorectal cancer are not expressed and the "expressed mutation dose" has prognostic and therapeutic relevance.

Hepatology 2021, 75:59-73. H.M. Vedeld et al., and G.E. Lind.
First and last author from Dept Mol Oncology
Main finding: Early detection of cholangiocarcinoma up to 12 months prior to diagnosis by tumor biomarkers in bile as the liquid biopsy source.

J Immunother Cancer, 2021, 9: DOI 10.1136/jitc-2021-003109. Flatmark K et al.
First author from Dept Tumor Biology
Main finding: Peptide vaccine targeting mutated GNAS may have application as treatment for pseudomyxoma peritonei.

Mol Oncol 2021, 16, 88-103. I.H. Rye et al., H.G. Russnes
First and last author from Dept Cancer Genetics
Main finding: Single cell immune profiling of lymph nodes with and without metastatic cells show that immune suppression occurs already in early stages of breast cancer progression.

Mol Syst Biol, 2021, 17, e9526, Jaiswal et al., and K, Aittokallio
Last author from Dept. of Cancer Genetics
*Main finding:*Identification of ECHDC1 as a novel breast tumor suppressor.

Nat Biotechnol 2021, Dec ahead of print. M. Ali*, E. Giannakopoulou* et al., and J. Olweus.
First authors and last author from Dept. of Cancer Immunology
Main finding: T-cell receptor-modified T cells targeting a lymphoid-specific enzyme (TdT) suggested as a promising immunotherapy for B-ALL and T-ALL that preserves normal lymphocytes.

Nat Commun 2021, 12:6427. O. Engebråten et al. A. Weyergang.
First and last authors from Dept Tumor Biology and Dept. Radiation Biology, respectively.
Main finding: Novel predictive biomarker for response to trastuzumab-emtansine in HER2+ breast cancer.

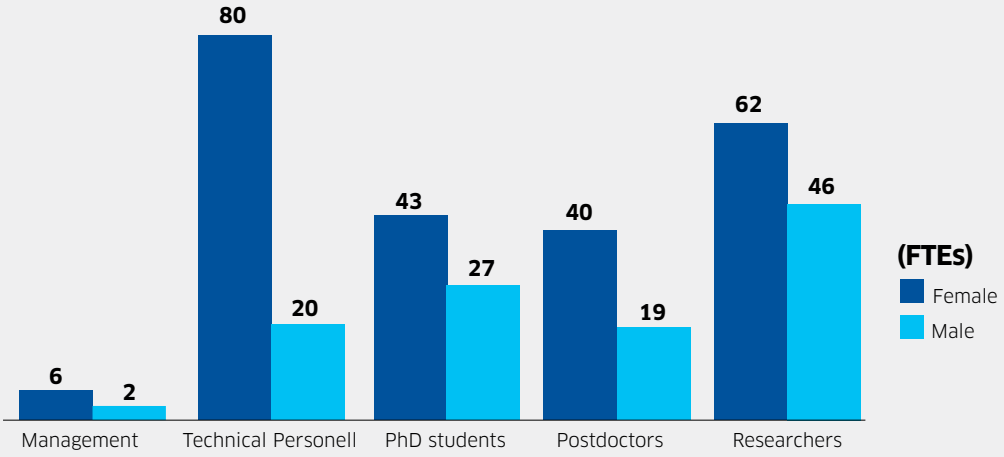
Nat Commun 2021, 12: 6577. K.O. Schink et al., and H. Stenmark.
First and last author from Dept Molecular Cell Biology
Main finding: Identification of a new regulator of macropinocytosis, the protein Phafin2 shown to modulate the cellular cytoskeleton and required for "cellular drinking".

Nat Commun, 2021, 12, 5307 DOI 10.1038, Taavitsainen S, Engedal N, et al and Urbanucci A.
Shared first (Engedal) and last author from Dept Tumor Biology.
Main finding: Gene patterns can predict prostate cancer treatment responses.

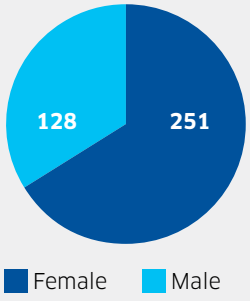
Nature 2021, 591, 142-146. Agudo-Canalejo J, Schultz SW, et al
Shared first author (Schultz) from Dept of Mol Cell Biol.
Main finding: Wetting whereby a liquid establishes a contact with a surface, is important for droplet sequestration during autophagy.

Science Signaling 2021 14(703):eabc8579. A.M. Lone et al., K. Taskén
First and last author: Dept Cancer Immunology
Main finding: Downstream signaling network through the EP1, EP2, EP3 and EP4 GPCRs on T cells involve more than 1,500 regulated phosphosites in receptor specific and shared signaling pathways.

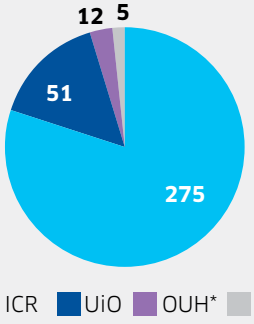
The People



Employees by Gender
(total 379)

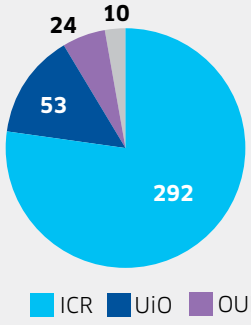


FTEs by Employer
(total 343)



*other than ICR

Employed by
(total 379)



*other than ICR

Prizes and Honors

- Fridtjof Nansen award for Excellence in Science to Harald Stenmark
- Oslo University Hospital "Excellent Researcher Award" to Ragnhild A. Lothe
- Oslo University Hospital "Early Career Award" to Marina Vietri
- Ragnar Mørk's Legacy's Prize for excellent cancer research to Anita Sveen
- Institute for Cancer Research "Researcher of the year 2021" to Kay Oliver Schink
- Institute for Cancer Research "Employee of the year 2021" to Idun Dale Rein
- Kolbjørn Brambani's cancer research grant awarded to Muhammad Ali at Oncology Forum
- Oslo University Hospital "Excellent article" prize to Eivind Heggernes Ask (Med 2021, 2:180-195.e5)
- Oslo University Hospital "Excellent article" prize to Sebastian W Schultz (Nature 2021, 591: 142-146)
- Oslo University appoints three new strategic research areas for young scientists: Spatial and multi-omics characterization of single cells to overcome treatment resistance in cancer has Thomas Fleiscer and Mads Haugland Haugen from the Institute as co-leads (lead: Xavier Tekpli)

Completed PhDs 2021

Maxi-Lu Böschen
Cancer Immunology
Towards new T cell receptor-based cancer immunotherapy

Kristina Totland Carm
Molecular Oncology
Genomic aberrations and molecular subtypes in multifocal prostate cancer

Vegar Johansen Dagenborg
Tumor Biology
Molecular and Immune Landscape of Colorectal Liver Metastases

Maria Mastrangelopoulou
Radiation Biology
A novel approach to inner cancer treatment through the activation of photosensitizers by protons

Christian Naucke
Radiation Biology
Development of a large scale flow cytometry screening method to identify novel treatment options for cancer

Tonje Sønstevold
Molecular Cell Biology
Implications of poly(alkyl cyanoacrylate) nanoparticle- induced cellular stress

Olaf Sørensen
Tumor Biology
Pharmacology of intraperitoneal mitomycin C in pseudomyxoma peritonei

Kia Wee Tan
Molecular Cell Biology
Membrane Remodeling in Macropinocytosis

Judit Jing Wen Wong
Radiation Biology
Photochemical Strategies to Eliminate Cancer Cells

Åsa Kristina Öjlert
Cancer Genetics
The non-small cell lung cancer tumor immune microenvironment: implications for treatment and prognosis

New project leaders

Nikolai Engedal,
Department of Tumor Biology

Vilde Drageset Haakensen,
Department of Cancer Genetics

Bjarne Johannessen,
Department of Molecular Oncology

Alf Håkon Lystad,
Department of Molecular Cell Biology

Sigrid Skånland,
Department of Cancer Immunology

Marina Vietri,
Department of Molecular Cell Biology

The People

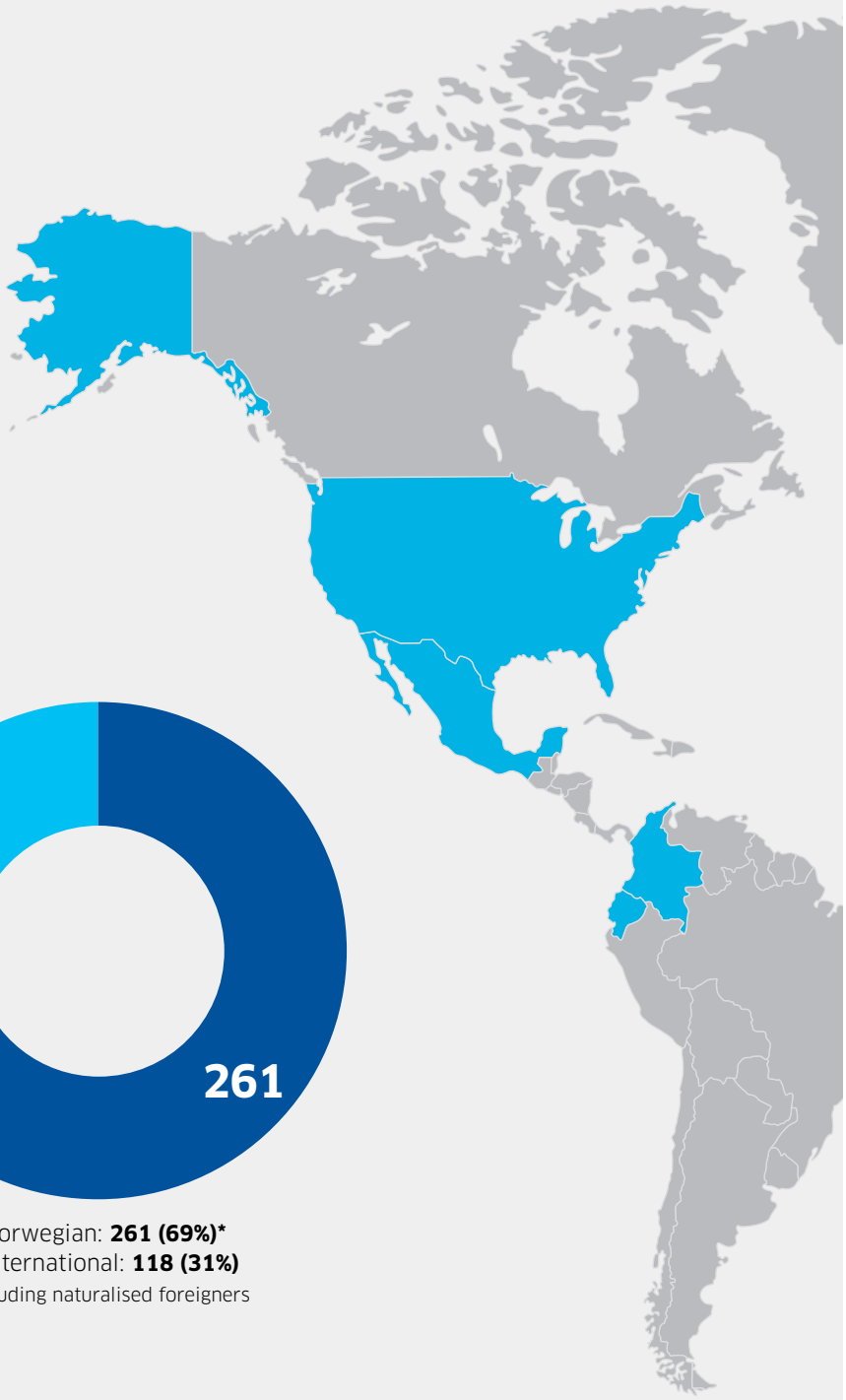
International Staff Distribution

118

PEOPLE IN TOTAL FROM OUTSIDE NORWAY

33

NATIONS ARE REPRESENTED



■ Norwegian: **261 (69%)***
■ International: **118 (31%)**
*Including naturalised foreigners

01

Countries represented by one person

Australia
Brazil
Colombia
Croatia
Egypt
Estonia
Holland
Peru
Russia
Singapore
Switzerland

02

People

Chile
Czech Republic
Finland
Japan
Lebanon
Serbia
USA

03

People

Great Britain
Iran
Portugal

04

People

Austria
France

05

People

Hungary

3

06
People
Greece
Lithuania
Poland
Spain
Sweden

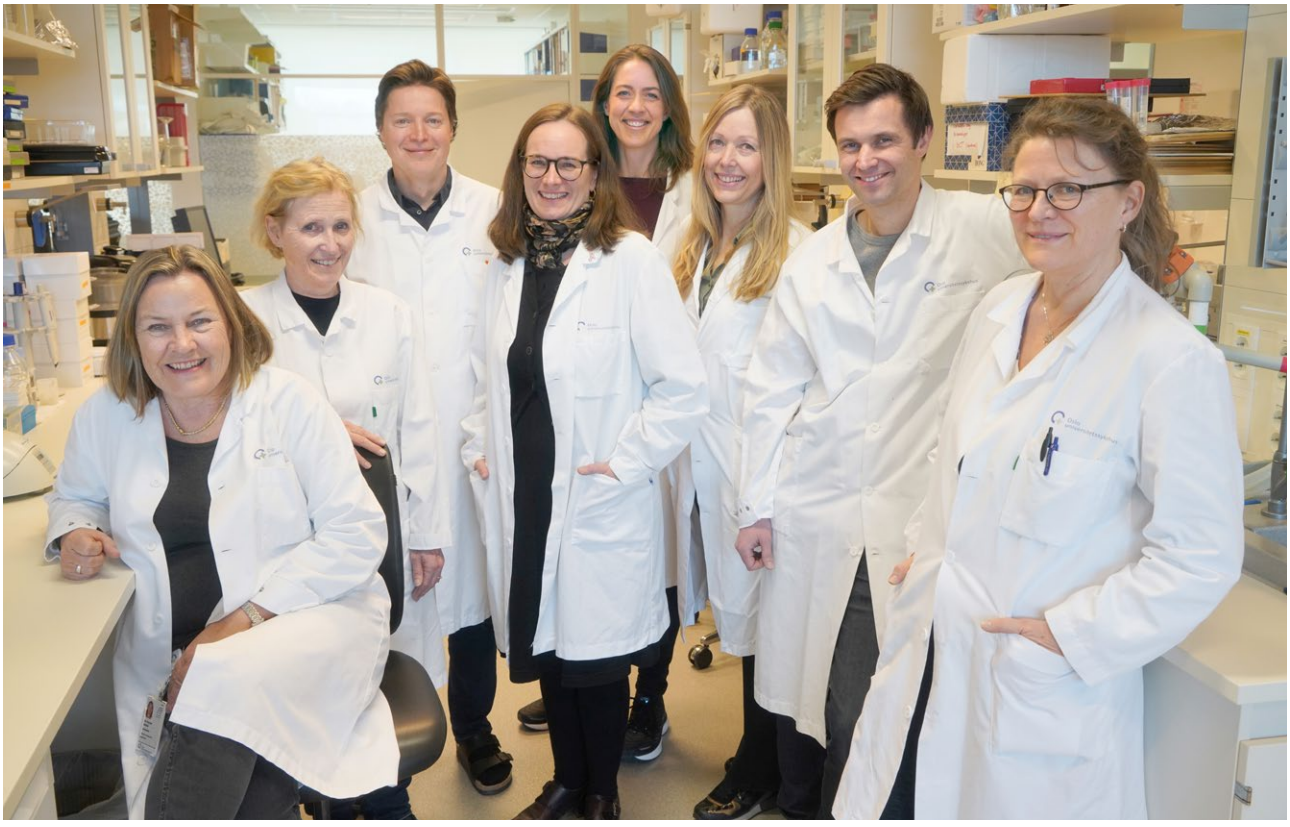
07
People
Italy

08
People
India

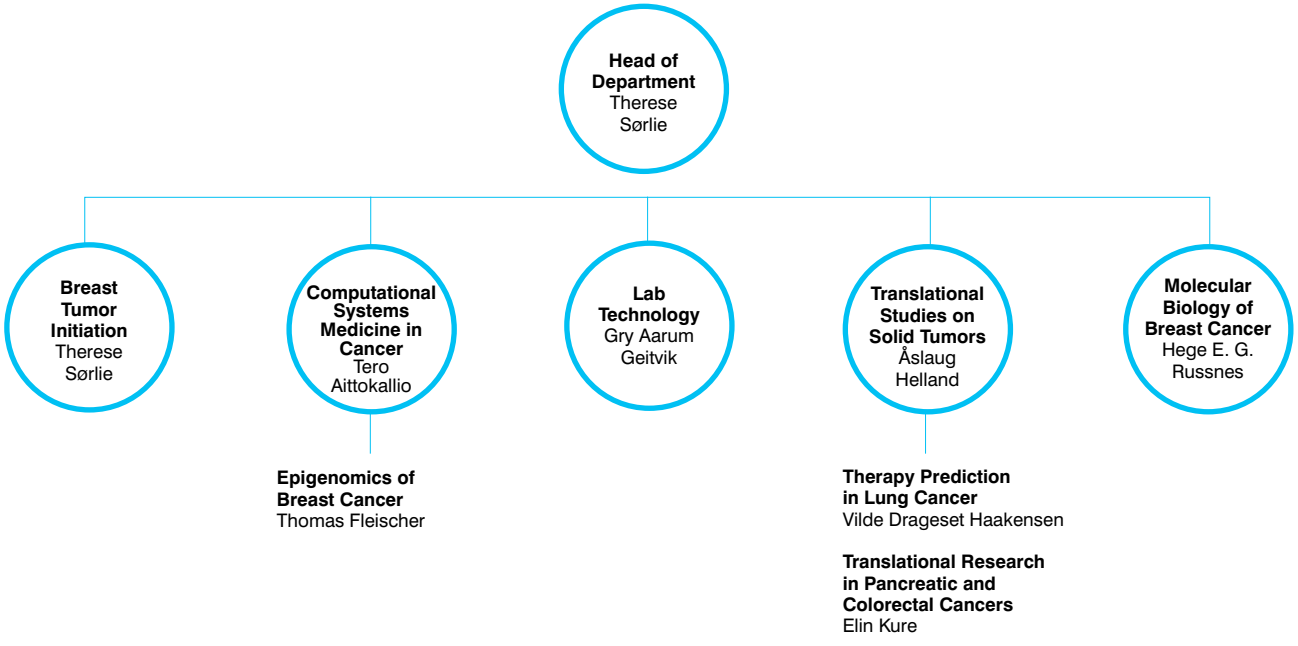
12
People
Germany

14
People
China

Department of Cancer Genetics



Gry Aarum Geitvik, Elin Kure, Tero Aittokallio, Hege E. G. Russnes, Vilde Drageset Haakensen, Therese Sørlie, Thomas Fleischer, Åslaug Helland



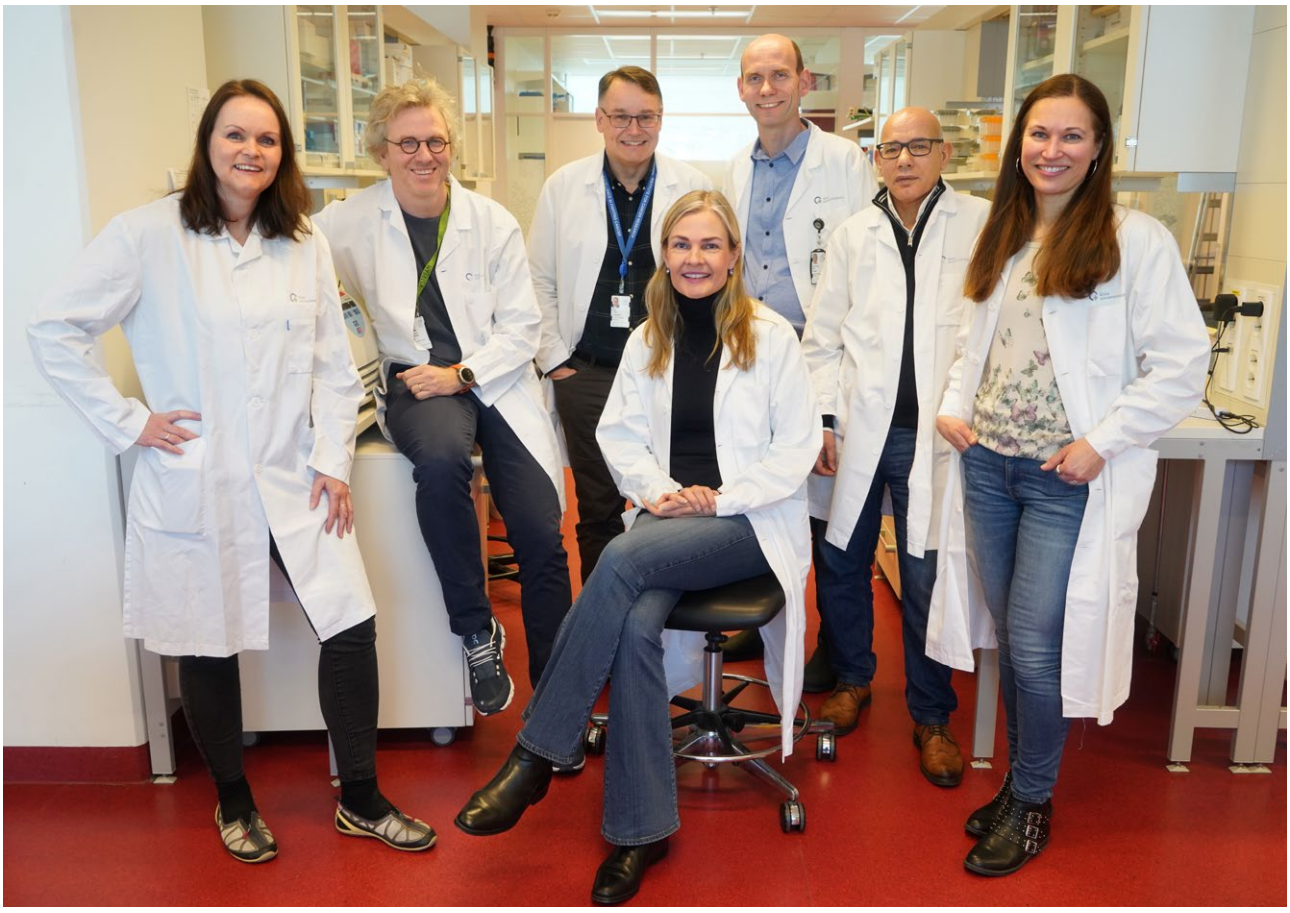
EMPLOYEES: **49**

4

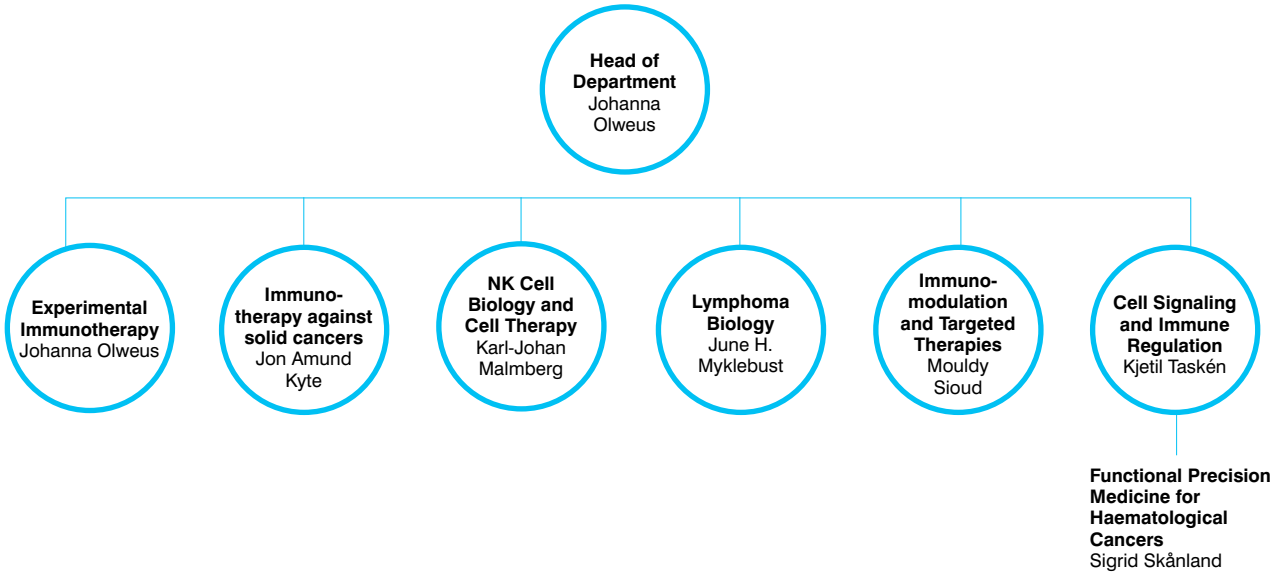
- Integrated molecular and clinical studies to reduce risk, diagnose early, improve prognosis, and tailor treatment for breast, lung and pancreas cancer
- We published 52 scientific articles in 2021
- We secured 30 million NOK in grant funding for our research groups (including personal grants to T Sørlie and T Fleischer)
- IMPRESS-Norway- national prospective precision medicine study included the first patients in 2021. Key leaders from DCG H. Russnes and Å. Helland
- MATRIX-128 mill NOK funding secured to a new research center for cancer treatment. PI Å Helland
- Partner in PANCAIM – "Pancreatic cancer AI for genomics and personalized Medicine", Horizon 2020 EU project, secured 1.18 mill EUR (partners T Aittokallio, E Kure)
- Initiated two observational studies in breast cancer with extensive biobanking and translational research (LATE, AXL) (H Russnes PI, I Rye, co-PI)
- Leading two lung cancer clinical trials (DART/NIPU) (Å Helland PI, V Haakensen co-PI)

"Our mission is to improve the lives of cancer patients through scientific advances in precision oncology"

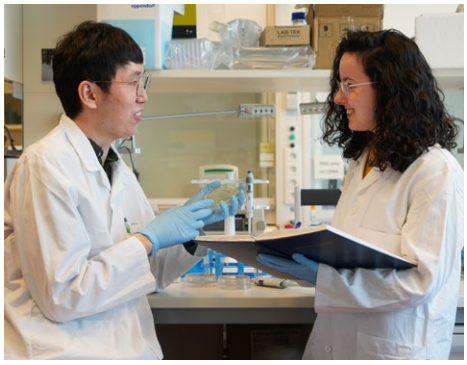
Department of Cancer Immunology

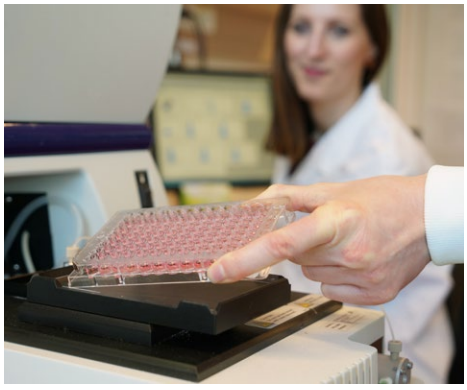


June H. Myklebust, Karl-Johan Malmberg, Kjetil Taskén, Johanna Olweus, Jon Amund Kyte, Mouldy Sioud, Sigrid Skånland



EMPLOYEES: **79**





- Published 34 articles; median IF of >8 and >50% with first and/or last authors from DCI, graduated one PhD, submitted 5 priority/PCT patent applications and got 1 granted patent
- Publication highlights: Articles in Nature Biotechnology, Blood and Science Signaling as first/last authors, and in Nature and Cell Stem Cells as co-authors
- Contributed to development of machine-learning frame-work Ecotyper for large-scale profiling of cell states and cellular ecosystems in lymphoma (first author, Cancer Cell)
- National funding: Norwegian Centre for Clinical Cancer Research (MATRIX) funded with 128 mill NOK, with several DCI members involved in leadership/as PIs. Renewed Open Call grants from HSØ and The Norwegian Cancer Society.
- International funding: DCI group partner on EU funded consortium – cell and gene therapy project (GeneTiga – Charité Berlin coordinator)
- Renewed Industry collaboration with Fate Therapeutics 18 mill NOK.
- Organized Nordic conference on chronic lymphocytic leukemia for >200 participants
- PI for three clinical experimental immunotherapy trials that completed patient enrollment in 2021

“Our goal is to improve cancer diagnostics and therapy through cutting edge research on tumor immunology and lymphocyte biology”

Department of Molecular Cell Biology

Kaisa Haglund, Kirsten Sandvig, Camilla Raiborg, Harald A. Stenmark, Antoni Wiedlocha, Kay Oliver Schink, Marina Vietri, Alf Håkon Lystad, Tor Erik Rusten, Alicia Martinez Llorente, Tore-Geir Iversen. Absent: Jorrit Enserink, Andreas Brech, Helene Knævelsrud

Head of Department
Harald A. Stenmark

Cellular Membrane Dynamics
Harald A. Stenmark

Unit of Cellular Electron Microscopy
Andreas Brech

Cytokinesis in Development and Carcinogenesis Kaisa Haglund

Autophagy and Related Pathways
Alf Håkon Lystad

Protein Dynamics in Tumor Suppressor Pathways Camilla Raiborg

Phosphoinositide Control of Early Endocytic Trafficking Kay Oliver Schink

Membrane Dynamics in Tumorigenesis
Marina Vietri

Protein Internalisation and Signaling
Antoni Wiedlocha

Cancer Molecular Medicine
Jorrit Enserink

Mapping and Disrupting Cancer Circuits
Helene Knævelsrud

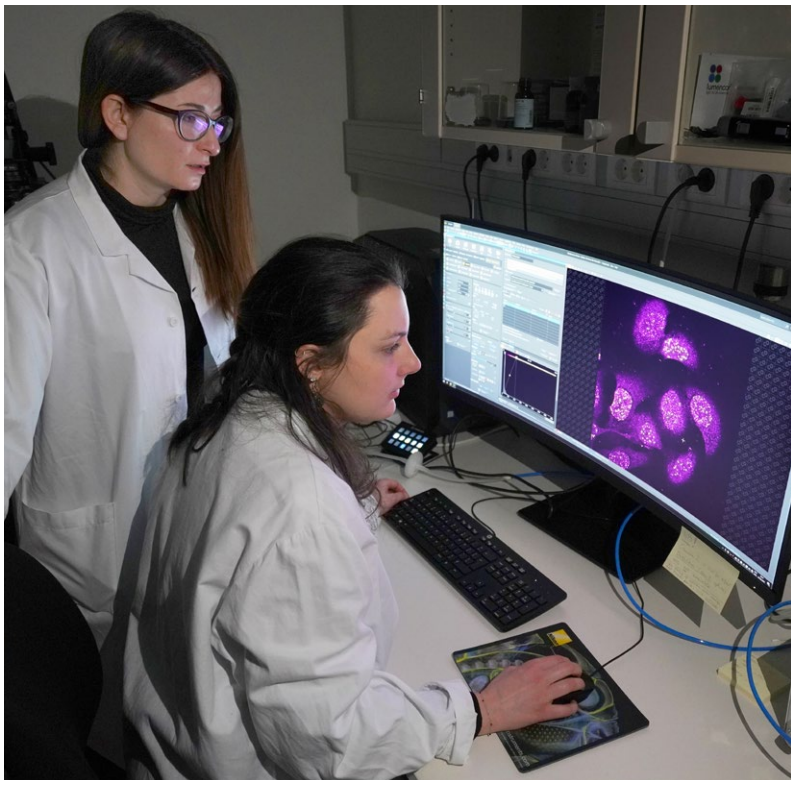
Tumor-host Biology
Tor Erik Rusten

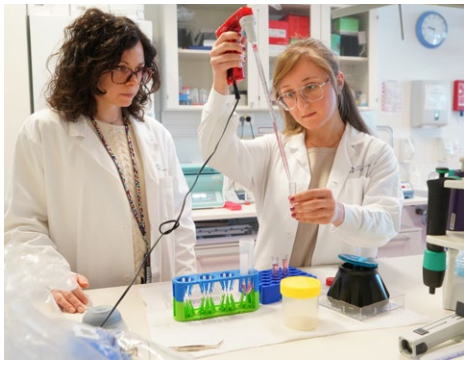
Intracellular Transport
Kirsten Sandvig

Nanoparticles in Biomedicine: In Vitro Studies
Tore-Geir Iversen

Exosomes and Prostate Cancer
Alicia Martinez Llorente

EMPLOYEES: **80**

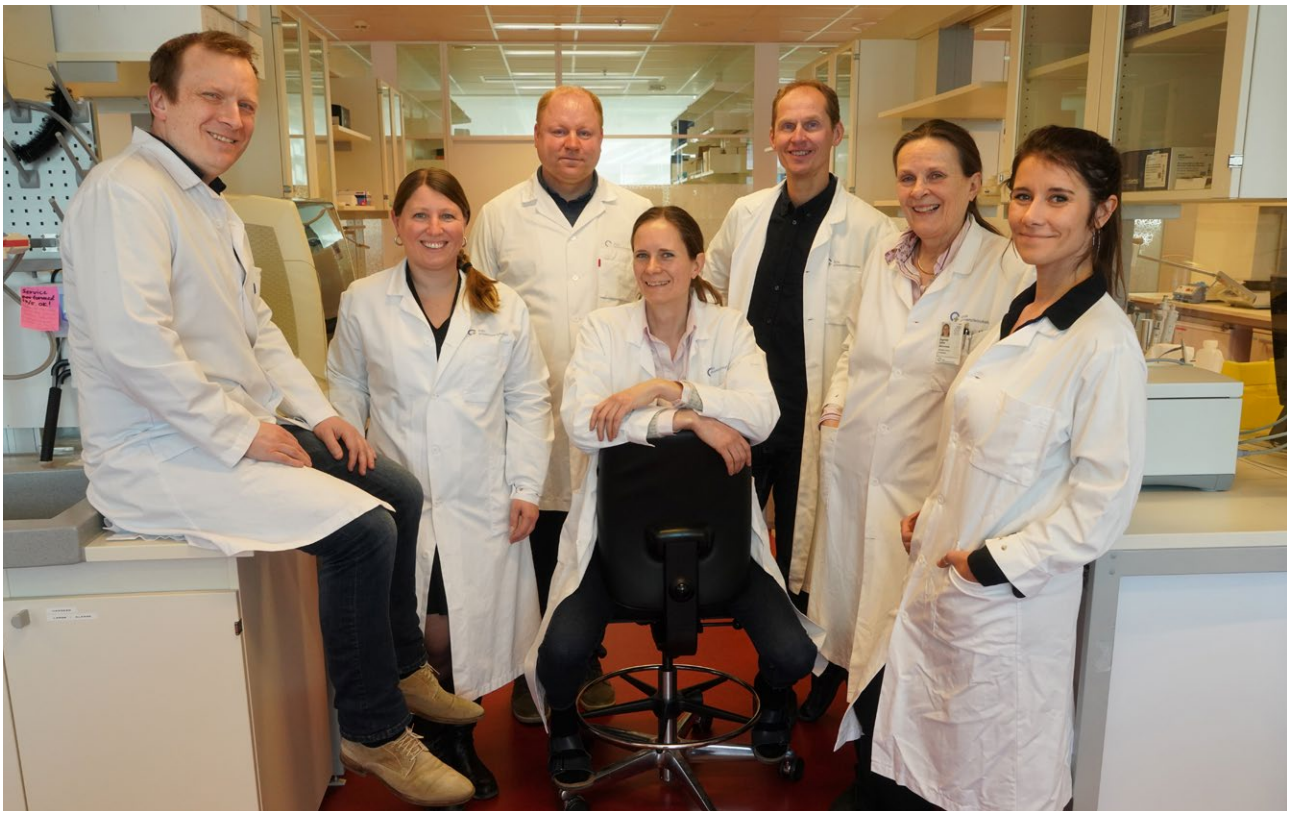




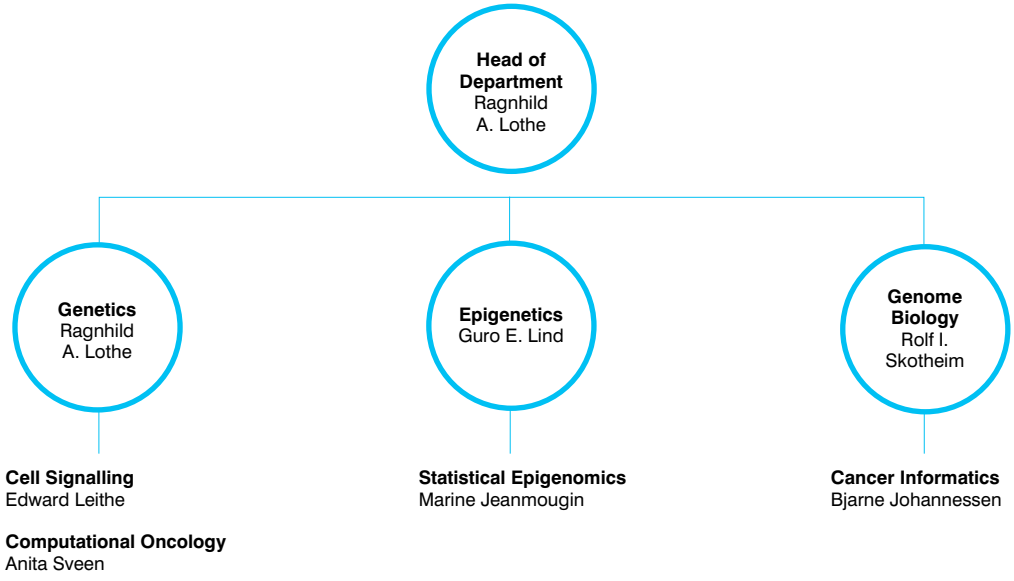
- MCB scientists published 44 papers in 2021 and were lead authors of articles in important journals such as *Nature, Nature Communications, EMBO Journal, Cell Reports, Nano Today, European Urology, Journal of Extracellular Vesicles, and Autophagy.*
- Kia Wee Tan and Tonje Sønstevold received their PhD degrees in 2021
- Marina Vietri received "Early Career Award" from Oslo University Hospital
- Kay O. Schink was awarded "Researcher of the Year" at Institute for Cancer Research
- Alf Håkon Lystad received a Young Research Talents grant from the Research Council, "DETECT and PROTECT - Surviving Insults to intracellular compartments".
- MCB scientists were awarded two UiO Life Science Convergence Grants – "Modeling human multi-organ Interaction in disease - cancer cachexia" led by Tor Erik Rusten, and "Role of autophagy in healthy aging" with participation of Jorrit Enserink and Helene Knævelsrud
- Alicia Llorente received an EEA Baltic Research Program grant - "Exploring the molecular mechanisms behind the effects of physical exercise on breast cancer prevention»
- Helene Knævelsrud received a grant from the South-Eastern Norway Regional Health Authority, "Unraveling the role of autophagy in kidney cancer".

"Uncovering the cellular basis of cancer development"

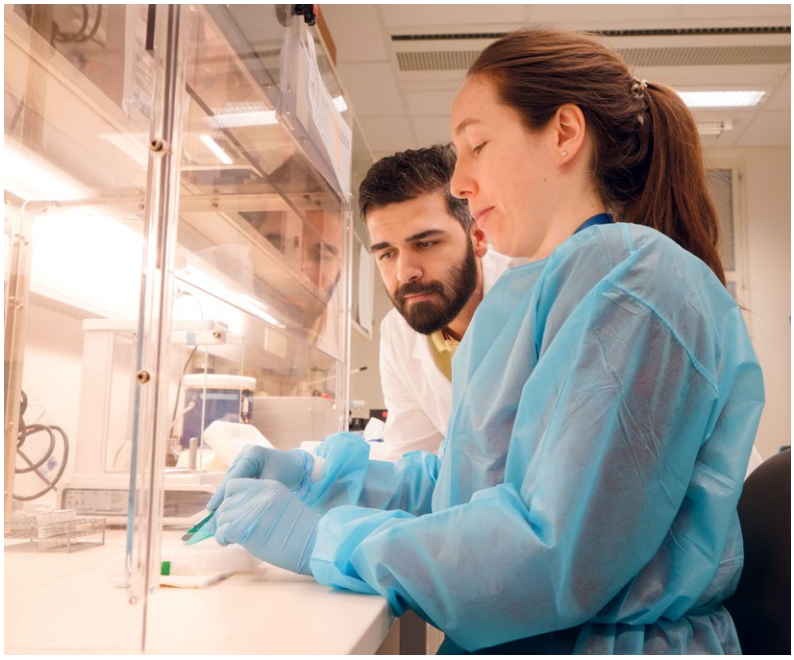
Department of Molecular Oncology

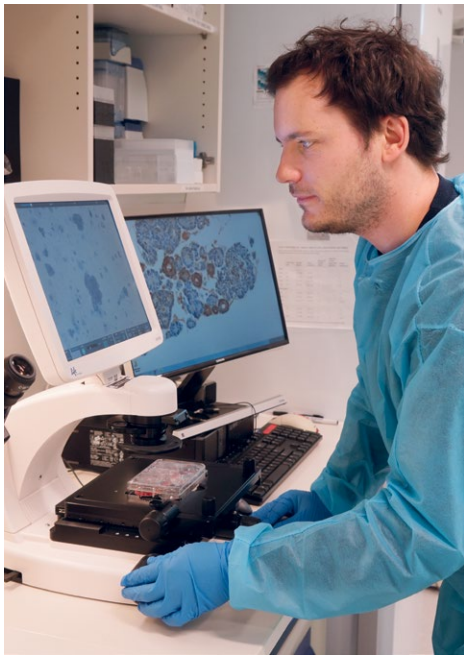


Bjarne Johannessen, Guro E. Lind, Edward Leithe, Anita Sveen, Rolf I. Skotheim, Ragnhild A. Lothe, Marine Jeanmougin



EMPLOYEES: **42**





- Our department celebrated its 15th anniversary in 2021 with successful completion of the 75th University degree (34PhD and 41MSc)
- Early detection of cholangiocarcinoma up to 12 months prior to diagnosis by tumor biomarkers in bile as the liquid biopsy source (Vedeld et al. Lind, Hepatology, 2021)
- Development of a metastasis-oriented framework for gene-expression based subtyping of colorectal cancer (Moosavi et al. Sveen, Genome Med 2021), and continues as an innovation project
- We demonstrated that the majority of somatic mutations in colorectal cancer are not expressed, and showed proof-of-concept that "expressed mutation dose" has prognostic and therapeutic relevance (Sveen et al. Lothe, Genome Med 2021)
- New genetic risk loci for testicular cancer identified by The Global Testicular Cancer Consortium (partner Skotheim) analyzing 10 000 patients (Pluta et al., Nat Comm)
- We completed the reference database of organoid lineages of metastatic colorectal cancer screened for sensitivity to 47 anticancer agents for the EVIDENT trial of ex vivo pharmacogenomics-guided experimental therapies
- Ragnhild A. Lothe received the Excellent Researcher award from Oslo University Hospital and Anita Sveen received Dr. Ragnar Mørk's legacy prize for excellent cancer research
- President of the Norwegian Association for Researchers, group leader Lind, appeared in 170 news coverages in national media, discussing early career development and employment conditions for researchers

"Biological discoveries for improved precision cancer medicine"

Department of Radiation Biology

Asta Juzeniene, Kristian Berg, Anette Weyergang, Sebastian Patzke, Randi Syljuåsen, Pål Kristian Selbo, Heidi Lyng, Absent: Theodossis A. Theodossiou, Beata Grallert, Trond Stokke

Head of Department
Kristian Berg

Photochemical Internalization
Kristian Berg

Clinical Radiation Biology
Heidi Lyng

Radiation Biology and DNA Damage Signaling
Randi Syljuåsen

Targeted Alpha Therapy
Asta Juzeniene

Light-Controlled Delivery of Cancer Immunotherapeutics
Pål Kristian Selbo

Protonics
Theodossis A. Theodossiou

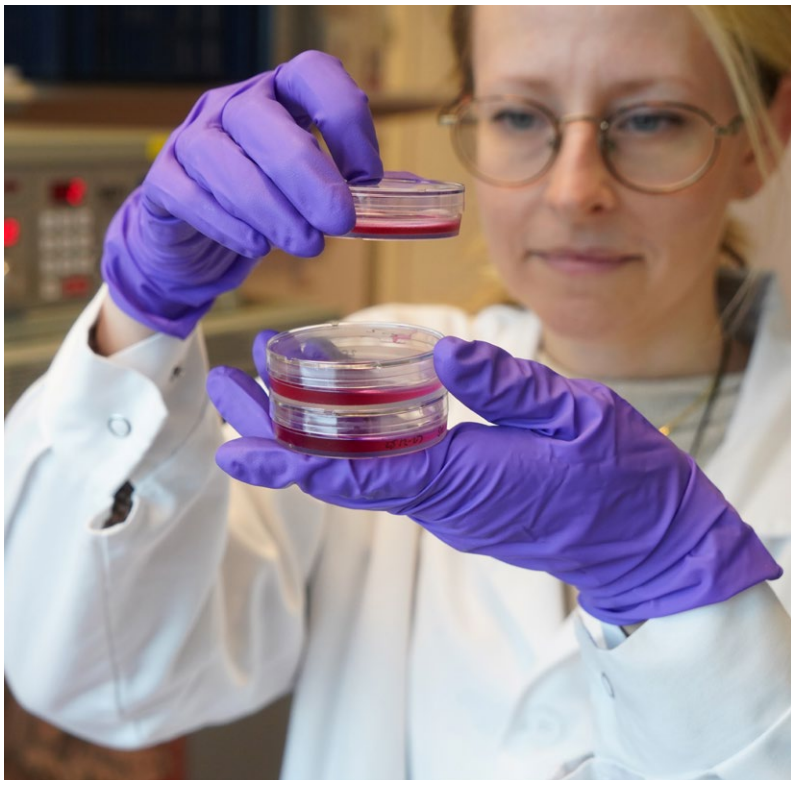
Recombinant Light Activated Therapeutics
Anette Weyergang

Regulation of Translation in Cell Cycle and Stress
Beata Grallert

Centrosome and Cell Division Cycle
Sebastian Patzke

The Molecular Radiation Biology group
Trond Stokke

EMPLOYEES: **43**

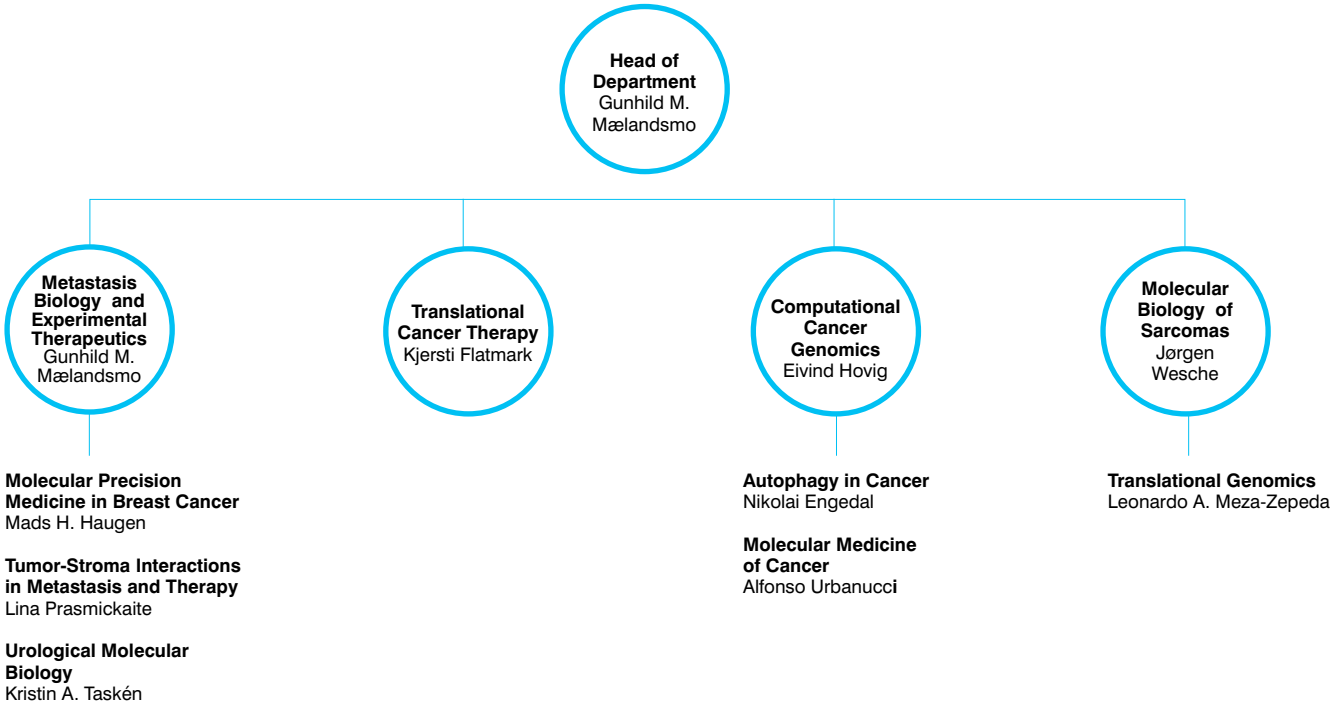


- Rab5A documented as a novel biomarker for treatment outcome for antibody drug conjugates published in Nat. Comm (Weyergang/Berg).
- New knowledge about ATR and WEE1 inhibitors in the presence and absence of radiation published in Cancers (Rødland/Syljuåsen)
- Our publications have provided preclinical data for the regulatory approval for a clinical trial of 212Pb-NG001 (Nucligen AS) in Norway (Juzeniene)
- Established genetic and super-resolution microscopy protocol to solve molecular mechanism underlying a genetically caused loss of hearing and vision (Patzke)
- Organizer of the Norwegian part of the international Biology-Guided Adaptive Radiotherapy (BiGART) conference (Lyng and Syljuåsen, by NIRO)
- Biomarker project admitted to the SPARK innovation program (Weyergang)
- Initiated collaboration with Kortuc Inc (Japan) for the implementation of our imaging biomarker in a clinical radiotherapy trial in cervical cancer patients in USA (Lyng, Hompland).
- Appointed chair of the Radiobiology Committee in the European Society for Radiation Oncology (ESTRO) (Lyng)

“Our goal is to develop new predictive methods and treatment strategies for improved radiation therapy”

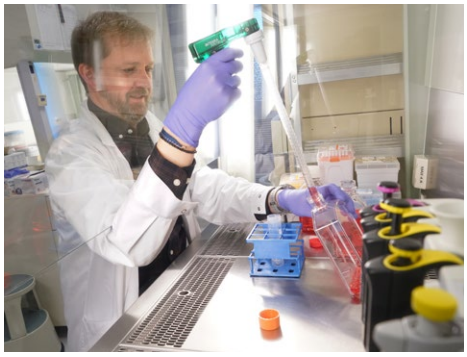
Department of Tumor Biology

Eivind Hovig, Alfonso Urbanucci, Lina Prasmickaite, Jørgen Wesche, Kjersti Flatmark, Leonardo A. Meza-Zepeda, Kristin A. Taskén, Mads H. Haugen, Gunhild M. Mælandsmo. Absent: Nikolai Engedal



EMPLOYEES: **55**

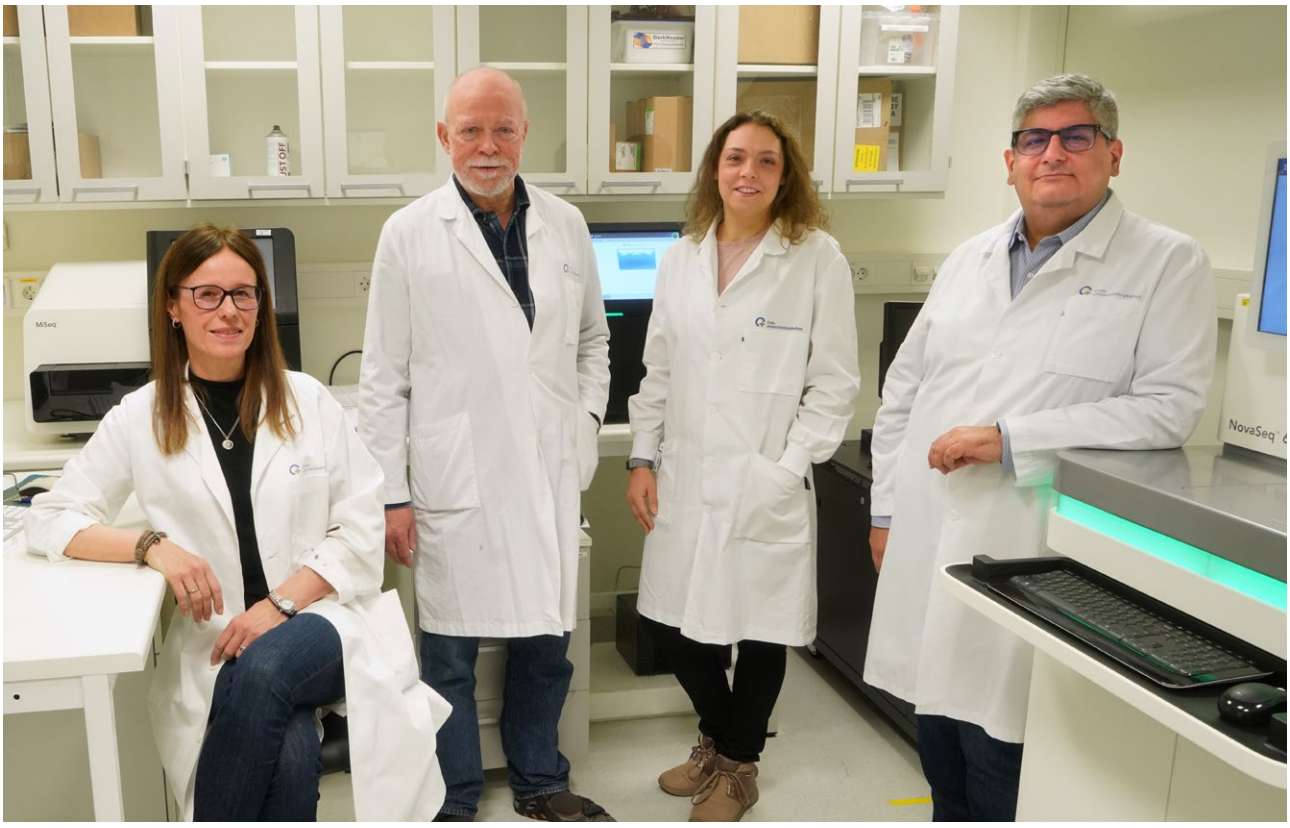
4



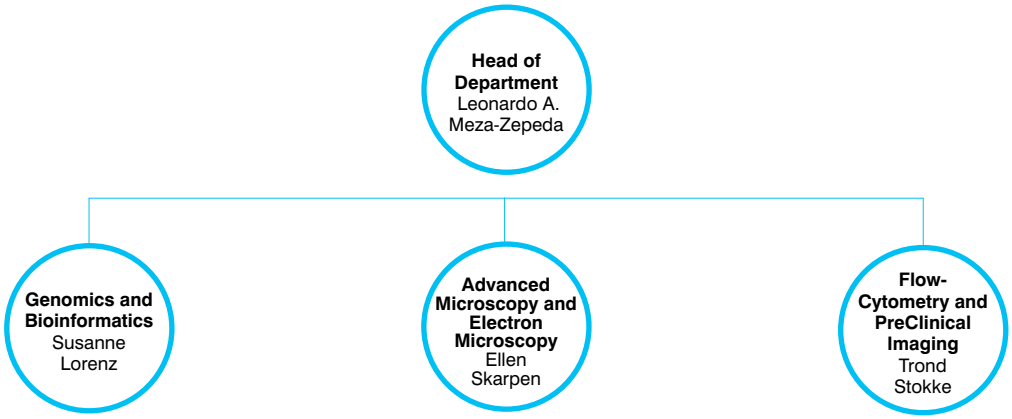
- Norwegian variant frequency database: Funding and responsibility for maintenance
- Breast cancer: Protein signature predicting response to chemotherapy and bevacizumab published, patent filed and funding for new clinical study ensured
- Pseudomyxoma peritonei: Mutated GNAS was identified as a target for peptide vaccination and a new clinical trial received funding
- Prostate cancer: association between β-blocker use and rate of recurrence after prostatectomy provides rationale and funding for a new clinical trial
- Sarcoma: Identification of *NAB2-STAT6* gene fusion variants as biomarkers to guide clinical decisions in solitary fibrous tumors
- Prostate cancer: Single-cell ATAC and RNA sequencing reveal pre-existing and persistent cells associated with relapse
- Education: Six MScs and two PhDs completed – both PhD projects in collaboration with Department of Gastroenterological Surgery
- Research funding: All four groups succeeded in receiving major grants ensuring continued high research activity

"Preclinical and clinical efforts towards precision oncology"

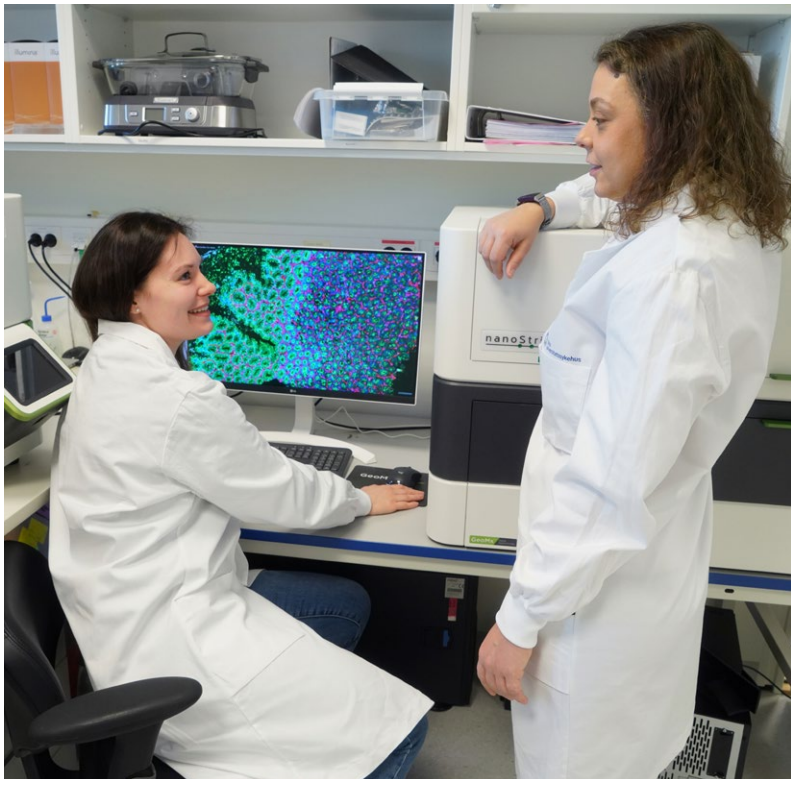
Department of Core Facilities

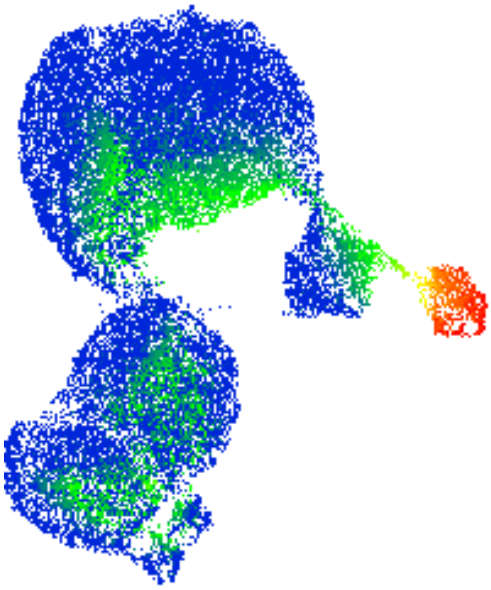


Ellen Skarpen, Trond Stokke, Susanne Lorenz, Leonardo A. Meza-Zepeda



EMPLOYEES: **19**

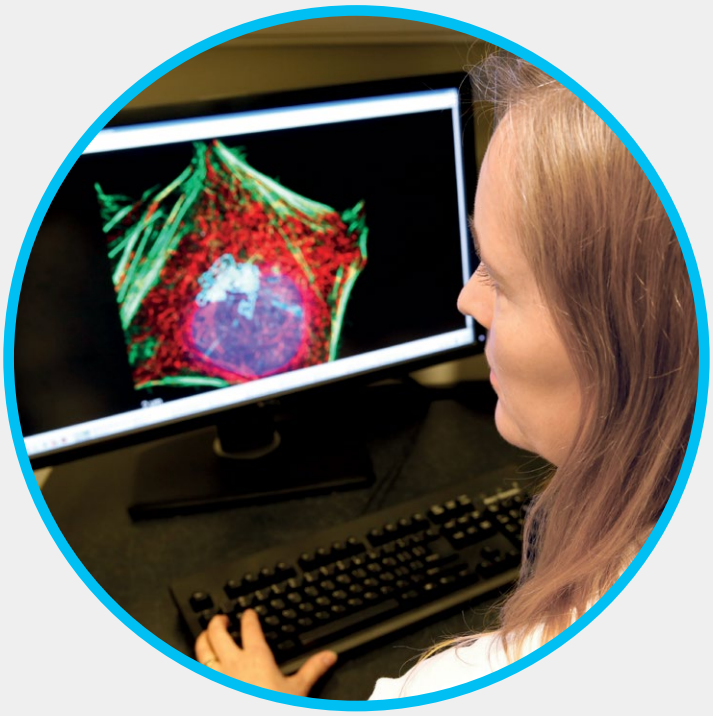




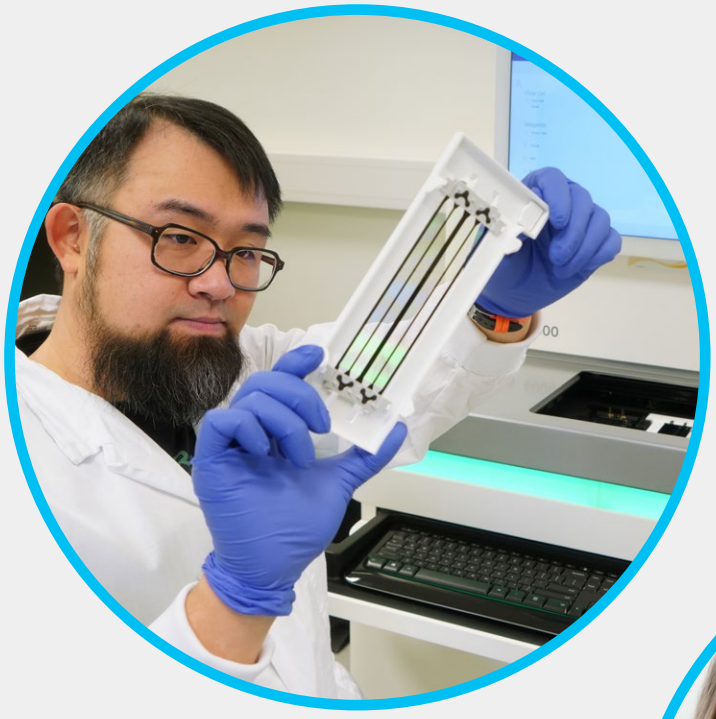
- The Advanced Microscopy unit obtained new funding from the Research Council of Norway to continue the Norwegian Advanced Light Microscopy Network (NALMIN-II)
- Funding for a live-cell light microscope with a photo-stimulation device was obtained by the Advanced Light Microscopy Facility from Fougner Hartmanns Familiefond and Oslo University Hospital
- The Flow Cytometry Facility has developed a comprehensive service for imaging mass cytometry using the Hyperion platform, from data generation to multiparameter analysis
- The Genomics unit has upgraded its sequencing infra-structure to accelerate high-throughput cancer genomics in Norway with an Illumina NovaSeq6000 and DRAGEN Bio-IT platform financed by the Norwegian Cancer Society and Radium Hospital Foundation
- The first Norwegian service for Digital Spatial Profiling to study cell interactions and heterogeneity in cancer was established by the Genomics Facility using the NanoString GeoMx DSP platform funded by the University of Oslo
- The Bioinformatics Core Facility contributes to ELIXIR Norway, the National bioinformatics platform financed by the Research Council of Norway (Funding renewed 2021)

“Providing cutting-edge-technology and competence to excel research”

Core Facilities



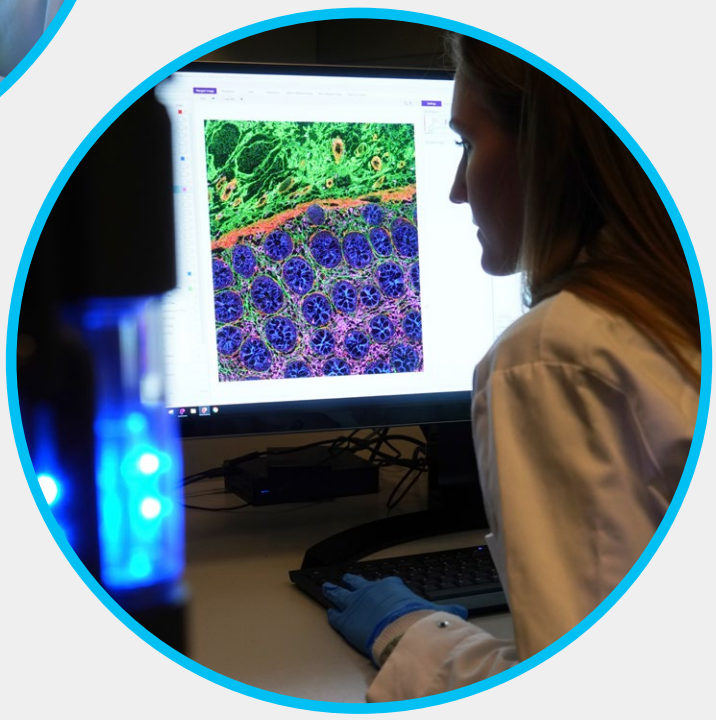
LIGHT MICROSCOPY



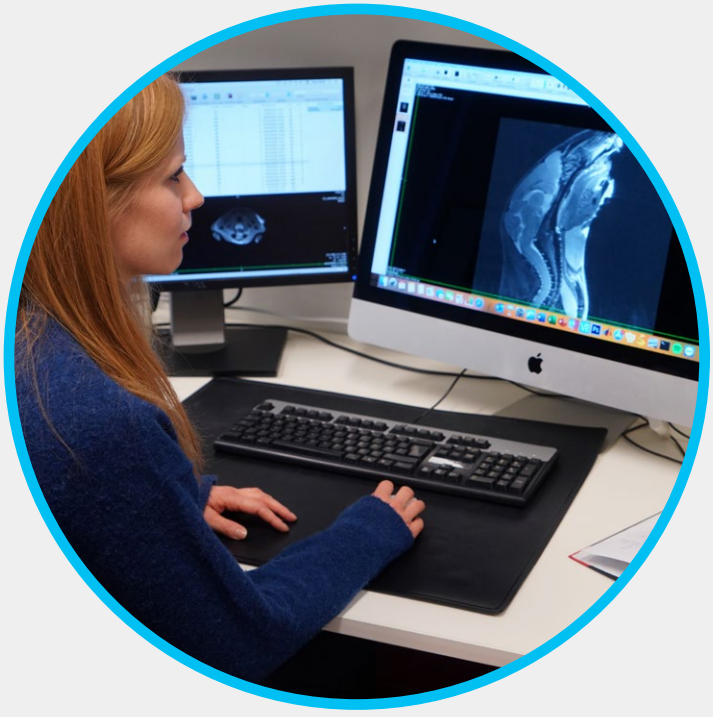
GENOMICS

BIOINFORMATICS

ELECTRON MICROSCOPY



FLOW CYTOMETRY



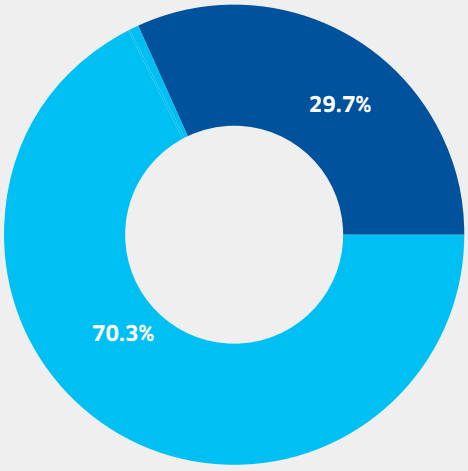
PRECLINICAL IMAGING

The Funding

The Institute researchers received a total of >300 mill NOK in new grants from external sources in 2021.

THIS INCLUDED:

- 128 mill NOK from the Research Council of Norway to a new clinical research centre "MATRIX" led by Åslaug Helland
- Three new grants to Therese Sørlie (>20 mill NOK in total) from the Norwegian Cancer Society, the Regional Health Authority for South-Eastern Norway and the Research Council of Norway,
- 18 mill NOK in renewed grant from the commercial company Fate Therapeutics to Kalle Malmberg
- 12 mill NOK to pancreas cancer research, EU grant to Elin H. Kure and Tero Aittokallio

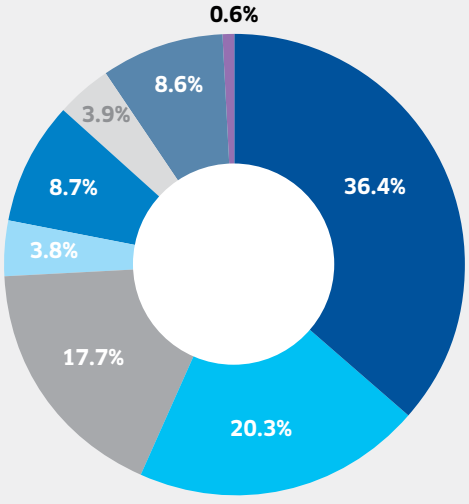


Funding

Percent

Actual Institute expenditure for 2021
by internal and external funding sources
(total 347,3 MNOK = approx. 35,3 M€)

- Internal funding
- External funding



External funding by source

Percent

Sources of external competitive funding for 2021, based on actual expenditure (total 244,2 MNOK= approx. 24,8 M€)

- South-Eastern Norway Regional Health Authority
- The Research Council of Norway
- The Norwegian Cancer Society
- University of Oslo
- EU
- Other international sources
- Other private sources
- Other public sources


6
3.

The Centres

Centre for Cancer Cell Reprogramming (CanCell)

Headed by Director Harald Stenmark, Co-Director Anne Simonsen.
Hosted by Institute of Clinical Medicine, UiO.

- CanCell´s scientists published 35 papers in 2021 and were lead authors of articles in important journals such as Nature, Nature Communications, EMBO Journal, Cell Reports, and Autophagy. In particular, progress was made in understanding the role of autophagy in cell metabolism and cancer cachexia, and macropinocytosis in nutrient acquisition of cancer cells.
- CanCell´s young scientists obtained 3 PhD degrees and 8 MSc degrees in 2021.
- CanCell scientists were awarded two UiO Life Science Convergence Grants – "Modeling human multi-organ Interaction in disease - cancer cachexia" led by Tor Erik Rusten, and "Role of autophagy in healthy aging" led by Anne Simonsen and with participation of Jorrit Enserink and Helene Knævelsrud.
- Other major grants to CanCell scientists included a Pioneer grant from the Cancer Society and a Project grant from the Children Cancer Society to Jørgen Wesche, a Research Project grant from the Cancer Society to Anne Simonsen, a PhD student grant from Helse sør-øst to Helene Knævelsrud, a Mobility grant from the Research Council to Dagim Tadele, and a Young Research Talents grant from the Research Council to Alf Håkon Lystad.
- CanCell's scientists had extensive outreach activity in 2021 in the forms of talks, podcasts, blogs, social media posts, and media interviews. A special form of outreach was CanCell's collaboration with Butoh Encounters for the dance performance, "Rebellion of the Cell".

"Reprogramming of cancer"

The Centres

ACT (Centre for Advanced Cell and Gene Therapy)

To be headed by Incoming Director Anna Pasetto, Scientific Director Karl-Johan Malmberg
Hosted by Section for Cell Therapy, Dept. of Oncology, OUH, Co-hosted by the ICR

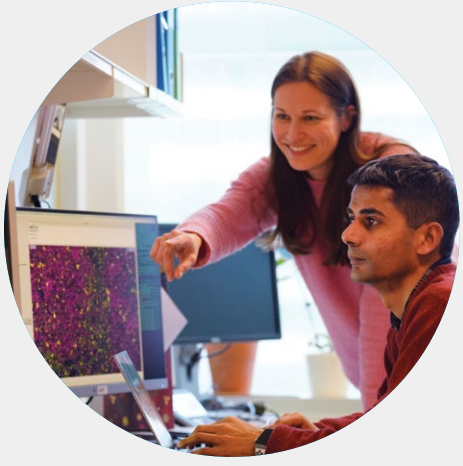
- Inauguration of the new ACT center, including a single point of entry, research and protocol board and streamlined workflow for new clinical cell therapy trials
- Acquisition and installation of the first Prodigy instrument for automated transduction and expansion of gene modified immune cells, and training of personnel
- Search for ACT Director led to recruitment of Dr. Anna Pasetto that will start April 2022

"Translating Basic Discoveries in Cancer Research Into Living Drugs"

K.G. Jebsen Centre for B-cell malignancies

Headed by Ludvig A. Munthe and June H. Myklebust.
Hosted by Institute of Clinical Medicine, UiO

- Leading position in Norway, running clinical studies for patients with B-cell malignancies (total 80 studies, 26 actively recruiting patients)
- Active translational research in developing genetic biomarkers, functional assays for precision medicine, CAR T cell design and tumor microenvironment characterization
- Breaking research discoveries related to COVID-19 pandemic - SARS-CoV-2, with papers published in NEJM, Eur Heart, Lancet Rheumatology



"From basic research and preclinical studies to precision medicine for B-cell malignancies"

STIFTELSEN KGJ Kristian Gerhard Jebsen Foundation

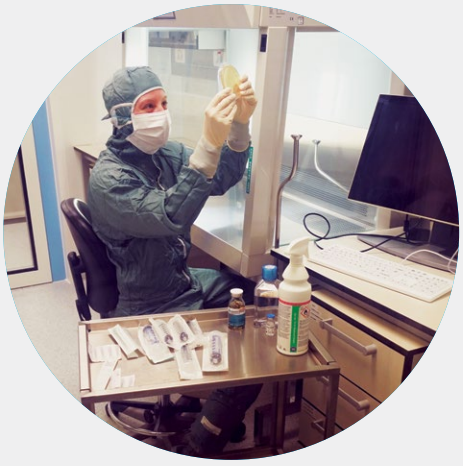
7

STRATEGIC RESEARCH AREA FOR OSLO UNIVERSITY HOSPITAL

Strategic Research Area in Cell Therapy – StratCell

Headed by Karl-Johan Malmberg

- Supported the transition of the GMP facility into a core facility with the launch of the Center for Advanced Cell and Gene Therapy (ACT)
- Technical support for the development of the first in house protocol for gene editing of primary T cells
- Identified key areas of improvement including regulatory competencies and physical pre-GMP space



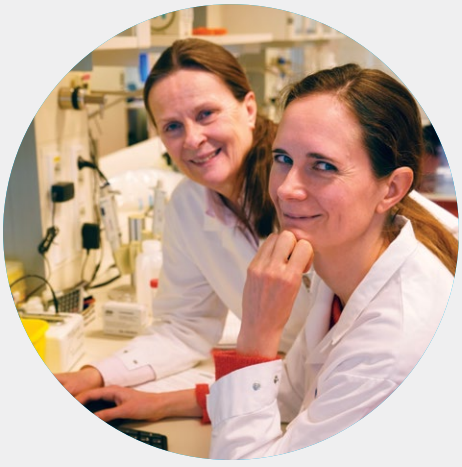
”Bringing First in Class Cell and Gene Therapy to Norwegian Patients”

STRATEGIC RESEARCH AREA FOR OSLO UNIVERSITY HOSPITAL

TEAM-ACT: Tumor Evolution in Advanced Models to Accelerate precision Cancer Therapy

Headed by Ragnhild A. Lothe

- 200 tumor organoid lineages of metastatic colorectal cancer established. Pharmacogenomics data from organoids and 110 cell lines are used to identify mechanisms of treatment response and resistance
- EVIDENT: ongoing trial of experimental- and standard of care- therapies (n=23) guided by the pharmacogenomic profiles of the patients’ own colorectal cancer models (organoid)
- ExCalibur: randomized controlled trials of metastatic colorectal cancer with extensive tumour burden in the liver, to evaluate the grey zone between technical feasibility and patient benefit from surgical modalities, including transplantation



”New treatment strategies of colorectal cancer”

The Clinic

The ICR as a gravity point in Oslo University Hospital Comprehensive Cancer Centre

Oslo University Hospital, a Comprehensive Cancer Centre since 2017, aims to be a leading cancer centre in Europe. The Institute for Cancer Research (ICR) is a competence hub with many world-leading research groups and environments and its research is a corner stone in our OECI-accredited Comprehensive Cancer Centre (CCC). The Institute is situated in close proximity to clinical cancer departments and diagnostic laboratories at the Radium Hospital, a cancer-oriented part of Oslo University Hospital and with Oslo Cancer Cluster and the Cancer Registry of Norway as neighbours.

More patients into clinical trials is an expressed aim for the CCC, and a number investigator-initiated clinical trials have been developed in close collaboration between researchers at ICR and clinical research groups at all locations of Oslo University Hospital. The tight connection among research groups at ICR and clinicians and diagnosticians in Oslo University Hospital is an important factor to instigate and improve investigator-initiated clinical trials, by delivering new methodologies for patient stratification and including high quality translational research connected to trials.

The extensive international collaboration involving researchers at ICR is also an important asset for the CCC. In the integrated organisation of cancer-related activities, the ICR will be a gravity point in the further development of Oslo University Hospital as a leading cancer centre in Europe.

Sigbjørn Smeland
Head of Division of Cancer Medicine
Chair, OUH CCC Board

Since 2019 the ICR has aimed to strengthen our translational research as well as collaboration, co-ordination and cohesion with clinical and diagnostic environments in OUH CCC. From 2020 we established the Translational Research and Innovation Committee (TRIC) that meets every month and from 2021 we instigated and started planning a series of symposia where we invite key researchers in clinical and diagnostic departments to open discussions on how we can interact more and improve research in specific areas (first two symposia held March 2022).

A survey of 120 translation and innovation projects originating from the Institute and their collaboration partners showed the following (non-exhaustive) distribution of collaboration partners in OUH, particularly in the CCC:

ICR INTERNAL	DIVISION OF CANCER MEDICINE*:	DIVISION OF LABORATORY MEDICINE:	DIVISION OF SURGERY, TRANSPLANTATION AND INFLAMMATION:	DIVISION OF RADIOLOGY AND NUCLEAR MEDICINE:	OTHER DIVISIONS:
25	72#	15	12	6	7

*Other than ICR
#Distribution in Div. Cancer Med.: Dept. Oncology 59, Dept. Hematol. 6, Dept. Gynecol. Oncol. 3, Dept. Med. Physics 3, Inst. Cancer Genet & Informatics: 1

In addition, the same 120 translation and innovation projects has numerous other partners nationally and internationally (see also section on International Network).

8

Clinical intervention trials where Institute researchers play a prominent part

IMPRESS-Norway – Improving public cancer care by implementing precision medicine in Norway
ClinicalTrial.gov #: NCT04817956; https://impress-norway.no/en
Institute participants: National PI: Åslaug Helland, Trial Management Committee: Hege Russnes, Kjetil Taskén, Jon Amund Kyte; Trial Steering Committee: Eivind Hovig, Leonardo Meza-Zepeda, Ragnhild Lothe plus TMC members; Coordinator: Live Fagereng.

ALICE: Atezolizumab Combined With Immunogenic Chemotherapy in Patients With Metastatic Triple-negative Breast Cancer
ClinicalTrials.gov #: NCT03164993
PI: Jon Amund Kyte, partner labs.: J.A. Kyte, Hege Russnes

ASAC - Aspirin as secondary prevention in colorectal cancer liver metastasis
ClinicalTrials.gov #: NCT03326791; www.asac.no
PIs: Sheraz Yaqub and Kjetil Taskén

bTME; The Beyond TME Trial
ClinicalTrials.gov#: NCT02292641
PIs: Gina Brown (Royal Marsden University Hospital, UK) and Kjersti Flatmark (Norway)

ComIT - Combinatory ImmunoTherapy-1
ClinicalTrials.gov #: NCT03644823
PI: Åslaug Helland, partner lab.: Åslaug Helland

DART – Durvalumab after chemo-radiotherapy for NSCLC (multinational phase II trial)
ClinicalTrials.gov #: NCT04392505
PI: Åslaug Helland, partner lab.: Åslaug Helland

EVIDENT – Ex vivo drug sensitivity in metastatic colorectal cancer.
EudraCT #: 2020-003395-41.
PI: Tormod K. Guren, partner lab.: Ragnhild A. Lothe

I-BCT-1 - Improved breast cancer therapy in the neoadjuvant and metastatic setting: A phase 2 clinical trial protocol studying biological rationale for the optimal selection of treatment regimens
ClinicalTrials.gov #: NCT02546232
PI: Olav Engebråten, partner labs.: Gunhild M. Mælandsmo, Hege Russnes

ICON: Phase IIb Study Evaluating Immunogenic Chemotherapy Combined With Ipilimumab and Nivolumab in Breast Cancer
ClinicalTrials.gov #: NCT03409198
PI: Jon Amund Kyte, partner labs.: J.A. Kyte, Hege Russnes

LARC-EX; Locally Advanced Rectal Cancer - Exfoliated Peritoneal Tumor Cells
ClinicalTrials.gov#: NCT02113384
PI: Kjersti Flatmark, partner lab: Kjersti Flatmark

LD-VenEx - Phase II "feasibility" study of azacitidine in combination with low dose venetoclax in patients with acute myeloid leukemia-
EudraCT #: 2020-005461-14
PI: The Nordic AML Group, partner lab: Jorrit Enserink

METIMMOX; Colorectal Cancer METastasis - Shaping Anti-tumor IMMunity by OXaliplatin
ClinicalTrials.gov#: NCT03388190
PI: Anne Hansen Ree (AHUS), partner lab: Kjersti Flatmark

METOXY-LACC - Altered Tumor Oxygenation by Metformin, a Potential Step in Overcoming Radiotherapy Resistance in Locally Advanced Cervical Cancer (LACC)
ClinicalTrials.gov #: NCT04275713
PI: Kjersti Bruheim, partner lab: Heidi Lyng

NAVI-LARRC; Computer Navigation-assisted Surgery for Locally Advanced and Recurrent Rectal Cancer
ClinicalTrials.gov#: NCT04512937
PI: Kjersti Flatmark, partner lab: Kjersti Flatmark

NIPEC-OXA; Normothermic Intraperitoneal Chemotherapy - Long Term in Peritoneal Metastases from Colorectal Cancer
ClinicalTrials.gov#: NCT05056389
PI: Mariusz Goscinski (AGK), partner lab: Kjersti Flatmark

NIPU – Nivolumab and ipilimumab +/- UV1 vaccine in second line treatment of mesotheliomas
ClinicalTrials.gov #: NCT04300244
PI: Åslaug Helland, partner lab.: Vilde Haakensen

NorPACT-1/2 - Neo-adjuvant chemotherapy for pancreatic cancer
ClinicalTrials.gov #: NCT02919787
PI: Knut Jørgen Labori, partner lab: Elin Kure

PSM; Peritoneal Surface Malignancies - Characterization, Models and Treatment Strategies
ClinicalTrials.gov #: NCT02073500
PI: Kjersti Flatmark, partner lab: Kjersti Flatmark

REPORT; REirradiation and PD-1 blockade On Recurrent squamous cell head and neck Tumors
ClinicalTrials.gov #: NCT03317327
PI: Åse Bratland, Co-PI: Jon Amund Kyte, partner lab.: J.A. Kyte lab

Sequential neoadjuvant ifosfamide and doxorubicin in localized high-grade soft tissue sarcoma of extremities and trunk wall
ClinicalTrials.gov #: NCT04776525
PI: Kjetil Boye, partner lab.: Jørgen Wesche

The International Network

ICR members report collaborations with researchers at 146 institutions in 30 countries world-wide.

AUSTRALIA
- Kinghorn Cancer Centre, Sydney
- Monash University, Melbourne

AUSTRIA
- Institute of Pathophysiology Biocenter, Innsbruck Medical University, Innsbruck
- Medical University of Vienna, Vienna

BELGIUM
- Catholic university of Brussels, Brussels
- Ghent University, Ghent
- Katholieke University Leuven, Leuven
- Universiteit Hasselt, Genk

CANADA
- McGill University, Montreal
- Princess Margaret Hospital, Toronto
- University of Ottawa, Ottawa

CROATIA
- University of Zagreb, Zagreb

CZECH REPUBLIC
- Charles University, Prague
- Institute of Experimental Biology, Masaryk University, Brno
- National Institute of Public Health, Prague

DENMARK
- Aalborg University Hospital, Aalborg
- Aarhus University Hospital, Aarhus
- Copenhagen University Hospital, Copenhagen
- University of Copenhagen, Copenhagen
- University of Southern Denmark, Odense

FINLAND
- Biomedicum Helsinki, University of Helsinki, Helsinki
- Finnish Institute of Molecular Medicine, Nordic EMBL partner, Helsinki
- Pharmatest Services Ltd, Turku
- Tampere University of Technology, Tampere
- Zora Oy, Espoo

FRANCE
- Centre National de Génotypage, Paris
- EurOPDX - European Consortium on Patient-derived Xenografts, Paris
- Institut Gustave Roussy, Paris
- Institut National de la Sante et de la Recherche Medicale, Paris
- Institute Cürie, Paris
- Institute of Systems and Synthetic Biology Genopole, UEVE, CNRS, Évry
- International Agency for Research on Cancer (IARC), Lyon
- Université de Lorraine, Nancy
- Université Lyon, Villeurbanne
- Université Paris-Sud, Orsay

GERMANY
- EMBL, Heidelberg
- Jacobs University, Bremen
- University of Bayreuth, Bayreuth
- University of Bochum, Bochum
- University of Cologne, Cologne
- University of Freiburg, Freiburg
- University of Heidelberg, Heidelberg
- University of Mainz, Mainz
- University of Marburg, Marburg
- University of Stuttgart, Stuttgart

GREECE
- National and Kapodistrian University of Athens, Athens
- National Centre for Scientific Research "Demokritos", Athens
- University of Ioannina, Ioannina

HUNGARY
- University of Szeged, Szeged

ICELAND
- University of Iceland, Biomedical Center, Reykjavik

INDIA
- Indian institute of Technology, Hyderabad
- Savitribai Phule Pune University, Pune

IRELAND
- National Institute for Bioprocessing Research and Training (NIBRT), Dublin

ISRAEL
- Technion - Israel Institute of Technology, Haifa
- Weizmann Institute, Rehovot

ITALY
- IFOM, Milan
- International School for Advanced Studies, Trieste
- Istituto Nationale di Tumori, Milano
- The Rizzoli Institute, Bologna
- University of Bologna, Bologna
- University of Padova, Padova
- University of Salento, Lecce

NORWAY
- Cancer Registry of Norway, Oslo
- Haukeland University Hospital, Bergen
- Norwegian University of Life Sciences, Ås.
- Norwegian University of Science and Technology, Trondheim
- Stavanger University Hospital, Stavanger
- Trondheim University Hospital-St. Olavs Hospital, Trondheim
- University hospital of North Norway, Tromsø
- University of Bergen, Bergen
- University of Oslo, Oslo

POLAND
- Faculty of Biotechnology, University of Wroclaw, Wroclaw
- Jagiellonian University, Kraków
- University of Gdansk, Gdansk

PORTUGAL
- Institute of Molecular Pathology and Immunology, University of Porto
- Portuguese Oncology Institute, Porto

ROMANIA
- Horia Hulubei National Institute for Physics and Nuclear Engineering Bucharest - Magurele

RUSSIA
- Institute of Cytology and Genetics, Novosibirsk

SINGAPORE
- Cancer Science Institute of Singapore, Singapore

SPAIN
- Biocruces Bizkaia Health Research Institute, Barakaldo
- CABIMER, University of Sevilla, Sevilla
- Centre for Biological Studies, Madrid
- Fundacion Instituto Valenciano de Oncologica (FIVO), Valencia
- ICGC, Technical validation group and Ivo Gut, Barcelona
- University of Lleida, Lleida
- University of Valencia, Valencia
- Universitat Politècnica de València, Valencia
- Vall d'Hebron Institute of Oncology, Barcelona

SWEDEN
- Karolinska Institutet and University of Stockholm, Stockholm
- Lund University, Lund
- The Sahlgrenska Academy at the University of Gothenburg, Gothenburg
- Uppsala University Hospital, Uppsala

SWITZERLAND
- University Hospital Zurich, Zurich

THE NETHERLANDS
- Leiden University, Leiden
- Netherlands Cancer Institute (NKI), Amsterdam
- Radboud University Nijmegen, Nijmegen
- The Netherlands Proteomics Centre, Utrecht
- University Medical Center, Groningen
- Utrecht University, Utrecht
- VU Medical Center, Amsterdam

TUNISIA
- University of Tunis, Tunis

UNITED KINGDOM
- Cambridge Cancer Institute, Cambridge
- Hampshire Hospitals/Southampton University, Southampton
- Institute of Cancer and Genomic Sciences, University of Birmingham, Birmingham
- London Research Institute,The Francis Crick Institute, London
- Newcastle University, Newcastle upon Tyne
- Queen's University Belfast
- Royal National Orthopaedic Hospital, Stanmore, Middlesex
- The Beatson Institute for Cancer Research, Glasgow
- The European Bioinformatics Institute (EMBL-EBI), Hinxton
- University College London Medical School, UCL, London
- University of Cambridge, Cambridge
- University of Liverpool, Liverpool
- University of Oxford, Oxford
- Wellcome Sanger Institute, Hinxton

USA
- Buck Institute for Research on Aging, Novato, California
- Dana Farber Cancer Institute, Boston, Massachusetts
- Dartmouth College, Hanover, New Hampshire
- Duke University Medical Center, Durham, North Carolina
- Fred Hutchinson Cancer Research Center, Seattle, Washington
- Georgetown University, Washington DC
- Harvard University, Boston, Massachusetts
- Johns Hopkins Medicine, Baltimore, Maryland
- Lawrence Berkeley National Laboratory, Berkeley, California
- Lineberger Comprehensive Cancer Center, Chapel Hill, North Carolina
- Masonic Cancer Center and University of Minnesota, Minneapolis
- Massachusetts General Hospital, Boston, Massachusetts
- MD Anderson Comprehensive Cancer Center, Houston, Texas
- MedKoo Biosciences, Morrisville, North Carolina
- Memorial Sloan Kettering Cancer Center, New York
- National Institutes of Health (NIH), Bethesda, Maryland
- Oregon State University, Corvallis, Oregon
- Princeton University, New Jersey
- Rutgers Cancer Institute of New Jersey
- Stanford University, California
- The Mount Sinai Hospital, New York
- The University of Kansas Hospital, Kansas
- Tisch Cancer Institute, New York
- UCSF, Helen Diller Family Cancer Centre, San Francisco, California
- University of Albany, New York
- University of California, Berkeley, California
- University of Chicago, Illinois
- University of Colorado, Denver, Colorado
- University of Illinois, Champaign, Illinois
- University of Washington, Seattle, Washington
- Washington University, St Louis, Missouri
- Weill Medical College of Cornell University, New York

The Radium Hospital site

INSTITUTE FOR CANCER RESEARCH

OSLO CANCER CLUSTER BUILDINGS

The Radium Hospital site after completion of new clinical buildings and the new proton therapy centre Q1 2024 (new buildings with green/ black roofs) amidst older clinical buildings and present ICR and OCC buildings. OCC buildings houses also pathology and Cancer Registry of Norway. Note proximity of clinical and diagnostic activity to research and innovation at ICR and in OCC.

The Next Generation

Some of the new recruits of 2021:

Maria Aanesland Dahle
PhD-student
Member of the Mælandsmo group,
Metastasis Biology and Experimental Therapeutics
Department of Tumor Biology

Marie Kristine Gillstrøm
Special engineer
Member of the Genomics and Bioinformatics Unit (Lorenz)
Department of Core Facilities

Håvard Styrkestad Haukaas
PhD-student
Member of the Stenmark group,
Cellular Membrane Dynamics
Department of Molecular Cell Biology

Caroline Lunder Jensen
PhD-student
Member of the Lothe group
Genetics
Department of Molecular Oncolog

Riccarda Katharina Læret
PhD-student
Member of the Berg group,
Photochemical Internalization
Department of Radiation Biology

Lamberto Javier Torralba Raga
Postdoctor
Member of the Malmberg group,
NK Cell Biology and Cell Therapy
Department of Cancer Immunology

John Zobolas
Postdoctor
Member of the Aittokallio group,
Computational Systems Medicine in Cancer
Department of Cancer Genetics

Institute training
The ICR had some 70 PhD students and 59 postdocs employed in 2021, and 29 MSc students graduated. We provide student (MSc, PhD) and Postdoc mentoring and training. Our researcher track includes advancement levels to Scientist and Senior Scientist, and we have 31 Project Group Leaders in addition to Group Leaders. For Engineers advancement levels are to Head Engineer.

Internally, the ICR Postdoc forum and ICR PhD forum organise talks and serve as meeting places across our departments for students and postdocs.

Our trainees at different levels also benefit from and our staff members contribute to teaching and mentoring in the UiO PhD programmes, the UiO Faculty of Medicine Postdoc Career Dev Programme, the School of Health Innovation and SPARK programme and various research leadership training programmes.

ICR career development program
In 2021-22 we aim to develop a career development program that incorporates focus on project leaders as a resource, on mentorship, and scientific mobility.

A Working Group for Career Development for different categories of staff is in operation and will deliver:

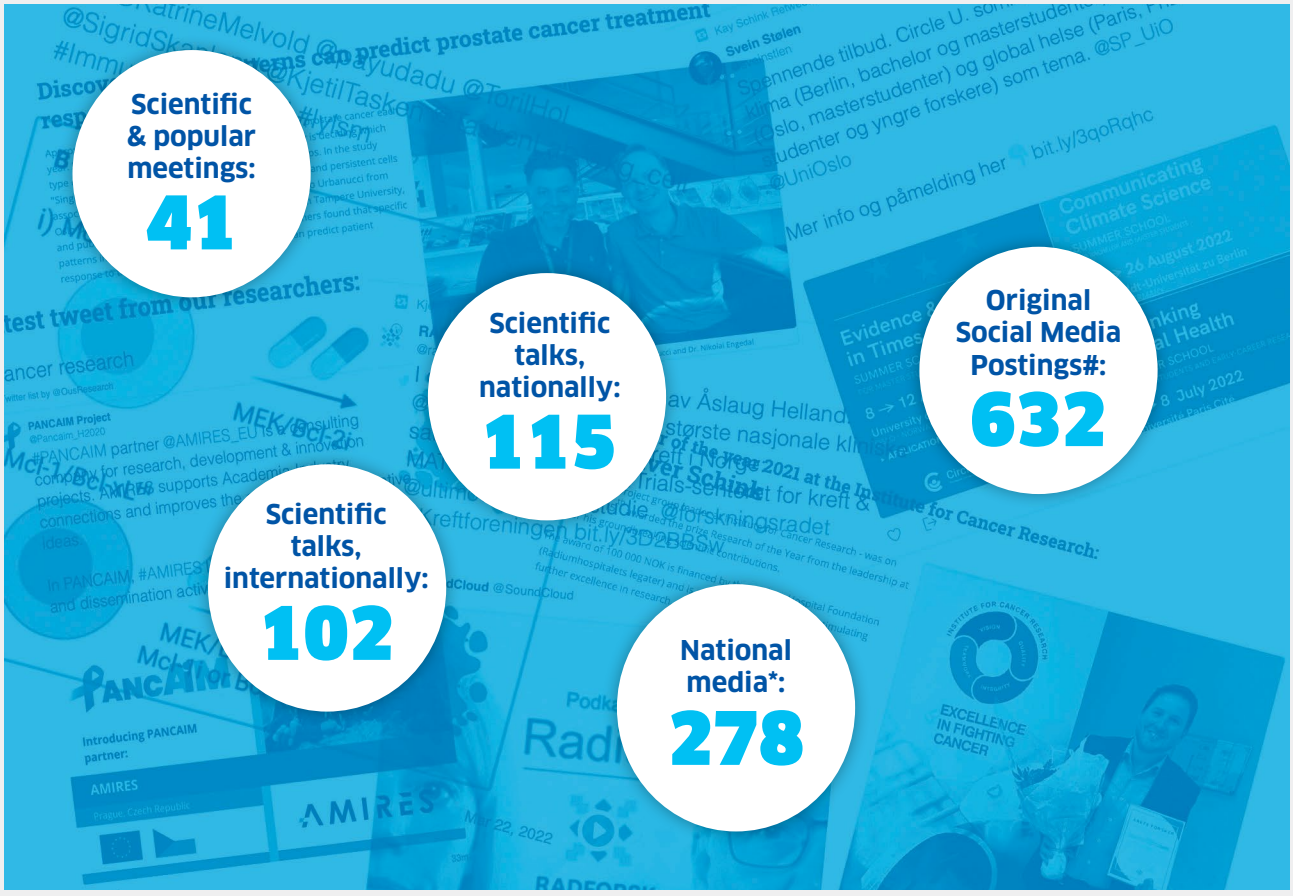
- An overview of what career development activities that are available institutionally
- Survey courses for postdoc, researchers, method-specialists etc
- Examine mentoring arrangements for different categories of staff
- Look specifically at career development post-postdoc (scientists, project leaders)
- Formalize Career Plans
- Document practices and available courses and programmes
- Suggest additional dedicated activities based on a gap analysis

“In 2021-22 we aim to develop a career development program that incorporates focus on project leaders as a resource, on mentorship, and scientific mobility.”

The Communication is Key

We published more than 240 peer-reviewed original, scientific papers in 2021 which is an important part of knowledge-generation. In addition, ICR members were also active in public outreach.

The ICR organized a number of scientific and popular meetings nationally and internationally, and we gave scientific talks in national fora and at international meetings, symposia and institutional seminars. Our researchers also disseminated knowledge in popular talks, interviews, newspaper correspondence, viewpoints and debate articles. We also communicated our science in more than 600 original postings in social media (Twitter, LinkedIn etc).



*: talks, interviews, newspaper correspondence, viewpoints and debate articles on popular science and research policy

#: original postings about science in social media (Twitter, LinkedIn etc)

Publications

Publications 2021

Agudo-Canalejo J, **Schultz SW**, Chino H, **Migliano SM**, Saito C, Koyama-Honda I, **Stenmark H**, **Brech A**, May AI, Mizushima N, Knorr RL (2021)
Wetting regulates autophagy of phase-separated compartments and the cytosol
Nature, 591 (7848), 142-146

Akimov Y, **Aittokallio T** (2021)
Re-defining synthetic lethality by phenotypic profiling for precision oncology
Cell Chem Biol, 28 (3), 246-256

Ali M, **Giannakopoulou E**, **Li Y**, Lehander M, Virding Culleton S, **Yang W**, **Knetter C**, Odabasi MC, **Bollineni RC**, Yang X, **Foldvari Z**, **Böschen ML**, **Taraldsrud E**, **Strønen E**, Toebes M, Hillen A, Mazzi S, de Ru AH, Janssen GMC, Kolstad A, Tjønnfjord GE, Lie BA, Griffioen M, Lehmann S, Osnes LT et al. (2021)
T cells targeted to TdT kill leukemic lymphoblasts while sparing normal lymphocytes
Nat Biotechnol

Aman Y, Schmauck-Medina T, Hansen M, Morimoto RI, Simon AK, Bjedov I, Palikaras K, **Simonsen A**, Johansen T, Tavernarakis N, Rubinsztein DC, Partridge L, Kroemer G, Labbadia J, Fang EF (2021)
Autophagy in healthy aging and disease
Nat Aging, 1 (8), 634-650

Anda S, **Boye E**, **Schink KO**, **Grallert B** (2021)
Cosegregation of asymmetric features during cell division
Open Biol, 11 (8), 210116

Andersen E, Chollet ME, Bernardi F, Branchini A, Baroni M, Mariani G, Dolce A, Batorova A, **Skarpen E**, Myklebust CF, Skretting G, Sandset PM (2021)
The Factor VII Variant p.A354V-p.P464Hfs: Clinical versus Intracellular and Biochemical Phenotypes Induced by Chemical Chaperones
Appl. Sci.-Basel, 11 (13), 5762

Andersen E, Chollet ME, Sletten M, Stavik B, **Skarpen E**, Backe PH, Thiede B, Glosli H, Henriksson CE, Iversen N (2021)
Molecular Characterization of Two Homozygous Factor VII Variants Associated with Intracranial Bleeding
Thromb Haemost, 121 (12), 1588-1598

Andersson Y, **Fleten KG**, **Abrahamsen TW**, Reed W, Davidson B, **Flatmark K** (2021)
Anti-Angiogenic Treatment in Pseudomyxoma Peritonei-Still a Strong Preclinical Rationale
Cancers (Basel), 13 (11)

Aranguren-Abadía L, Yadetie F, Donald CE, Sørhus E, Myklatun LE, **Zhang X**, Lie KK, Perrichon P, Nakken CL, Durif C, Shema S, Browman HI, Skiftesvik AB, Goksøyr A, Meier S, Karlsen OA (2021)
Photo-enhanced toxicity of crude oil on early developmental stages of Atlantic cod (Gadus morhua)
Sci Total Environ, 807 (Pt 1), 150697

Ask EH, Tschan-Plessl A, **Gjerdingen TJ**, **Saetersmoen ML**, **Hoel HJ**, **Wiiger MT**, **Olweus J**, Wahlin BE, **Lingjaerde OC**, Horowitz A, Cashen AF, Watkins M, Fehniger TA, Holte H, **Kolstad A**, **Malmberg KJ** (2021)
A Systemic Protein Deviation Score Linked to PD-1(+) CD8(+) T Cell Expansion That Predicts Overall Survival in Diffuse Large B Cell Lymphoma
Med, 2 (2), 180-+

Aure MR, **Fleischer T**, **Bjørklund S**, **Ankill J**, Castro-Mondragon JA, OSBREAC, **Børresen-Dale AL**, Tost J, **Sahlberg KK**, **Mathelier A**, **Tekpli X**, **Kristensen VN** (2021)
Crosstalk between microRNA expression and DNA methylation drives the hormone-dependent phenotype of breast cancer
Genome Med, 13 (1), 72

Bahrami N, **Jabeen S**, **Tahiri A**, **Sauer T**, Ødegård HP, Geisler SB, Gravdehaug B, Reitsma LC, Selsås K, **Kristensen V**, Geisler J (2021)
Lack of cross-resistance between non-steroidal and steroidal aromatase inhibitors in breast cancer patients: the potential role of the adipokine leptin
Breast Cancer Res Treat, 190 (3), 435-449

Barkovskaya A, Goodwin CM, **Seip K**, **Hilmarsdottir B**, **Pettersen S**, Stalnecker C, **Engebraaten O**, Briem E, Der CJ, Moestue SA, Gudjonsson T, **Maelandsmo GM**, **Prasmickaite L** (2021)
Detection of phenotype-specific therapeutic vulnerabilities in breast cells using a CRISPR loss-of-function screen
Mol Oncol, 15 (8), 2026-2045

Bartok O, Pataskar A, Nagel R, **Laos M**, Goldfarb E, Hayoun D, Levy R, Körner PR, Kreuger IZM, Champagne J, Zaal EA, Bleijerveld OB, Huang X, Kenski J, Wargo J, Brandis A, Levin Y, Mizrahi O, Alon M, Lebon S, Yang W, **Nielsen MM**, Stern-Ginossar N, Altelaar M, Berkers CR, Geiger T, Peeper DS, **Olweus J**, Samuels Y, Agami R.(2021)
Anti-tumour immunity induces aberrant peptide presentation in melanoma
Nature, 590 (7845), 332-337

Baxter JS, Johnson N, Tomczyk K, Gillespie A, Maguire S, Brough R, Fachal L, Michailidou K, Bolla MK, Wang Q, Dennis J, Ahearn TU, Andrulis IL, Anton-Culver H, Antonenkova NN, Arndt V, Aronson KJ, Augustinsson A, Becher H, Beckmann MW, Behrens S, Benitez J, Bermisheva M, Bogdanova NV, Bojesen SE et al. (2021)
Functional annotation of the 2q35 breast cancer risk locus implicates a structural variant in influencing activity of a long-range enhancer element
Am J Hum Genet, 108 (7), 1190-1203

Ben-Elazar S, **Aure MR**, Jonsdottir K, Leivonen SK, **Kristensen VN**, Janssen EAM, **Kleivi Sahlberg K**, **Lingjærde OC**, Yakhini Z (2021)
miRNA normalization enables joint analysis of several datasets to increase sensitivity and to reveal novel miRNAs differentially expressed in breast cancer
PLoS Comput Biol, 17 (2), e1008608

Bengtsen M, Winje IM, Eftestøl E, Landskron J, Sun C, Nygård K, Domanska D, Millay DP, **Meza-Zepeda LA**, Gundersen K (2021)
Comparing the epigenetic landscape in myonuclei purified with a PCM1 antibody from a fast/glycolytic and a

slow/oxidative muscle
PLoS Genet, 17 (11), e1009907

Berg J, Ramberg C, Haugstvedt JOS, Bengtson MB, Gabrielsen AM, **Brustugun OT**, Halvorsen AR, **Helland Å** (2021)
Lung Function After Stereotactic Body Radiation Therapy for Early-Stage Non-Small Cell Lung Cancer, Changes and Predictive Markers
Front Oncol, 11, 674731

Berg KCG, **Brunsell TH**, **Sveen A**, **Alagaratnam S**, **Bjørnslett M**, **Hektoen M**, Brudvik KW, Røsok BI, Bjørnbeth BA, Nesbakken A, **Lothe RA** (2021)
Genomic and prognostic heterogeneity among RAS/BRAF^{V600E} /TP53 co-mutated resectable colorectal liver metastases
Mol Oncol, 15 (4), 830-845

Bergholtz H, Carter JM, Cesano A, Cheang MCU, Church SE, Divakar P, Fuhrman CA, Goel S, Gong J, Guerriero JL, Hoang ML, Hwang ES, Kuasne H, Lee J, Liang Y, Mittendorf EA, Perez J, Prat A, Pusztai L, Reeves JW, Riazalhosseini Y, Richer JK, Sahin Ö, Sato H, Schlam I et al. (2021)
Best Practices for Spatial Profiling for Breast Cancer Research with the GeoMx® Digital Spatial Profiler
Cancers (Basel), 13 (17)

Berishvili E, Kaiser L, Cohen M, Berney T, Scholz H, **Floisand Y**, Mattsson J (2021)
Treatment of COVID-19 Pneumonia: the Case for Placenta-derived Cell Therapy
Stem Cell Rev Rep, 17 (1), 63-70

Bjaanæs MM, Nilsen G, **Halvorsen AR**, **Russnes HG**, Solberg S, Jørgensen L, **Brustugun OT**, **Lingjærde OC**, **Helland Å** (2021)
Whole genome copy number analyses reveal a highly aberrant genome in TP53 mutant lung adenocarcinoma tumors
BMC Cancer, 21 (1), 1089

Bjaanæs MM, Sande EPS, Loe Ø, Ramberg C, Næss TM, Ottestad A, Rogg LV, Svestad JG, **Haakensen VD** (2021)
Improved adaptive radiotherapy to adjust for anatomical alterations during curative treatment for locally advanced lung cancer
Phys Imaging Radiat Oncol, 18, 51-54

Bjørnetrø T, Steffensen LA, Vestad B, Brusletto BS, Olstad OK, Trøseid AM, Aass HCD, Haug KBF, **Llorente A**, Bøe SO, Lång A, Samiappan R, Redalen KR, Øvstebø R, Ree AH (2021)
Uptake of circulating extracellular vesicles from rectal cancer patients and differential responses by human monocyte cultures
FEBS Open Bio, 11 (3), 724-740

Boye K, Longhi A, Guren T, **Lorenz S**, Næss S, Pierini M, Taksdal I, Lobmaier I, Cesari M, Paioli A, Løndalen AM, Setola E, Hompland I, **Meza-Zepeda LA**, Sundby Hall K, Palmerini E (2021)
Pembrolizumab in advanced osteosarcoma: results of a single-arm, open-label, phase 2 trial
Cancer Immunol Immunother, 70 (9), 2617-2624

Breast Cancer Association Consortium, Dorling L, Carvalho S, Allen J, González-Neira A, Luccarini C, Wahlström C, Pooley KA, Parsons MT, Fortuno C, Wang Q, Bolla MK, Dennis J, Keeman R, Alonso MR, Álvarez N, Herraez B, Fernandez V, Núñez-Torres R, Osorio A, Valcich J, Li M, Törngren T, Harrington PA, Baynes C et al. (2021)
Breast Cancer Risk Genes - Association Analysis in More than 113,000 Women
N Engl J Med, 384 (5), 428-439

Brück OE, Lallukka-Brück SE, Hohtari HR, Ianevski A, Ebeling FT, Kovanen PE, Kytölä SI, **Aittokallio TA**, Ramos PM, Porkka KV, Mustjoki SM (2021)
Machine Learning of Bone Marrow Histopathology Identifies Genetic and Clinical Determinants in Patients with MDS
Blood Cancer Discov, 2 (3), 238-249

Bruun J, **Eide PW**, **Bergsland CH**, Bruck O, Svindland A, Arjama M, Välimäki K, **Bjørnslett M**, Guren MG, Kallioniemi O, Nesbakken A, **Lothe RA**, Pellinen T (2021)
E-cadherin is a robust prognostic biomarker in colorectal cancer and low expression is associated with sensitivity to inhibitors of topoisomerase, aurora, and HSP90 in preclinical models
Mol Oncol

Buratta S, Shimanaka Y, Costanzi E, Ni S, Urbanelli L, Kono N, Morena F, **Sagini K**, Giovagnoli S, Romani R, Gargaro M, Arai H, Emiliani C (2021)
Lipotoxic stress alters the membrane lipid profile of extracellular vesicles released by Huh-7 hepatocarcinoma cells
Sci Rep, 11 (1), 4613

Cangiano M, Grudniewska M, Salji MJ, Nykter M, Jenster G, **Urbanucci A**, Granchi Z, Janssen B, Hamilton G, Leung HY, Beumer IJ (2021)
Gene Regulation Network Analysis on Human Prostate Orthografts Highlights a Potential Role for the *JMJD6* Regulon in Clinical Prostate Cancer
Cancers (Basel), 13 (9)

Caulier B, **Enserink JM**, Wälchli S (2021)
Pharmacologic Control of CAR T Cells
Int J Mol Sci, 22 (9)

Chellappa S, **Kushekhar K**, Hagness M, Horneland R, **Taskén K**, **Aandahl EM** (2021)
The Presence of Activated T Cell Subsets prior to Transplantation Is Associated with Increased Rejection Risk in Pancreas Transplant Recipients
J Immunol, 207 (10), 2501-2511

Chiu E, Felices M, Cichocki F, Davis Z, Wang H, Tuninga K, Vallera DA, Lee T, Bjordahl R, **Malmberg KJ**, Valamehr B, Miller JS (2021)
Anti-NKG2C/IL-15/anti-CD33 killer engager directs primary and iPSC-derived NKG2C + NK cells to target myeloid leukemia Mol Ther. 2021 Dec 1;29(12):3410-3421

Christensen SB, Simonsen HT, **Engedal N**, Nissen P, Møller JV, Denmeade SR, Isaacs JT (2021)
From Plant to Patient: Thapsigargin, a Tool for Understanding Natural Product Chemistry, Total Syntheses, Biosynthesis, Taxonomy, ATPases, Cell Death, and Drug Development
Prog Chem Org Nat Prod, 115, 59-114

Christopoulos PF, **Grigalavicius M**, Corthay A, **Berg K**, **Theodossiou TA** (2021)
Reactive Species from Two-Signal Activated Macrophages Interfere with Their Oxygen Consumption Measurements
Antioxidants (Basel), 10 (7)

Cichońska A, Ravikumar B, Allaway RJ, Wan F, Park S, Isayev O, Li S, Mason M, Lamb A, Tanoli Z, Jeon M, Kim S, Popova M, Capuzzi S, Zeng J, Dang K, Koytiger G, Kang J, Wells CI, Willson TM, IDG-DREAM Drug-Kinase Binding Prediction Challenge Consortium, Oprea TI, Schlessinger A, Drewry DH, Stolovitzky G et al. (2021)
Crowdsourced mapping of unexplored target space of kinase inhibitors
Nat Commun, 12 (1), 3307

Dagenborg VJ, **Marshall SE**, Grzyb K, Fretland ÅA, Lund-Iversen M, **Mælandsmo GM**, Ree AH, Edwin B, Yaqub S, **Flatmark K** (2021)
Low Concordance Between T-Cell Densities in Matched Primary Tumors and Liver Metastases in Microsatellite Stable Colorectal Cancer
Front Oncol, 11, 671629

Dale K, Yadetie F, Horvli T, **Zhang X**, Frøysa HG, Karlsen OA, Goksøyr A (2021)
Single PFAS and PFAS mixtures affect nuclear receptor- and oxidative stress-related pathways in precision-cut liver slices of Atlantic cod (Gadus morhua)
Sci Total Environ, 152732 (in press)

Davydova E, Shimazu T, Schuhmacher MK, Jakobsson ME, Willemen HLDM, Liu T, Moen A, Ho AYY, Małecki J, Schroer L, **Pinto R**, Suzuki T, Grønsberg IA, Sohtome Y, Akakabe M, Weirich S, Kikuchi M, Olsen JV, Dohmae N, Umehara T, Sodeoka M, Siino V, McDonough MA, Eijkelkamp N, Schofield CJ et al. (2021)
The methyltransferase METTL9 mediates pervasive 1-methylhistidine modification in mammalian proteomes
Nat Commun, 12 (1), 891

de Freitas Germano J, **Sharma A**, Stastna M, Huang C, Aniag M, Aceves A, Van Eyk JE, Mentzer RM, Piplani H, Andres AM, Gottlieb RA (2021)
Proteomics of Mouse Heart Ventricles Reveals Mitochondria and Metabolism as Major Targets of a Post-Infarction Short-Acting GLP1Ra-Therapy
Int J Mol Sci, 22 (16)

Dillard C, **Reis JGT**, **Rusten TE** (2021)
RasV12; scrib-/- Tumors: A Cooperative Oncogenesis Model Fueled by Tumor/Host Interactions
Int J Mol Sci, 22 (16)

Dillard P, Casey N, Pollmann S, Vernhoff P, **Gaudernack G**, Kvalheim G, Wälchli S, Inderberg EM (2021)
Targeting KRAS mutations with HLA class II-restricted TCRs for the treatment of solid tumors
Oncoimmunology, 10 (1), 1936757

Dominguez-Valentin M, Plazzer JP, Sampson JR, Engel C, Aretz S, Jenkins MA, Sunde L, Bernstein I, Capella G, Balaguer F, Macrae F, Winship IM, Thomas H, Evans DG, Burn J, Greenblatt M, de Vos Tot Nederveen Cappel WH, Sijmons RH, Nielsen M, Bertario L, Bonanni B, Tibiletti MG, Cavestro GM, Lindblom A, Valle AD et al. (2021)
No Difference in Penetrance between Truncating and Missense/Aberrant Splicing Pathogenic Variants in MLH1 and MSH2: A Prospective Lynch Syndrome Database Study
J Clin Med, 10 (13)

Durgan J, **Lystad AH,** Sloan K, Carlsson SR, Wilson MI, Marcassa E, Ulferts R, Webster J, Lopez-Clavijo AF, Wakelam MJ, Beale R, **Simonsen A**, Oxley D, Florey O (2021)
Non-canonical autophagy drives alternative ATG8 conjugation to phosphatidylserine
Mol Cell, 81 (9), 2031-2040.e8

Eide IJZ, Grut H, **Helland Å**, Ekman S, Sørensen JB, Hansen KH, Grønberg BH, Cicenas S, Koivunen JP, Mellemgaard A, **Brustugun OT** (2021)
Intracranial effect of osimertinib in relapsed EGFR-mutated T790M-positive and -negative non-small cell lung cancer patients: results from a phase II study
Acta Oncol, 60 (12), 1565-1571

Eide M, **Zhang X**, Karlsen OA, Goldstone JV, Stegeman J, Jonassen I, Goksøyr A (2021)
The chemical defensome of five model teleost fish
Sci Rep, 11 (1), 10546

Eide PW, **Moosavi SH**, **Eilertsen IA**, **Brunsell TH**, **Langerud J**, **Berg KCG**, Røsok BI, Bjørnbeth BA, Nesbakken A, **Lothe RA**, **Sveen A** (2021)
Metastatic heterogeneity of the consensus molecular subtypes of colorectal cancer
NPJ Genom Med, 6 (1), 59

Ellingsen EB, Mangsbo SM, **Hovig E**, Gaudernack G (2021)
Telomerase as a Target for Therapeutic Cancer Vaccines and Considerations for Optimizing Their Clinical Potential
Front Immunol, 12, 682492

Engebraaten O, Yau C, **Berg K**, Borgen E, Garred Ø, **Berstad MEB**, **Fremstedal ASV**, DeMichele A, Veer LV', Esserman L, **Weyergang A** (2021)
RAB5A expression is a predictive biomarker for trastuzumab emtansine in breast cancer
Nat Commun, 12 (1), 6427

Erdbrügger U, Blijdorp CJ, Bijnsdorp IV, Borràs FE, Burger D, Bussolati B, Byrd JB, Clayton A, Dear JW, Falcón-Pérez JM, Grange C, Hill AF, Holthöfer H, Hoorn EJ, Jenster G, Jimenez CR, Junker K, Klein J, Knepper MA, Koritzinsky EH, Luther JM, Lenassi M, Leivo J, Mertens I, Musante L, **Llorente A,** Martens-Uzunova, ES, et al. (2021)
Urinary extracellular vesicles: A position paper by the Urine Task Force of the International Society for Extracellular Vesicles
J Extracell Vesicles, 10 (7), e12093

Erdélyi K, Ditrói T, Johansson HJ, Czikora Á, Balog N, **Silwal-Pandit L**, Ida T, Olasz J, Hajdú D, Mátrai Z, Csuka O, Uchida K, Tóvári J, **Engebraten O**, Akaike T, **Børresen Dale AL**, Kásler M, Lehtiö J, Nagy P (2021)
Reprogrammed transsulfuration promotes basal-like breast tumor progression via realigning cellular cysteine persulfidation
Proc Natl Acad Sci U S A, 118 (45)

Fernandes P, Miotto B, Saint-Ruf C, Said M, Barra V, **Nähse V**, Ravera S, Cappelli E, Naim V (2021)
FANCD2 modulates the mitochondrial stress response to prevent common fragile site instability
Commun Biol, 4 (1), 127

Ferreira FA, Helmersen K, **Visnovska T**, Jørgensen SB, Aamot HV (2021)
Rapid nanopore-based DNA sequencing protocol of antibiotic-resistant bacteria for use in surveillance and outbreak investigation
Microb Genom, 7 (4)

Flatin BTB, Vedeld HM, Pinto R, Langerud J, Lind GE, Lothe RA, Sveen A, Jeanmougin M (2020)
Multiregional assessment of CIMP in primary colorectal cancers: Phenotype concordance but marker variability
Int J Cancer, 148 (7), 1652-1657

Flatmark K, **Torgunrud A**, **Fleten KG**, Davidson B, Juul HV, Mensali N, **Lund-Andersen C**, Inderberg EM (2021)
Peptide vaccine targeting mutated GNAS: a potential novel treatment for pseudomyxoma peritonei
J Immunother Cancer, 9 (10)

Fleten KG, Eksteen JJ, Mauseth B, Camilio KA, Vasskog T, Sveinbjørnsson B, Rekdal Ø, **Mælandsmo GM**, **Flatmark K** (2021)
Oncolytic peptides DTT-205 and DTT-304 induce complete regression and protective immune response in ex-

perimental murine colorectal cancer
Sci Rep, 11 (1), 6731

Fløisand Y, Schroeder MA, Chevallier P, Selleslag D, Devine S, Renteria AS, Mohty M, Yakoub-Agha I, Chen C, Parfionovas A, Quadri S, Jansson J, Akbari M, Chen YB (2021)
A phase 2a randomized clinical trial of intravenous vedolizumab for the treatment of steroid-refractory intestinal acute graft-versus-host disease
Bone Marrow Transplant, 56 (10), 2477-2488

Fores-Martos J, Cervera-Vidal R, Sierra-Roca J, Lozano-Asencio C, Fedele V, Cornelissen S, **Edvarsen H**, Tadeo-Cervera I, Eroles P, Lluch A, Tabares-Seisdedos R, Falcó A, Van't Veer LJ, Schmidt M, Quigley DA, **Børresen-Dale AL**, **Kristensen VN**, Balmain A, Climent J (2021)
Circadian PERformance in breast cancer: a germline and somatic genetic study of PER3^{VNTR} polymorphisms and gene co-expression
NPJ Breast Cancer, 7 (1), 118

Formica M, Storaci AM, Bertolini I, Carminati F, **Knævelsrud H**, Vaira V, Vaccari T (2021)
V-ATPase controls tumor growth and autophagy in a Drosophila model of gliomagenesis
Autophagy, 17 (12), 4442-4452

Frafjord A, Buer L, Hammarström C, Aamodt H, Woldbæk PR, **Brustugun OT**, **Helland Å**, Øynebråten I, Corthay A (2021)
The Immune Landscape of Human Primary Lung Tumors Is Th2 Skewed
Front Immunol, 12, 764596

Galili B, **Tekpli X**, **Kristensen VN**, Yakhini Z (2021)
Efficient gene expression signature for a breast cancer immuno-subtype
PLoS One, 16 (1), e0245215

Gansmo LB, Sofiyeva N, **Bjørnslett M**, Romundstad P, Hveem K, Vatten L, Dørum A, Lønning PE, Knappskog S (2021)
Impact of the APOBEC3A/B deletion polymorphism on risk of ovarian cancer
Sci Rep, 11 (1), 23463

Garcia I, **Orellana-Muñoz S**, Ramos-Alonso L, **Andersen AN**, Zimmermann C, Eriksson J, Bøe SO, Kaferle P, Papamichos-Chronakis M, Chymkowitch P, **Enserink JM** (2021)
Kel1 is a phosphorylation-regulated noise suppressor of the pheromone signaling pathway
Cell Rep, 37 (13), 110186

Gaustad JV, **Rofstad EK** (2021)
Assessment of Hypoxic Tissue Fraction and Prediction of Survival in Cervical Carcinoma by Dynamic Contrast-Enhanced MRI
Front Oncol, 11, 668916

Gaustad JV, **Rofstad EK** (2021)
Assessment of Intratumor Heterogeneity in Parametric Dynamic Contrast-Enhanced MR Images: A Comparative Study of Novel and Established Methods
Front Oncol, 11, 722773

Gaustad JV, **Simonsen TG**, **Hansem LMK**, **Rofstad EK** (2021)
Intravital microscopy of tumor vessel morphology and function using a standard fluorescence microscope
Eur J Nucl Med Mol Imaging, 48 (10), 3089-3100

Georgiesh T, **Namløs HM**, **Sharma N**, **Lorenz S**, Myklebost O, Bjerkehagen B, **Meza-Zepeda LA**, **Boye K** (2021)
Clinical and molecular implications of NAB2-STAT6 fusion variants in solitary fibrous tumour
Pathology, 53 (6), 713-719

Giovannucci TA, Salomons FA, Stoy H, Herzog LK, Xu S, Qian W, Merino LG, Gierisch ME, Haraldsson M, Lystad AH, Uvell H, **Simonsen A**, Gustavsson AL, Vallin M, Dantuma NP (2021)
Identification of a novel compound that simultaneously impairs the ubiquitin-proteasome system and autophagy
Autophagy

Gonçalves AB, Hasselbalch SK, Joensen BB, **Patzke S**, Martens P, Ohlsen SK, Quinodoz M, Nikopoulos K, Suleiman R, Damsø Jeppesen MP, Weiss C, Christensen ST, Rivolta C, Andersen JS, Farinelli P, Pedersen LB (2021)
CEP78 functions downstream of CEP350 to control biogenesis of primary cilia by negatively regulating CP110 levels
Elife, 10

Gorgen A, Guttormsen M, Larsen AC, Siem S, Adli E, Edin NFJ, Gjersdal H, Henriksen G, Malinen E, Modamio V, Schoultz B, Sobas PA, **Theodossiou TA**, Wikne JC (2021)
The Oslo Cyclotron Laboratory
Eur. Phys. J. Plus, 136 (2), 181

Grad I, **Hanes R**, Ayuda-Durán P, Kuijjer ML, **Enserink JM**, **Meza-Zepeda LA**, **Myklebost O** (2021)
Discovery of novel candidates for anti-liposarcoma therapies by medium-scale high-throughput drug screening
PLoS One, 16 (3), e0248140

Grigalavicius M, Mastrangelopoulou M, Berg K, Arous D**,** Ménard M**, Raabe-Henriksen T,** Brondz E, Siem S, Görgen A, Edin NFJ, Malinen E**, Theodossiou TA.** (2021)
Publisher Correction: Proton-dynamic therapy following photosensitiser activation by accelerated protons demonstrated through fluorescence and singlet oxygen production. Nat Commun. 2021 Nov 30;12(1):7073

Guerriero I, **Ramberg H**, **Sagini K**, **Ramirez-Garrastacho M**, **Taskén KA**, **Llorente A** (2021)
Implication of β2-adrenergic receptor and miR-196a correlation in neurite outgrowth of LNCaP prostate cancer cells
PLoS One, 16 (6), e0253828

Guldvik IJ, Ekseth L, Kishan AU, Stensvold A, Inderberg EM, Lilleby W (2021)
Circulating Tumor Cell Persistence Associates with Long-Term Clinical Outcome to a Therapeutic Cancer Vaccine in Prostate Cancer
J Pers Med, 11 (7)

Gundersen S, Boddu S, Capella-Gutierrez S, Drabløs F, Fernández JM, Kompova R, Taylor K, Titov D, Zerbino D, **Hovig E** (2021)
Recommendations for the FAIRification of genomic track metadata
F1000Res, 10

Hamfjord J, Guren TK, Glimelius B, Sorbye H, Pfeiffer P, Dajani O, **Lingjaerde OC**, Tveit KM, Pallisgaard N, Spindler KG, **Kure EH** (2021)
Clinicopathological factors associated with tumour-specific mutation detection in plasma of patients with RAS-mutated or BRAF-mutated metastatic colorectal cancer
Int J Cancer, 149 (6), 1385-1397

Hamfjord J, Myklebust TÅ, Larsen IK, **Kure EH**, Glimelius B, Guren TK, Tveit KM, Guren MG (2021)
Survival Trends of Right- and Left-Sided Colon Cancer across Four Decades: A Norwegian Population-Based Study
Cancer Epidemiol Biomarkers Prev (in press)

Hauge S, **Eek Mariampillai A**, **Rødland GE**, **Bay LTE**, **Landsverk HB**, **Syljuåsen RG** (2021)
Expanding roles of cell cycle checkpoint inhibitors in radiation oncology
Int J Radiat Biol

Haugen MH, **Lingjærde OC**, Hedenfalk I, Garred Ø, Borgen E, Loman N, Hatschek T, **Børresen-Dale AL**, Naume B, Mills GB, **Mælandsmo GM**, **Engebraaten O** (2021)
Protein Signature Predicts Response to Neoadjuvant Treatment With Chemotherapy and Bevacizumab in HER2-Negative Breast Cancers
JCO Precis Oncol, 5

He C, Micallef L, He L, Peddinti G, **Aittokallio T**, Jacucci G (2021)
Characterizing the Quality of Insight by Interactions: A Case Study
IEEE Trans Vis Comput Graph, 27 (8), 3410-3424

Helwa R, Gansmo LB, **Bjørnslett M**, Halle MK, Werner HMJ, Romundstad P, Hveem K, Vatten L, Dørum A, Lønning PE, Knappskog S (2021)
Impact of MDM2 promoter SNP55 (rs2870820) on risk of endometrial and ovarian cancer
Biomarkers, 26 (4), 302-308

Herring S, Oda JM, Wagoner J, Kirchmeier D, O'Connor A, Nelson EA, Huang Q, Liang Y, DeWald LE, Johansen LM, Glass PJ, Olinger GG, Ianevski A, **Aittokallio T**, Paine MF, Fink SL, White JM, Polyak SJ (2021)
Inhibition of Arenaviruses by Combinations of Orally Available Approved Drugs
Antimicrob Agents Chemother, 65 (4)

Holland P, Hagopian WM, Jahren AH, **Rusten TE** (2021)
Natural abundance isotope ratios to differentiate sources of carbon used during tumor growth in vivo
BMC Biol, 19 (1), 85

Hompland T, **Fjeldbo CS**, **Lyng H** (2021)
Tumor Hypoxia as a Barrier in Cancer Therapy: Why Levels Matter
Cancers (Basel), 13 (3)

Hovda T, Hoff SR, Larsen M, Romundstad L, **Sahlberg KK**, Hofvind S (2021)
True and Missed Interval Cancer in Organized Mammographic Screening: A Retrospective Review Study of Diagnostic and Prior Screening Mammograms
Acad Radiol (in press)

Hølmebakk T, Wiedswang AM, **Meza-Zepeda LA**, Hompland I, Lobmaier IVK, Berner JM, Stoldt S, **Boye K** (2021)
Integrating Anatomical, Molecular and Clinical Risk Factors in Gastrointestinal Stromal Tumor of the Stomach
Ann Surg Oncol, 28 (11), 6837-6845

Haakensen VD, Nowak AK, **Ellingsen EB**, **Farooqi SJ**, **Bjaanæs MM**, **Horndalsveen H**, Mcculloch T, Grundberg O, Cedres SM, **Helland Å** (2021)
NIPU: a randomised, open-label, phase II study evaluating nivolumab and ipilimumab combined with UV1 vaccination as second line treatment in patients with malignant mesothelioma
J Transl Med, 19 (1), 232

Ianevski A, Lahtela J, Javarappa KK, Sergeev P, Ghimire BR, Gautam P, Vähä-Koskela M, Turunen L, Linnavirta N, Kuusanmäki H, Kontro M, Porkka K, Heckman CA, Mattila P, Wennerberg K, Giri AK, **Aittokallio T** (2021)
Patient-tailored design for selective co-inhibition of leukemic cell subpopulations
Sci Adv, 7 (8)

Iglesias R, Ferreras JM, **Llorente A**, Citores L (2021)
Ebulin l Is Internalized in Cells by Both Clathrin-Dependent and -Independent Mechanisms and Does Not Require Clathrin or Dynamin for Intoxication
Toxins (Basel), 13 (2)

Isaksen KT, Mastroianni MA, Rinde M, Rusten LS, Barzenje DA, Ramslien LF, Slaaen M, Jerm MB, **Smeland EB**, Rostoft S, Liestøl K, **Brodtkorb M**, Holte H (2021)
A simplified frailty score predicts survival and can aid treatment-intensity decisions in older patients with DLBCL
Blood Adv, 5 (22), 4771-4782

Jaiswal A, Gautam P, Pietilä EA, Timonen S, Nordström N, Akimov Y, Sipari N, Tanoli Z, **Fleischer T**, Lehti K, Wennerberg K, **Aittokallio T** (2021)
Multi-modal meta-analysis of cancer cell line omics profiles identifies ECHDC1 as a novel breast tumor suppressor
Mol Syst Biol, 17 (3), e9526

Janiszewska M, Stein S, Metzger Filho O, Eng J, Kingston NL, Harper NW, **Rye IH**, Alečković M, Trinh A, Murphy KC, Marangoni E, Cristea S, Oakes B, Winer EP, Krop IE, **Russnes HG**, Spellman PT, Bucher E, Hu Z, Chin K, Gray JW, Michor F, Polyak K (2021)
The impact of tumor epithelial and microenvironmental heterogeneity on treatment responses in HER2+ breast cancer
JCI Insight, 6 (11)

Janssen M, **Stenmark H**, Carlson A (2021)
Divalent ligand-monovalent molecule binding
Soft Matter, 17 (21), 5375-5383

Jenum S, Tonby K, Rueegg CS, Rühwald M, Kristiansen MP, Bang P, Olsen IC, Sellæg K, Røstad K, Mustafa T, **Taskén K**, Kvale D, Mortensen R, Dyrhol-Riise AM (2021)
A Phase I/II randomized trial of H56:IC31 vaccination and adjunctive cyclooxygenase-2-inhibitor treatment in tuberculosis patients
Nat Commun, 12 (1), 6774

Jerjes W, Hamdoon Z, **Berg K**, Høgset A, Hopper C (2021)
Squamous cell carcinoma of the ear treated by photochemical internalization
Photodiagnosis Photodyn Ther, 36, 102528

Ji X, Lin L, Fan J, Li Y, Wei Y, Shen S, Su L, Shafer A, **Bjaanaes MM**, Karlsson A, Planck M, Staaf J, **Helland Å**, Esteller M, Zhang R, Chen F, Christiani DC (2021)
Epigenome-wide three-way interaction study identifies a complex pattern between TRIM27, KIAA0226, and smoking associated with overall survival of early-stage NSCLC
Mol Oncol

Jiang X, Bergquist A, Löscher BS, Venkatesh G, Mold JE, Holm K, Laerdahl JK, **Skånland SS**, Maleki KT, Cornillet M, **Taskén K**, Franke A, Karlsen TH, Björkström NK, Melum E (2021)
A heterozygous germline CD100 mutation in a family with primary sclerosing cholangitis
Sci Transl Med, 13 (582)

Johannesen TB, Smeland S, Aaserud S, Buanes EA, Skog A, Ursin G, **Helland Å** (2021)
COVID-19 in Cancer Patients, Risk Factors for Disease and Adverse Outcome, a Population-Based Study From Norway
Front Oncol, 11, 652535

Johansson ALV, Trewin CB, Fredriksson I, Reinertsen KV, **Russnes H**, Ursin G (2021)
In modern times, how important are breast cancer stage, grade and receptor subtype for survival: a population-based cohort study
Breast Cancer Res, 23 (1), 17

Juzeniene A, **Stenberg VY**, Bruland ØS, Larsen RH (2021)
Preclinical and Clinical Status of PSMA-Targeted Alpha Therapy for Metastatic Castration-Resistant Prostate Cancer
Cancers (Basel), 13 (4)

Jøntvedt Jørgensen M, Nore KG, Aass HCD, Layre E, Nigou J, Mortensen R, **Tasken K**, Kvale D, Jenum S, Tonby K, Dyrhol-Riise AM (2021)
Plasma LOX-Products and Monocyte Signaling Is Reduced by Adjunctive Cyclooxygenase-2 Inhibitor in a Phase I Clinical Trial of Tuberculosis Patients
Front Cell Infect Microbiol, 11, 669623

Jørgensen SF, Buechner J, Myhre AE, Galteland E, Spetalen S, Kulseth MA, Sorte HS, Holla ØL, Lundman E, Alme C, Heier I, Flægstad T, **Fløisand Y**, Benneche A, Fevang B, Aukrust P, Stray-Pedersen A, Gedde-Dahl T, Nordøy I (2021)
A Nationwide Study of GATA2 Deficiency in Norway-the Majority of Patients Have Undergone Allo-HSCT
J Clin Immunol

Kang W, Fromm B, Houben AJ, **Høye E**, Bezdan D, Arnan C, Thrane K, Asp M, Johnson R, Biryukova I, Friedländer MR (2021)
MapToCleave: High-throughput profiling of microRNA biogenesis in living cells
Cell Rep, 37 (7), 110015

Karvelsson ST, Sigurdsson A, **Seip K**, Grinde MT, Wang Q, Johannsson F, **Mælandsmo GM**, Moestue SA, Rolfsson O, Halldorsson S (2021)
EMT-Derived Alterations in Glutamine Metabolism Sensitize Mesenchymal Breast Cells to mTOR Inhibition
Mol Cancer Res, 19 (9), 1546-1558

Karvelsson ST, Wang Q, **Hilmarsdottir B**, Sigurdsson A, Moestue SA, **Mælandsmo GM**, Halldorsson S, Gudmundsson S, Rolfsson O (2021)
Argininosuccinate lyase is a metabolic vulnerability in breast development and cancer
NPJ Syst Biol Appl, 7 (1), 36

Kehrloesser S, Oberst S, Westerhuis W, Wendler A, Wind A, Blaauwgeers H, Burrion JB, Nagy P, **Saeter G**, Gustafsson E, De Paoli P, Lovey J, Lombardo C, Philip T, de Valeriola D, Docter M, Boomsma F, Saghatchian M, Svoboda M, Philip I, Monetti F, Hummel H, McVie G, Otter R, van Harten W (2021)
Analysing the attributes of Comprehensive Cancer Centres and Cancer Centres across Europe to identify key hallmarks
Mol Oncol, 15 (5), 1277-1288

Khezri R, **Holland P**, Schoborg TA, Abramovich I, **Takáts S**, **Dillard C**, **Jain A**, **O'Farrell F**, **Schultz SW**, Hagopian WM, **Quintana EM**, Ng R, **Katheder NS**, **Rahman MM**, **Teles Reis JG**, **Brech A**, Jasper H, Rusan NM, Jahren AH, Gottlieb E, **Rusten TE** (2021)
Host autophagy mediates organ wasting and nutrient mobilization for tumor growth
EMBO J, 40 (18), e107336

Kidd SG, **Carm KT**, **Bogaard M**, **Olsen LG**, **Bakken AC**, **Løvf M**, **Lothe RA**, **Axcrona K**, **Axcrona U**, **Skotheim RI** (2021)
High expression of SCHLAP1 in primary prostate cancer is an independent predictor of biochemical recurrence, despite substantial heterogeneity
Neoplasia, 23 (6), 634-641

Kim SJ, Lubinski J, Huzarski T, **Møller P**, Armel S, Karlan BY, Senter L, Eisen A, Foulkes WD, Singer CF, Tung N, Bordeleau L, Neuhausen SL, Olopade OI, Eng C, Weitzel JN, Fruscio R, Narod SA, Kotsopoulos J, Hereditary Ovarian Cancer Clinical Study Group (2021)
Weight Gain and the Risk of Ovarian Cancer in BRCA1 and BRCA2 Mutation Carriers
Cancer Epidemiol Biomarkers Prev, 30 (11), 2038-2043

Kjøsen G, Rydenfelt K, Horneland R, **Aandahl EM**, Line PD, Dorenberg E, Berstad AE, Brabrand K, Hagen G, Pischke SE, Bergmann GB, Nordheim E, Jenssen TG, Tønnessen TI, Haugaa H (2021)
Early detection of complications in pancreas transplants by microdialysis catheters, an observational feasibility study
PLoS One, 16 (3), e0247615

Klionsky DJ, Abdel-Aziz AK, Abdelfatah S, Abdellatif M, Abdoli A, Abel S, Abeliovich H, Abildgaard MH, Abudu YP, Acevedo-Arozena A, Adamopoulos IE, Adeli K, Adolph TE, Adornetto A, Aflaki E, Agam G, Agarwal A, Aggarwal BB, Agnello M, Agostinis P, Agrewala JN, Agrotis A, Aguilar PV, Ahmad ST, Ahmed ZM et al. (2021)
Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition)[1]
Autophagy, 17 (1), 1-382

Klionsky DJ, Petroni G, Amaravadi RK, Baehrecke EH, Ballabio A, Boya P, Bravo-San Pedro JM, Cadwell K, Cecconi F, Choi AMK, Choi ME, Chu CT, Codogno P, Colombo MI, Cuervo AM, Deretic V, Dikic I, Elazar Z, Eskelinen EL, Fimia GM, Gewirtz DA, Green DR, Hansen M, Jäättelä M, Johansen T et al. (2021)
Autophagy in major human diseases
EMBO J, 40 (19), e108863

Klopotowska M, Bajor M, Graczyk-Jarzynka A, Kraft A, Pilch Z, Zhylko A, Firczuk M, Baranowska I, Lazniewski M, Plewczynski D, Goral A, Soroczynska K, Domagala J, Marhelava K, Slusarczyk A, Retecki K, Ramji K, Krawczyk M, Temples MN, Sharma B, Lachota M, **Netskar H**, **Malmberg KJ**, Zagozdzon R, Winiarska M (2021)
PRDX-1 Supports the Survival and Antitumor Activity of Primary and CAR-Modified NK Cells under Oxidative Stress
Cancer Immunol Res (in press)

Kosanović M, **Llorente A**, Glamočlija S, Valdivielso JM, **Bozic M** (2021)
Extracellular Vesicles and Renal Fibrosis: An Odyssey toward a New Therapeutic Approach
Int J Mol Sci, 22 (8)

Krüger K, **Silwal-Pandit L**, Wik E, Straume O, Stefansson IM, Borgen E, Garred Ø, Naume B, **Engebraaten O,** Akslen LA (2021)
Baseline microvessel density predicts response to neoadjuvant bevacizumab treatment of locally advanced breast cancer
Sci Rep, 11 (1), 3388

Kryeziu K, **Moosavi SH**, **Bergsland CH**, Guren MG, **Eide PW**, **Totland MZ**, Lassen K, Abildgaard A, Nesbakken A, **Sveen A**, **Lothe RA** (2021)
Increased sensitivity to SMAC mimetic LCL161 identified by longitudinal ex vivo pharmacogenomics of re-

current, KRAS mutated rectal cancer liver metastases
J Transl Med, 19 (1), 384

Krzyscik MA, Zakrzewska M, **Sørensen V**, **Øy GF**, **Brunheim S**, **Haugsten EM**, **Mælandsmo GM**, **Wiedlocha A**, Otlewski J (2021)
Fibroblast Growth Factor 2 Conjugated with Monomethyl Auristatin E Inhibits Tumor Growth in a Mouse Model
Biomacromolecules, 22 (10), 4169-4180

Kukkonen K, Taavitsainen S, Huhtala L, Uusi-Makela J, Granberg KJ, Nykter M, **Urbanucci A** (2021)
Chromatin and Epigenetic Dysregulation of Prostate Cancer Development, Progression, and Therapeutic Response
Cancers (Basel), 13 (13)

Kumar S, Javed R, Mudd M, Pallikkuth S, Lidke KA, Jain A, Tangavelou K, Gudmundsson SR, Ye C, **Rusten TE**, Anonsen JH, Lystad AH, Claude-Taupin A, **Simonsen A**, Salemi M, Phinney B, Li J, Guo LW, Bradfute SB, Timmins GS, Eskelinen EL, Deretic V (2021)
Mammalian hybrid pre-autophagosomal structure HyPAS generates autophagosomes
Cell, 184 (24), 5950-5969.e22

Kværner AS, Birkeland E, **Bucher-Johannessen C**, Vinberg E, Nordby JI, Kangas H, Bemanian V, Ellonen P, Botteri E, Natvig E, Rognes T, **Hovig E**, Lyle R, Ambur OH, de Vos WM, Bultman S, Hjartåker A, Landberg R, Song M, Blix HS, Ursin G, Randel KR, de Lange T, Hoff G, Holme Ø et al. (2021)
The CRCbiome study: a large prospective cohort study examining the role of lifestyle and the gut microbiome in colorectal cancer screening participants
BMC Cancer, 21 (1), 930

Köksal H, Dillard P, **Juzeniene A**, Kvalheim G, **Smeland E**B, **Myklebust JH**, Inderberg EM, Wälchli S (2020)
Combinatorial CAR design improves target restriction
J Biol Chem, 296, 100116

Lachota M, Lennikov A, **Malmberg KJ**, Zagozdzon R (2021)
Bioinformatic Analysis Reveals Central Role for Tumor-Infiltrating Immune Cells in Uveal Melanoma Progression
J Immunol Res, 2021, 9920234

Lai X, Taskén HA, **Mo T**, Funke SW, Frigessi A, Rognes ME, Köhn-Luque A (2021)
A scalable solver for a stochastic, hybrid cellular automaton model of personalized breast cancer therapy
Int J Numer Method Biomed Eng, 38 (1), e3542

Landsverk HB, **Sandquist LE**, **Bay LTE**, **Syljuåsen RG** (2021)
New link between the RNA polymerase II-CTD and replication stress
Mol Cell Oncol, 8 (3), 1910008

Langenbucher A, Bowen D, Sakhtemani R, Bournique E, **Wise JF**, Zou L, Bhagwat AS, Buisson R, Lawrence MS (2021)
An extended APOBEC3A mutation signature in cancer
Nat Commun, 12 (1), 1602

Larrinaga G, Calvete-Candenas J, Solano-Iturri JD, Martín AM, Pueyo A, **Nunes-Xavier CE**, Pulido R, Dorado JF, López JI, Angulo JC (2021)
(Pro)renin Receptor Is a Novel Independent Prognostic Marker in Invasive Urothelial Carcinoma of the Bladder
Cancers (Basel), 13 (22)

Larsen SG, Goscinski MA, Dueland S, Steigen SE, Hofsli E, **Torgunrud A,** Lund-Iversen M, Dagenborg VJ, **Flatmark K**, Sorbye H (2021)
Impact of KRAS, BRAF and microsatellite instability status after cytoreductive surgery and HIPEC in a national cohort of colorectal peritoneal metastasis patients
Br J Cancer

Lehtiö J, Arslan T, Siavelis I, Pan Y, Socciarelli F, Berkovska O, Umer HM, Mermelekas G, Pirmoradian M, Jönsson M, Brunnström H, **Brustugun OT**, Purohit KP, Cunningham R, Asl HF, Isaksson S, Arbajian E, Aine M, Karlsson A, Kotevska M, Hansen CG, **Haakensen VD**, **Helland Å**, Tamborero D, Johansson HJ et al. (2021)
Proteogenomics of non-small cell lung cancer reveals molecular subtypes associated with specific therapeutic targets and immune evasion mechanisms
Nat Cancer, 2 (11), 1224-1242

Lesueur F, Easton DF, Renault AL, Tavtigian SV, Bernstein JL, Kote-Jarai Z, Eeles RA, Plaseska-Karanfia D, Feliubadaló L, Spanish ATM working group, Arun B, Herold N, Versmold B, Schmutzler RK, GC-HBOC, Nguyen-Dumont T, Southey MC, Dorling L, Dunning AM, Ghiorzo P, Dalmasso BS, Cavaciuti E, Le Gal D, Roberts NJ, **Dominguez-Valentin M** et al. (2021)
First international workshop of the ATM and cancer risk group (4-5 December 2019)
Fam Cancer

Levy-Jurgenson A, **Tekpli X**, Yakhini Z (2021)
Assessing heterogeneity in spatial data using the HTA index with applications to spatial transcriptomics and imaging
Bioinformatics, 37 (21), 3796-3804

Li H, Engel C, de la Hoya M, Peterlongo P, Yannoukakos D, Livraghi L, Radice P, Thomassen M, Hansen TVO, Gerdes AM, Nielsen HR, Caputo SM, Zambelli A, Borg A, Solano A, Thomas A, Parsons MT, Antoniou AC, Leslie G, Yang X, Chenevix-Trench G, Caldes T, Kwong A, Pedersen IS, Lautrup CK et al. (2021)
Risks of breast and ovarian cancer for women harboring pathogenic missense variants in BRCA1 and BRCA2 compared with those harboring protein truncating variants
Genet Med, 24 (1), 119-129

Li RG, Lindland K, Bønsdorff TB, Westrøm S, Larsen RH (2021)
A Novel Single-Step-Labeled ^{212}Pb-CaCO_3 Microparticle for Internal Alpha Therapy: Preparation, Stability, and Preclinical Data from Mice
Materials (Basel), 14 (23)

Li RG, Lindland K, Tonstad SK, Bønsdorff TB, **Juzeniene A**, Westrøm S, Larsen RH (2021)
Improved Formulation of ^{224}Ra-Labeled Calcium Carbonate Microparticles by Surface Layer Encapsulation and Addition of EDTMP
Pharmaceutics, 13 (5)

Li RG, **Napoli E**, Jorstad IS, Bønsdorff TB, **Juzeniene A**, Bruland ØS, Larsen RH, Westrøm S (2021)
Calcium Carbonate Microparticles as Carriers of ^{224}Ra: Impact of Specific Activity in Mice with Intraperitoneal Ovarian Cancer
Curr Radiopharm, 14 (2), 145-153

Lien TG, Ohnstad HO, **Lingjærde OC**, Vallon-Christersson J, Aaserud M, Sveli MAT, Borg Å, Osbreac OBO, Garred Ø, Borgen E, Naume B, **Russnes H**, **Sørlie T** (2021)
Sample Preparation Approach Influences PAM50 Risk of Recurrence Score in Early Breast Cancer
Cancers (Basel), 13 (23)

Lilleborge M, Falk RS, **Sørlie T**, Ursin G, Hofvind S (2021)
Can breast cancer be stopped? Modifiable risk factors of breast cancer among women with a prior benign or premalignant lesion
Int J Cancer, 149 (6), 1247-1256

Lingelem ABD, Kavaliauskiene S, Halsne R, Klokk TI, Surma MA, Klose C, **Skotland T, Sandvig K** (2020)
Diacylglycerol kinase and phospholipase D inhibitors alter the cellular lipidome and endosomal sorting towards the Golgi apparatus
Cell Mol Life Sci, 78 (3), 985-1009

Lingjærde C, **Lien TG**, Borgan Ø, **Bergholtz H**, Glad IK (2021)
Tailored graphical lasso for data integration in gene network reconstruction
BMC Bioinformatics, 22 (1), 498

Lone AM, Giansanti P, Jørgensen MJ, Gjerga E, Dugourd A, Scholten A, Saez-Rodriguez J, Heck AJR, **Taskén K** (2021)
Systems approach reveals distinct and shared signaling networks of the four PGE_2 receptors in T cells
Sci Signal, 14 (703), eabc8579

Lone AM, **Taskén K** (2021)
Phosphoproteomics-Based Characterization of Prostaglandin E_2 Signaling in T Cells
Mol Pharmacol, 99 (5), 370-382

Lorvik KB, Meyer-Myklestad MH, **Kushekar K**, Handeland C, Medhus AW, Lund-Iversen M, Stiksrud B, Kvale D, Dyrhol-Riise AM, **Taskén K**, Reikvam DH (2021)
Enhanced Gut-Homing Dynamics and Pronounced Exhaustion of Mucosal and Blood $CD4^+$ T Cells in HIV-Infected Immunological Non-Responders
Front Immunol, 12, 744155

Luna S, Torices L, Mingo J, Amo L, Rodríguez-Escudero I, Ruiz-Ibarlucea P, Erramuzpe A, Cortés JM, Tejada MI, Molina M, **Nunes-Xavier CE**, López JI, Cid VJ, Pulido R (2021)
A global analysis of the reconstitution of PTEN function by translational readthrough of PTEN pathogenic premature termination codons
Hum Mutat, 42 (5), 551-566

Lund-Andersen C, **Torgunrud A**, **Fleten KG**, **Flatmark K** (2021)
Omics analyses in peritoneal metastasis-utility in the management of peritoneal metastases from colorectal cancer and pseudomyxoma peritonei: a narrative review
J Gastrointest Oncol, 12 (Suppl 1), S191-S203

Maclachlan KH, **Rustad EH**, Derkach A, Zheng-Lin B, Yellapantula V, Diamond B, Hultcrantz M, Ziccheddu B, Boyle EM, Blaney P, Bolli N, Zhang Y, Dogan A, Lesokhin AM, Morgan GJ, Landgren O, Maura F (2021)
Copy number signatures predict chromothripsis and clinical outcomes in newly diagnosed multiple myeloma
Nat Commun, 12 (1), 5172

Mariathasan AB, **Boye K**, Dueland S, **Flatmark K**, Larsen SG (2021)
Metastases in locally advanced rectal cancer undergoing curatively intended treatment
Eur J Surg Oncol, 47 (9), 2377-2383

Martens-Uzunova ES, Blijdorp CJ, Burger D, Erdbrügger U, **Llorente A** (2021)
Urinary Extracellular Vesicles in Urology: Current Successes and Challenges Ahead
Eur Urol, 81 (1), 127-128

Mattingsdal M, Ebenesersdóttir SS, Moore KHS, Andreassen OA, Hansen TF, Werge T, Kockum I, Olsson T, Alfredsson L, Helgason A, Stefánsson K, **Hovig E** (2021)
The genetic structure of Norway
Eur J Hum Genet, 29 (11), 1710-1718

Maura F, Boyle EM, **Rustad EH**, Ashby C, Kaminetzky D, Bruno B, Braunstein M, Bauer M, Blaney P, Wang Y, Ghamlouch H, Williams L, Stoeckle J, Davies FE, Walker BA, Maclachlan K, Diamond B, Landgren O, Morgan GJ (2021)
Chromothripsis as a pathogenic driver of multiple myeloma
Semin Cell Dev Biol (in press)

Mazzarella L, Enblad G, **Olweus J**, **Malmberg KJ**, Jerkeman M (2021)
Advances in immune therapies in hematological malignancies
J Intern Med

Meltzer S, **Torgunrud A**, Abrahamsson H, Solbakken AM, **Flatmark K**, Dueland S, Bakke KM, Bousquet PA, Negård A, Johansen C, Lyckander LG, Larsen FO, Schou JV, Redalen KR, Ree AH (2021)
The circulating soluble form of the CD40 costimulatory immune checkpoint receptor and liver metastasis risk in rectal cancer
Br J Cancer, 125 (2), 240-246

Melvold K, **Giliberto M**, **Karlsen L**, **Ayuda-Durán P**, **Hanes R**, Holien T, **Enserink J**, Brown JR, Tjønnfjord GE, **Taskén K**, **Skånland SS** (2021)
Mcl-1 and Bcl-xL levels predict responsiveness to dual MEK/Bcl-2 inhibition in B-cell malignancies
Mol Oncol

Mensali N, Dillard P, Fayzullin A, Köksal H, **Gaudernack G**, Kvalheim G, Inderberg EM, Wälchli S (2021)
"Built-in" PD-1 blocker to rescue NK-92 activity from PD-L1-mediated tumor escape mechanisms
FASEB J, 35 (9), e21750

Meriranta L, Alkodsi A, Pasanen A, Lepistö M, Mapar P, **Blaker YN**, Jørgensen JM, Karjalainen-Lindsberg ML, Fiskvik I, Mikalsen LTG, Autio M, Björkholm M, Jerkeman M, Fluge Ø, Brown P, Jyrkkiö S, Holte H, Pitkänen E, Ellonen P, Leppa S (2021)
Molecular features encoded in the ctDNA reveal heterogeneity and predict outcome in high-risk aggressive B-cell lymphoma
Blood (in press)

Mester S, Evers M, **Meyer S**, Nilsen J, Greiff V, Sandlie I, Leusen J, Andersen JT (2021)
Extended plasma half-life of albumin-binding domain fused human IgA upon pH-dependent albumin engagement of human FcRn in vitro and in vivo
MAbs, 13 (1), 1893888

Moghaddam S, Jalali A, O'Neill A, Murphy L, Gorman L, Reilly AM, Heffernan Á, Lynch T, Power R, O'Malley KJ, **Taskèn KA**, Berge V, Solhaug VA, Klocker H, Murphy TB, Watson RW (2021)
Integrating Serum Biomarkers into Prediction Models for Biochemical Recurrence Following Radical Prostatectomy
Cancers (Basel), 13 (16)

Moosavi SH, **Eide PW**, **Eilertsen IA**, **Brunsell TH**, **Berg KCG**, Røsok BI, Brudvik KW, Bjørnbeth BA, Guren MG, Nesbakken A, **Lothe RA**, **Sveen A** (2021)
De novo transcriptomic subtyping of colorectal cancer liver metastases in the context of tumor heterogeneity
Genome Med, 13 (1), 143

Morra A, Escala-Garcia M, Beesley J, Keeman R, Canisius S, Ahearn TU, Andrulis IL, Anton-Culver H, Arndt V, Auer PL, Augustinsson A, Beane Freeman LE, Becher H, Beckmann

MW, Behrens S, Bojesen SE, Bolla MK, Brenner H, Brüning T, Buys SS, Caan B, Campa D, Canzian F, Castelao JE, Chang-Claude J et al. (2021)
Association of germline genetic variants with breast cancer-specific survival in patient subgroups defined by clinic-pathological variables related to tumor biology and type of systemic treatment
Breast Cancer Res, 23 (1), 86

Munson MJ, Mathai BJ, Ng MYW, Trachsel-Moncho L, de la Ballina LR, **Schultz SW**, Aman Y, Lystad AH, **Singh S**, **Singh S**, **Wesche J**, Fang EF, **Simonsen A** (2021)
GAK and PRKCD are positive regulators of PRKN-independent mitophagy
Nat Commun, 12 (1), 6101

Mygland L, Brinch SA, Strand MF, Olsen PA, Aizenshtadt A, Lund K, Solberg NT, Lycke M, **Thorvaldsen TE**, Espada S, Misaghian D, Page CM, **Agafonov O**, Nygård S, Chi NW, Lin E, Tan J, Yu Y, Costa M, Krauss S, Waaler J (2021)
Identification of response signatures for tankyrase inhibitor treatment in tumor cell lines
iScience, 24 (7), 102807

Maagdenberg H, Oosterom N, Zanen J, Gemmati D, Windsor RE, Heil SG, Esperón P, **Jabeen S**, Ruiz-Argüelles GJ, Zolk O, Hoerning S, Sleurs C, Lopéz-Lopéz E, Moreno-Galván M, van den Heuvel-Eibrink MM, Maitland-van der Zee AH, Carleton BC (2021)
Genetic variants associated with methotrexate-induced mucositis in cancer treatment: A systematic review and meta-analysis
Crit Rev Oncol Hematol, 161, 103312

Nakken S, Lilleby W, Switlyk MD, Knudsen KE, Lilleby O, **Zhao S**, **Kaveh F**, **Ekstrøm PO**, **Urbanucci A**, **Hovig E** (2021)
The Quandary of DNA-Based Treatment Assessment in De Novo Metastatic Prostate Cancer in the Era of Precision Oncology
J Pers Med, 11 (5)

Nakken S, Saveliev V, Hofmann O, **Møller P**, **Myklebost O**, **Hovig E** (2021)
Cancer Predisposition Sequencing Reporter (CPSR): A flexible variant report engine for high-throughput germline screening in cancer
Int J Cancer, 149 (11), 1955-1960

Napoli E, Bønsdorff TB, Jorstad IS, Bruland ØS, Larsen RH, Westrøm S (2021)
Radon-220 diffusion from 224Ra-labeled calcium carbonate microparticles: Some implications for radiotherapeutic use
PLoS One, 16 (3), e0248133

Nguyen L, Madsen SJ, **Berg K**, Hirschberg H (2021)
An improved in vitro photochemical internalization protocol for 3D spheroid cultures
Lasers Med Sci, 36 (8), 1567-1571

Nguyen L, Potma EO, Le JN, Johnson J, Romena G, Peng Q, **Berg K,** Hirschberg H (2020)
Photosensitizer delivery by fibrin glue: potential for bypassing the blood-brain barrier
Lasers Med Sci, 36 (5), 1031-1038

Normann LS, Aure MR, Leivonen SK, **Haugen MH**, Hongisto V, Kristensen VN, **Mælandsmo GM**, **Sahlberg KK** (2021)
MicroRNA in combination with HER2-targeting drugs reduces breast cancer cell viability in vitro
Sci Rep, 11 (1), 10893

Nowosielska EM, Cheda A, Pociegiel M, Cheda L, Szymański P, **Wiedlocha A** (2021)
Effects of a Unique Combination of the Whole-Body Low Dose Radiotherapy with Inactivation of Two Immune Checkpoints and/or a Heat Shock Protein on the Transplantable Lung Cancer in Mice
Int J Mol Sci, 22 (12)

Nunes-Xavier CE, Kildal W, Kleppe A, Danielsen HE, Waehre H, Llarena R, **Maelandsmo GM**, **Fodstad Ø**, Pulido R, López JI (2021)
Immune checkpoint B7-H3 protein expression is associated with poor outcome and androgen receptor status in prostate cancer
Prostate, 81 (12), 838-848

Nunes-Xavier CE, Zaldumbide L, Mosteiro L, López-Almaraz R, García de Andoin N, Aguirre P, Emaldi M, Torices L, López JI, Pulido R (2021)
Protein Tyrosine Phosphatases in Neuroblastoma: Emerging Roles as Biomarkers and Therapeutic Targets
Front Cell Dev Biol, 9, 811297

Oksvold MP, Berglund UW, Gad H, **Bai B**, **Stokke T**, **Rein ID**, Pham T, Sanjiv K, **Øy GF**, **Norum JH**, **Smeland EB**, **Myklebust JH**, Helleday T, **Våtsveen TK** (2021)
Karonudib has potent anti-tumor effects in preclinical models of B-cell lymphoma
Sci Rep, 11 (1), 6317

Otterhaug T, Janetzki S, Welters MJP, **Håkerud M**, **Nedberg AG**, **Edwards VT**, Boekestijn S, Loof NM, **Selbo PK**, Olivecrona H, van der Burg SH, Høgset A (2021)
Photochemical Internalization Enhanced Vaccination Is Safe, and Gives Promising Cellular Immune Responses to an HPV Peptide-Based Vaccine in a Phase I Clinical Study in Healthy Volunteers
Front Immunol, 11, 576756

Pandya AD, **Iversen TG**, Moestue S, Grinde MT, Mørch Ý, Snipstad S, Åslund AKO, **Øy GF**, Kildal W, **Engebråten O**, **Sandvig K**, **Skotland T**, **Mælandsmo GM** (2021)
Biodistribution of Poly(alkyl cyanoacrylate) Nanoparticles in Mice and Effect on Tumor Infiltration of Macrophages into a Patient-Derived Breast Cancer Xenograft
Nanomaterials (Basel), 11 (5)

Park J, Choi JY, Choi J, Chung S, Song N, Park SK, Han W, Noh DY, Ahn SH, Lee JW, Kim MK, Jee SH, Wen W, Bolla MK, Wang Q, Dennis J, Michailidou K, Shah M, Conroy DM, Harrington PA, Mayes R, Czene K, Hall P, Teras LR, Patel AV et al. (2021)
Gene-Environment Interactions Relevant to Estrogen and Risk of Breast Cancer: Can Gene-Environment Interactions Be Detected Only among Candidate SNPs from Genome-Wide Association Studies?
Cancers (Basel), 13 (10)

Pavlovic M, Scheffer L, Motwani K, Kanduri C, Kompova R, Vazov N, Waagan K, Bernal FLM, Costa AA, Corrie B, Akbar R, Al Hajj GS, Balaban G, Brusko TM, Chernigovskaya M, Christley S, Cowell LG, Frank R, Grytten I, Gundersen S, Haff IH, **Hovig E**, Hsieh PH, Klambauer G, Kuijjer ML, **Lund-Andersen C**, et al. (2021)
The immuneML ecosystem for machine learning analysis of adaptive immune receptor repertoires
Nat. Mach. Intell., 3 (11), 936-+

Peneder P, Stütz AM, Surdez D, Krumbholz M, Semper S, Chicard M, Sheffield NC, Pierron G, Lapouble E, Tötzl M, Ergüner B, Barreca D, Rendeiro AF, Agaimy A, Boztug H, Engstler G, Dworzak M, Bernkopf M, Taschner-Mandl S, Ambros IM, **Myklebost O**, Marec-Bérard P, Burchill SA, Bren-

nan B, Strauss SJ et al. (2021)
Multimodal analysis of cell-free DNA whole-genome sequencing for pediatric cancers with low mutational burden
Nat Commun, 12 (1), 3230

Pluta J, Pyle LC, Nead KT, Wilf R, Li M, Mitra N, Weathers B, D'Andrea K, Almstrup K, Anson-Cartwright L, Benitez J, Brown CD, Chanock S, Chen C, Cortessis VK, Ferlin A, Foresta C, Gamulin M, Gietema JA, Grasso C, Greene MH, Grotmol T, Hamilton RJ, Haugen TB, Hauser R et al. (2021)
Identification of 22 susceptibility loci associated with testicular germ cell tumors
Nat Commun, 12 (1), 4487

Quiles-Jiménez A, Gregersen I, Segers FM, Skarpengland T, Kroustallaki P, Yang K, Kong XY, Lauritzen KH, Olsen MB, Karlsen TR, Nyman TA, Sagen EL, Bjerkeli V, Suganthan R, **Nygård S**, Scheffler K, Prins J, Van der Veer E, Øgaard JD, Fløisand Y, Jørgensen HF, Holven KB, Biessen EA, Nilsen H, Dahl TB et al. (2021)
DNA glycosylase Neil3 regulates vascular smooth muscle cell biology during atherosclerosis development
Atherosclerosis, 324, 123-132

Ramberg H, Richardsen E, **de Souza GA**, Rakaee M, **Stensland ME**, **Braadland PR**, **Nygård S**, **Ögren O**, **Guldvik IJ**, Berge V, Svindland A, **Taskén KA**, Andersen S (2021)
Proteomic analyses identify major vault protein as a prognostic biomarker for fatal prostate cancer
Carcinogenesis, 42 (5), 685-693

Ramirez-Garrastacho M, Bajo-Santos C, Line A, Martens-Uzunova ES, de la Fuente JM, Moros M, Soekmadji C, **Tasken KA**, **Llorente A** (2021)
Extracellular vesicles as a source of prostate cancer biomarkers in liquid biopsies: a decade of research
Br J Cancer

Ramirez-Garrastacho M, Berge V, Linē A, **Llorente A** (2021)
Potential of miRNAs in urinary extracellular vesicles for management of active surveillance in prostate cancer patients
Br J Cancer

Ravussin A, **Brech A**, Tooze SA, **Stenmark H** (2021)
The phosphatidylinositol 3-phosphate-binding protein SNX4 controls ATG9A recycling and autophagy
J Cell Sci, 134 (3)

Reint G, Li Z, Labun K, Keskitalo S, Soppa I, Mamia K, Tolo E, Szymanska M, **Meza-Zepeda LA**, **Lorenz S**, **Cieslar-Pobuda A**, Hu X, Bordin DL, Staerk J, Valen E, Schmierer B, Varjosalo M, Taipale J, Haapaniemi E (2021)
Rapid genome editing by CRISPR-Cas9-POLD3 fusion
Elife, 10

Remberger M, Tjønnfjord GE, Abrahamsen IW, Ali M, Myhre AE, Gedde-Dahl T, **Fløisand Y** (2021)
Superior Graft-versus-Host Disease-Free Relapse-Free Survival in Matched Unrelated Donor Hematopoietic Stem Cell Transplantation with Anti-Thymocyte Globulin (ATG) Compared to Matched Related Donor without ATG
Transplant Cell Ther, 27 (7), 621.e1-621.e3

Romena G, Nguyen L, **Berg K**, Madsen SJ, Hirschberg H (2020)
Enhanced gene transfection of macrophages by photochemical internalization: Potential for gene-directed enzyme prodrug therapy of gliomas
Photodiagnosis Photodyn Ther, 33, 102098

Rudolph MJ, Poon AY, **Kavaliauskiene S**, **Myrann AG**, Reynolds-Peterson C, Davis SA, **Sandvig K**, Vance DJ, Mantis NJ (2021)
Structural Analysis of Toxin-Neutralizing, Single-Domain Antibodies that Bridge Ricin's A-B Subunit Interface
J Mol Biol, 433 (15), 167086

Rustad EH, Nadeu F, Angelopoulos N, Ziccheddu B, Bolli N, Puente XS, Campo E, Landgren O, Maura F (2021)
mmsig: a fitting approach to accurately identify somatic mutational signatures in hematological malignancies
Commun Biol, 4 (1), 424

Rye IH, **Huse K**, **Josefsson SE**, Kildal W, Danielsen HE, Schlichting E, Garred Ø, Riis ML, Osbreac, Lingjaerde OC, **Myklebust JH**, **Russnes HG** (2021)
Breast cancer metastasis: immune profiling of lymph nodes reveals exhaustion of effector T cells and immunosuppression
Mol Oncol, 16 (1), 88-103

Rødland GE, **Hauge S**, **Hasvold G**, **Bay LTE**, **Raabe TTH**, **Joel M**, **Syljuåsen RG** (2021)
Differential Effects of Combined ATR/WEE1 Inhibition in Cancer Cells
Cancers (Basel), 13 (15)

Roeker LE, Eyre TA, Thompson MC, Lamanna N, Coltoff AR, Davids MS, Baker PO, Leslie L, Rogers KA, Allan JN, Cordoba R, Lopez-Garcia A, Antic D, Pagel JM, Martinez-Calle N, García-Marco J, Hernández-Rivas J, Miras F, Coombs CC, Österborg A, Hansson L, Seddon AN, Jiménez J, Wilson MR, El-Sharkawi D, Wojenski D, Ma S, Munir T, Valenciano S, Seymour E, Barr P M, Pu J, Patten PEM, Perini GF, Huntington SF, Parry H, Sundaram S, Skarbnik A, Kamdar M, Jacobs R, Walter H, Walewska R, Broom A, Lebowitz S, Isaac KM, Portell CA, Ahn IE, Ujjani CS, Shadman M, **Skånland SS**, Chong EA, Mato AR (2021)
COVID-19 in patients with CLL: improved survival outcomes and update on management strategies
Blood (2021) 138 (18): 1768–1773

Rønneberg L, Cremaschi A, **Hanes R**, **Enserink JM**, Zucknick M (2021)
bayesynergy: flexible Bayesian modelling of synergistic interaction effects in in vitro drug combination experiments
Brief Bioinform, 22 (6)

Sandvig K, **Kavaliauskiene S**, **Skotland T** (2021)
The Protein Toxins Ricin and Shiga Toxin as Tools to Explore Cellular Mechanisms of Internalization and Intracellular Transport
Toxins (Basel), 13 (6)

Sanjiv K, Calderón-Montaño JM, Pham TM, Erkers T, Tsuber V, Almlöf I, Höglund A, Heshmati Y, Seashore-Ludlow B, Nagesh Danda A, Gad H, Wiita E, Göktürk C, Rasti A, Friedrich S, Centio A, Estruch M, **Våtsveen TK**, Struyf N, Visnes T, Scobie M, Koolmeister T, Henriksson M, Wallner O, Sandvall T et al. (2021)
MTH1 Inhibitor TH1579 Induces Oxidative DNA Damage and Mitotic Arrest in Acute Myeloid Leukemia
Cancer Res, 81 (22), 5733-5744

Schink KO, **Tan KW**, **Spangenberg H**, **Martorana D**, **Sneeggen M**, Stévenin V, Enninga J, Campsteijn C, **Raiborg C**, **Stenmark H** (2021)
The phosphoinositide coincidence detector Phafin2 promotes macropinocytosis by coordinating actin organisation at forming macropinosomes
Nat Commun, 12 (1), 6577

Schläfli AM, Tokarchuk I, Parejo S, Jutzi S, Berezowska S, **Engedal N**, Tschan MP (2021)
ALK inhibition activates LC3B-inde-

pendent, protective autophagy in EML4-ALK positive lung cancer cells
Sci Rep, 11 (1), 9011

Schultz SW, Agudo-Canalejo J, Chino H, Migliano SM, Saito C, Koyama-Honda I, **Stenmark H, Brech A,** Mizushima N, Knorr RL, May AI (2021)
Should I bend or should I grow: the mechanisms of droplet-mediated autophagosome formation
Autophagy, 17 (4), 1046-1048

Seppälä TT, **Dominguez-Valentin M**, Crosbie EJ, Engel C, Aretz S, Macrae F, Winship I, Capella G, Thomas H, **Hovig E**, Nielsen M, Sijmons RH, Bertario L, Bonanni B, Tibiletti MG, Cavestro GM, Mints M, Gluck N, Katz L, Heinimann K, Vaccaro CA, Green K, Lalloo F, Hill J, Schmiegel W et al. (2021)
Uptake of hysterectomy and bilateral salpingo-oophorectomy in carriers of pathogenic mismatch repair variants: a Prospective Lynch Syndrome Database report
Eur J Cancer, 148, 124-133

Seppälä TT, Latchford A, Negoi I, Sampaio Soares A, Jimenez-Rodriguez R, Sánchez-Guillén L, Evans DG, Ryan N, Crosbie EJ, **Dominguez-Valentin M**, Burn J, Kloor M, Knebel Doeberitz MV, Duijnhoven FJBV, Quirke P, Sampson JR, **Møller P**, Möslein G, European Hereditary Tumour Group (EHTG) and European Society of Coloproctology (ESCP) (2021)
European guidelines from the EHTG and ESCP for Lynch syndrome: an updated third edition of the Mallorca guidelines based on gene and gender
Br J Surg, 108 (5), 484-498

Sharma A, Colonna G (2021)
System-Wide Pollution of Biomedical Data: Consequence of the Search for Hub Genes of Hepatocellular Carcinoma Without Spatiotemporal Consideration
Mol Diagn Ther, 25 (1), 9-27

Sharma K, Asp NT, Harrison SP, Siller R, Baumgarten SF, Gupta S, Chollet ME, Andersen E, Sullivan GJ, **Simonsen A** (2021)
Autophagy modulates cell fate decisions during lineage commitment
Autophagy

Siddiqui FA, Parkkola H, Vukic V, Oetken-Lindholm C, Jaiswal A, Kiriazis A, Pavic K, **Aittokallio T**, Salminen TA, Abankwa D (2021)
Novel Small Molecule Hsp90/Cdc37 Interface Inhibitors Indirectly Target K-Ras-Signaling
Cancers (Basel), 13 (4)

Siokis A, Robert PA, Demetriou P, **Kvalvaag A**, Valvo S, Mayya V, Dustin ML, Meyer-Hermann M (2021)
Characterization of mechanisms positioning costimulatory complexes in immune synapses
iScience, 24 (10), 103100

Sioud M (2021)
RNA Interference: Story and Mechanisms
Methods Mol Biol, 2282, 1-15

Sioud M (2021)
Reducing the immunosuppressive tumor microenvironment enhances photoimmunotherapy efficacy
EBioMedicine 67: 103351.

Sioud M, Juzenas P, **Zhang Q**, Kleinauskas A, Peng Q (2021)
Evaluation of In Vitro Phototoxicity of a Minibody-IR700 Conjugate Using Cell Monolayer and Multicellular Tumor Spheroid Models
Cancers (Basel), 13 (13)

Skånland SS, Mato AR (2021)
Overcoming resistance to targeted therapies in chronic lymphocytic leukemia
Blood Adv, 5 (1), 334-343

Skotland T, Iversen TG**, Sandvig K** (2021)
Cellular uptake of nanoparticles: Involvement of caveolae?
Precis Nanomed, 4 (2), 782-786

Skotland T, **Sandvig K** (2021)
Transport of nanoparticles across the endothelial cell layer
Nano Today, 36, 101029

Slørdahl KS, Klotz D, Olsen JÅ, Skovlund E, Undseth C, Abildgaard HL, Brændengen M, Nesbakken A, Larsen SG, Hanekamp BA, Holmboe L, Tvedt R, **Sveen A**, **Lothe RA**, Malinen E, Kaasa S, Guren MG (2021)
Treatment outcomes and prognostic factors after chemoradiotherapy for anal cancer
Acta Oncol, 60 (7), 921-930

Snapkov I, Chernigovskaya M, Sinitcyn P, Lê Quý K, **Nyman TA**, Greiff V (2021)
Progress and challenges in mass spectrometry-based analysis of antibody repertoires
Trends Biotechnol (in press)

Sohlberg E, Pfefferle A, Ask EH, Tschan-Plessl A, Jacobs B, Netskar H, **Lorenz S**, **Kanaya M**, Kosugi-Kanaya M, Meinke S, Mörtberg A, Höglund P, Sundin M, Carlsson G, Palmblad J, **Malmberg KJ** (2021)
Perturbed NK Cell Homeostasis Associated with Disease Severity in Chronic Neutropenia
Blood (in press)

Solis N, Zavaleta E, Wernhoff P, Dominguez-Barrera C, **Dominguez-Valentin M** (2021)
Challenges to Bringing Personalized Medicine to a Low-Resource Setting in Peru
Int J Environ Res Public Health, 18 (4)

Spasevska I, **Myklebust JH** (2021)
What It Takes to Transform a T Cell
Cancer Res, 81 (12), 3160-3161

Stabell M, Sæther T, Røhr ÅK, Gabrielsen OS, **Myklebost O** (2021)
Methylation-dependent SUMOylation of the architectural transcription factor HMGA2
Biochem Biophys Res Commun, 552, 91-97

Steen CB, Luca BA, Esfahani MS, Azizi A, Sworder BJ, Nabet BY, Kurtz DM, Liu CL, Khameneh F, Advani RH, Natkunam Y, **Myklebust JH**, Diehn M, Gentles AJ, Newman AM, Alizadeh AA (2021)
The landscape of tumor cell states and ecosystems in diffuse large B cell lymphoma
Cancer Cell, 39 (10), 1422-1437.e10

Stenberg VY, Larsen RH, **Ma LW**, Peng Q, Juzenas P, Bruland ØS, **Juzeniene A** (2021)
Evaluation of the PSMA-Binding Ligand ^{212}Pb-NG001 in Multicellular Tumour Spheroid and Mouse Models of Prostate Cancer
Int J Mol Sci, 22 (9)

Stjepanovic N, Lubinski J, **Moller P**, Randall Armel S, Foulkes WD, Tung N, Neuhausen SL, Kotsopoulos J, Sun P, Sun S, Eisen A, Narod SA, Hereditary Breast Cancer Clinical Study Group (2021)
Breast cancer risk after age 60 among BRCA1 and BRCA2 mutation carriers
Breast Cancer Res Treat, 187 (2), 515-523

Sullivan LC, Nguyen THO, Harpur CM, Stankovic S, Kanagarajah AR, Koutsakos M, Saunders PM, Cai

Z, Gray JA, Widjaja JML, Lin J, Pietra G, Mingari MC, Moretta L, Samir J, Luciani F, Westall GP, **Malmberg KJ**, Kedzierska K, Brooks AG (2021)
Natural killer cell receptors regulate responses of HLA-E-restricted T cells
Sci Immunol, 6 (58)

Sveen A, **Johannessen B**, **Eilertsen IA**, Røsok BI, **Gulla M**, **Eide PW**, **Bruun J**, **Kryeziu K**, **Meza-Zepeda LA**, **Myklebost O**, Bjørnbeth BA, **Skotheim RI**, Nesbakken A, **Lothe RA** (2021)
The expressed mutational landscape of microsatellite stable colorectal cancers
Genome Med, 13 (1), 142

Svendsen HA, Meling TR, **Nygaard V**, **Waagene S**, **Russnes H**, **Juell S**, Rogne SG, Pahnke J, Helseth E, **Fodstad Ø**, **Maelandsmo GM** (2021)
Novel human melanoma brain metastasis models in athymic nude fox1^{nu} mice: Site-specific metastasis patterns reflecting their clinical origin
Cancer Med, 10 (23), 8604-8613

Szybowska P, **Kostas M**, **Wesche J**, **Haugsten EM**, **Wiedlocha A** (2021)
Negative Regulation of FGFR (Fibroblast Growth Factor Receptor) Signaling
Cells, 10 (6)

Sønstevold T, **Engedal N**, **Torgersen ML** (2021)
Perturbation of Cellular Redox Homeostasis Dictates Divergent Effects of Polybutyl Cyanoacrylate (PBCA) Nanoparticles on Autophagy
Cells, 10 (12)

Taavitsainen S, **Engedal N**, Cao S, Handle F, Erickson A, Prekovic S, Wetterskog D, Tolonen T, Vuorinen EM, Kiviaho A, Nätkin R, Häkkinen T, Devlies W, Henttinen S, Kaarijärvi R, Lahnalampi M, Kaljunen H, Nowakowska K, Syvälä H, Bläuer M, Cremaschi P, Claessens F, Visakorpi T, Tammela TLJ, Murtola T et al. (2021)
Single-cell ATAC and RNA sequencing reveal pre-existing and persistent cells associated with prostate cancer relapse
Nat Commun, 12 (1), 5307

Tamhane T, Njenga RW, Burden RE, Bueth H, **Maelandsmo GM**, **Haugen MH**, Scott CJ, Brix K (2021)
Trafficking of Full-Length and N-Terminally Truncated Cathepsin B in Human Colorectal Carcinoma Cells
Appl. Sci.-Basel, 11 (24), 11936

Tan KW, **Nähse V**, Campsteijn C, **Brech A**, **Schink KO**, **Stenmark H** (2021)
JIP4 is recruited by the phosphoinositide-binding protein Phafin2 to promote recycling tubules on macropinosomes
J Cell Sci, 134 (14)

Tanoli Z, Vähä-Koskela M, **Aittokallio T** (2021)
Artificial intelligence, machine learning, and drug repurposing in cancer
Expert Opin Drug Discov, 16 (9), 977-989

Terkelsen T, Pernemalm M, Gromov P, **Børresen-Dale AL**, Krogh A, **Haakensen VD**, Lethiö J, Papaleo E, Gromova I (2021)
High-throughput proteomics of breast cancer interstitial fluid: identification of tumor subtype-specific serologically relevant biomarkers
Mol Oncol, 15 (2), 429-461

Thorgersen EB, Asvall J, **Frøysnes IS**, Schjalm C, Larsen SG, Dueland S, **Andersson Y**, **Fodstad Ø**, Mollnes TE, **Flatmark K** (2021)
Increased Local Inflammatory Response to MOC31PE Immunotoxin After Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy
Ann Surg Oncol, 28 (9), 5252-5262

Torices L, de Las Heras J, Arango-Lasprilla JC, Cortés JM, **Nunes-Xavier CE**, Pulido R (2021)
MMADHC premature termination codons in the pathogenesis of cobalamin D disorder: Potential of translational readthrough reconstitution
Mol Genet Metab Rep, 26, 100710

Toutah K, Nawar N, Timonen S, Sorger H, Raouf YS, Bukhari S, von Jan J, Ianevski A, Gawel JM, Olaoye OO, Geletu M, Abdeldayem A, Israelian J, Radu TB, Sedighi A, Bhatti MN, Hassan MM, Manaswiyoungkul P, Shouksmith AE, Neubauer HA, de Araujo ED, **Aittokallio T**, Krämer OH, Moriggl R, Mustjoki S et al. (2021)
Development of HDAC Inhibitors Exhibiting Therapeutic Potential in T-Cell Prolymphocytic Leukemia
J Med Chem, 64 (12), 8486-8509

Tulipan AJ, **Salberg UB**, Hole KH, Vlatkovic L, **Aarnes EK**, Revheim ME, **Lyng H**, Seierstad T (2021)
Amino acid transporter expression and 18F-FACBC uptake at PET in primary prostate cancer
Am J Nucl Med Mol Imaging, 11 (4), 250-259

Valko A, Perez-Pandolfo S, Sorianello E, **Brech A**, Wappner P, Melani M (2021)
Adaptation to hypoxia in Drosophila melanogaster requires autophagy
Autophagy

Valsalakumari R, Yadava SK, **Szwed M**, **Pandya AD**, **Mælandsmo GM**, **Torgersen ML**, **Iversen TG**, **Skotland T**, **Sandvig K**, Giri J (2021)
Mechanism of cellular uptake and cytotoxicity of paclitaxel loaded lipid nanocapsules in breast cancer cells
Int J Pharm, 597, 120217

van der Zanden TM, Mooij MG, Vet NJ, Neubert A, Rascher W, Lagler FB, Male C, **Grytli H**, Halvorsen T, de Hoog M, de Wildt SN (2021)
Benefit-Risk Assessment of Off-Label Drug Use in Children: The Bravo Framework
Clin Pharmacol Ther, 110 (4), 952-965

Vedeld HM, Grimsrud MM, **Andresen K**, **Pharo HD**, von Seth E, Karlsen TH, **Honne H**, Paulsen V, Färkkilä MA, Bergquist A, **Jeanmougin M**, Aabakken L, Boberg KM, Folseraas T, **Lind GE** (2021)
Early and accurate detection of cholangiocarcinoma in patients with primary sclerosing cholangitis by methylation markers in bile
Hepatology, 75 (1), 59-73

Vikan AK, **Kostas M**, **Haugsten EM**, **Selbo PK**, **Wesche J** (2021)
Efficacy and Selectivity of FGF2-Saporin Cytosolically Delivered by PCI in Cells Overexpressing FGFR1
Cells, 10 (6)

Wahl SGF, Dai HY, Emdal EF, Berg T, Halvorsen TO, Ottestad AL, Lund-Iversen M, **Brustugun OT**, Førde D, Paulsen EE, Donnem T, Andersen S, Grønberg BH, Richardsen E (2021)
The Prognostic Effect of KRAS Mutations in Non-Small Cell Lung Carcinoma Revisited: A Norwegian Multicentre Study
Cancers (Basel), 13 (17)

Waldeland JO, **Gaustad JV**, **Rofstad EK**, Evje S (2021)
In silico investigations of intratumoral heterogeneous interstitial fluid pressure
J Theor Biol, 526, 110787

Wang T, Szedmak S, Wang H, **Aittokallio T**, Pahikkala T, Cichonska A, Rousu J (2021)

Modeling drug combination effects via latent tensor reconstruction
Bioinformatics, 37 (Suppl_1), i93-i101

Waters AM, Khatib TO, Papke B, Goodwin CM, Hobbs GA, Diehl JN, Yang R, Edwards AC, Walsh KH, Sulahian R, McFarland JM, Kapner KS, Gilbert TSK, Stalnecker CA, Javaid S, **Barkovskaya A**, Grover KR, Hibshman PS, Blake DR, Schaefer A, Nowak KM, Klomp JE, Hayes TK, Kassner M, Tang N et al. (2021)
Targeting p130Cas- and microtubule-dependent MYC regulation sensitizes pancreatic cancer to ERK MAPK inhibition
Cell Rep, 35 (13), 109291

Weisheit S, **Wegner CS**, **Ailte I**, **Radulovic M**, **Weyergang A**, **Selbo PK**, **Brech A** (2021)
Inhibiting autophagy increases the efficacy of low-dose photodynamic therapy
Biochem Pharmacol, 194, 114837

White BS, Khan SA, Mason MJ, Ammad-Ud-Din M, Potdar S, Malani D, Kuusanmäki H, Druker BJ, Heckman C, Kallioniemi O, Kurtz SE, Porkka K, Tognon CE, Tyner JW, **Aittokallio T**, Wennerberg K, Guinney J (2021)
Bayesian multi-source regression and monocyte-associated gene expression predict BCL-2 inhibitor resistance in acute myeloid leukemia
NPJ Precis Oncol, 5 (1), 71

White JM, Schiffer JT, Bender Ignacio RA, Xu S, Kainov D, Ianevski A, **Aittokallio T**, Frieman M, Olinger GG, Polyak SJ (2021)
Drug Combinations as a First Line of Defense against Coronaviruses and Other Emerging Viruses
mBio, 12 (6), e0334721

Wirth M, Mouilleron S, Zhang W, Sjøttem E, Princely Abudu Y, **Jain A**, Lauritz Olsvik H, Bruun JA, Razi M, Jefferies HBJ, Lee R, Joshi D, O'Reilly N, Johansen T, **Tooze SA** (2021)
Phosphorylation of the LIR Domain of SCOC Modulates ATG8 Binding Affinity and Specificity
J Mol Biol, 433 (13), 166987

Woan KV, Kim H, Bjordahl R, Davis ZB, Gaidarova S, Goulding J, Hancock B, Mahmood S, Abujarour R, Wang H, Tuininga K, Zhang B, Wu CY, Kodal B, Khaw M, Bendzick L, Rogers P, Ge MQ, Bonello G, Meza M, Felices M, Huffman J, Dailey T, Lee TT, Walcheck B et al. (2021)
Harnessing features of adaptive NK cells to generate iPSC-derived NK cells for enhanced immunotherapy
Cell Stem Cell, 28 (12), 2062-2075.e5

Wong JJW, **Selbo PK** (2021)
Light-controlled elimination of PD-L1+ cells
J Photochem Photobiol B, 225, 112355

Xu H, **Lien T**, **Bergholtz H**, **Fleischer T**, Djerroudi L, Vincent-Salomon A, **Sørlie T**, **Aittokallio T** (2021)
Multi-Omics Marker Analysis Enables Early Prediction of Breast Tumor Progression
Front Genet, 12, 670749

Yaqub S, Bjørnbeth BA, Angelsen JH, Fristrup CW, Grønbech JE, Hemmingsson O, Isaksson B, Juel IS, Larsen PN, Lindell G, Mortensen FV, Mortensen KE, Rizell M, Sandström P, Sandvik OM, Sparrelid E, Taflin H, **Taskén K**, ASAC study group (2021)
Aspirin as secondary prevention in colorectal cancer liver metastasis (ASAC trial): study protocol for a multicentre randomized placebo-controlled trial
Trials, 22 (1), 642

Zdżalik-Bielecka D, Poświata A, Kozik K, Jastrzębski K, **Schink KO**, Brewińska-Olchowik M, Piwocka K, **Stenmark H**, Miączyńska M (2021)
The GAS6-AXL signaling pathway triggers actin remodeling that drives membrane ruffling, macropinocytosis, and cancer-cell invasion
Proc Natl Acad Sci U S A, 118 (28)

Zhen Y, **Radulovic M**, **Vietri M**, **Stenmark H** (2021)
Sealing holes in cellular membranes
EMBO J, 40 (7), e106922

Öjlert ÅK, **Nebdal D**, Snapkov I, **Olsen V**, Kidman J, Greiff V, Chee J, **Helland Å** (2021)
Dynamic changes in the T cell receptor repertoire during treatment with radiotherapy combined with an immune checkpoint inhibitor
Mol Oncol, 15 (11), 2958-2968

Øverbye A, **Torgersen ML**, **Sønstevold T**, **Iversen TG**, Mørch Ý, **Skotland T**, **Sandvig K** (2021)
Cabazitaxel-loaded poly(alkyl cyanoacrylate) nanoparticles: toxicity and changes in the proteome of breast, colon and prostate cancer cells
Nanotoxicology, 15 (7), 865-884

Aamdal E, Inderberg EM, **Ellingsen EB**, Rasch W, Brunsvig PF, Aamdal S, **Heintz KM**, **Vodák D**, **Nakken S**, **Hovig E**, Nyakas M, Guren TK, Gaudernack G (2021)
Combining a Universal Telomerase Based Cancer Vaccine With Ipilimumab in Patients With Metastatic Melanoma - Five-Year Follow Up of a Phase I/IIa Trial
Front Immunol, 12, 663865

Aamdal E, Jacobsen KD, Straume O, Kersten C, Herlofsen O, Karlsen J, Hussain I, Amundsen A, Dalhaug A, Nyakas M, Schuster C, Hagene KT, Holmsen K, **Russnes HG**, Skovlund E, Kaasa S, Aamdal S, **Kyte JA**, Guren TK (2021)
Ipilimumab in a real-world population: A prospective Phase IV trial with long-term follow-up
Int J Cancer, 150 (1), 100-111

Aasebø K, **Bruun J**, **Bergsland CH**, Nunes L, Eide GE, Pfeiffer P, Dahl O, Glimelius B, **Lothe RA**, Sorbye H (2021)
Prognostic role of tumour-infiltrating lymphocytes and macrophages in relation to MSI, CDX2 and BRAF status: a population-based study of metastatic colorectal cancer patients
Br J Cancer, 126 (1), 48-56

PUBLICATIONS 2022 AND IN PRESS

Ahearn TU, Zhang H, Michailidou K, Milne RL, Bolla MK, Dennis J, Dunning AM, Lush M, Wang Q, Andrulis IL, Anton-Culver H, Arndt V, Aronson KJ, Auer PL, Augustinsson A, Baten A, Becher H, Behrens S, Benitez J, Bermisheva M, Blomqvist C, Bojesen SE, Bonanni B, **Børresen-Dale AL**, Brauch H et al. (2022)
Common variants in breast cancer risk loci predispose to distinct tumor subtypes
Breast Cancer Res, 24 (1), 2

Alaña L, **Nunes-Xavier CE**, Zaldumbide L, Martin-Guerrero I, Mosteiro L, Alba-Pavón P, Villate O, García-Obregón S, González-García H, Herraiz R, Astigarraga I, Pulido R, García-Ariza M (2022)
Identification and Functional Analysis of a Novel CTNNB1 Mutation in Pediatric Medulloblastoma
Cancers (Basel), 14 (2)

Bajor M, Graczyk-Jarzynka A, Marhelava K, Burdzinska A, Muchowicz A, Goral A, Zhylko A, Soroczynska K, Retecki K, Krawczyk M, Klopotows-

ka M, Pilch Z, Paczek L, **Malmberg KJ**, Wälchli S, Winiarska M, Zagozdzon R (2022)
PD-L1 CAR effector cells induce self-amplifying cytotoxic effects against target cells
J Immunother Cancer, 10 (1)

Ballester PJ, Stevens R, Haibe-Kains B, Huang RS, **Aittokallio T** (2022)
Artificial intelligence for drug response prediction in disease models
Brief Bioinform, 23 (1)

Blijdorp CJ, Burger D, **Llorente A**, Martens-Uzunova ES, Erdbrügger U (2022)
Extracellular Vesicles as Novel Players in Kidney Disease
J Am Soc Nephrol (in press)

Cable J, Weber-Ban E, Clausen T, Walters KJ, Sharon M, Finley DJ, Gu Y, Hanna J, Feng Y, Martens S, **Simonsen A**, Hansen M, Zhang H, Goodwin JM, Reggio A, Chang C, Ge L, Schulman BA, Deshaies RJ, Dikic I, Harper JW, Wertz IE, Thomä NH, Słabicki M, Frydman J et al. (2022)
Targeted protein degradation: from small molecules to complex organelles-a Keystone Symposia report
Ann N Y Acad Sci

Chakraborty S, Woldemariam NT, **Visnovska T**, Rise ML, Boyce D, Santander J, Andreassen R (2022)
Characterization of miRNAs in Embryonic, Larval, and Adult Lumpfish Provides a Reference miRNAome for Cyclopterus lumpus
Biology (Basel), 11 (1)

Engedal N, **Sønstevold T**, Beese CJ, **Selladurai S**, **Melcher T**, **Simensen JE**, Frankel LB, **Urbanucci A**, **Torgersen ML** (2022)
Measuring Autophagic Cargo Flux with Keima-Based Probes
Methods Mol Biol, 2445, 99-115

Enserink JM, Chymkowitch P (2022)
Cell Cycle-Dependent Transcription: The Cyclin Dependent Kinase Cdk1 Is a Direct Regulator of Basal Transcription Machineries
Int J Mol Sci, 23 (3)

Fontugne J, Cai PY, Alnajar H, Bhinder B, Park K, Ye H, Beg S, Sailer V, Siddiqui J, Blattner-Johnson M, Croyle JA, Noorzad Z, Calagua C, MacDonald TY, Axcrona U, **Bogaard M**, **Axcrona K**, Scherr DS, Sanda MG, **Johannessen B**, Chinnaiyan AM, Elemento O, **Skotheim RI**, Rubin MA, Barbieri CE et al. (2022)
Collision tumors revealed by prospectively assessing subtype-defining molecular alterations in 904 individual prostate cancer foci
JCI Insight (in press)

Fromm B, **Høye E**, Domanska D, Zhong X, Aparicio-Puerta E, Ovchinnikov V, Umu SU, Chabot PJ, Kang W, Aslanzadeh M, Tarbier M, Mármol-Sánchez E, Urgese G, Johansen M, **Hovig E**, Hackenberg M, Friedländer MR, Peterson KJ (2022)
MirGeneDB 2.1: toward a complete sampling of all major animal phyla
Nucleic Acids
Res, 50 (D1), D204-D210

Giliberto M, **Thimiri Govinda Raj DB**, Cremaschi A, **Skånland SS**, Gade A, Tjønnfjord GE, Schjesvold F, Munthe LA, **Taskén K** (2022)
Ex vivo drug sensitivity screening in multiple myeloma identifies drug combinations that act synergistically
Mol Oncol (in press)

Hjerkind KV, Johansson ALV, Trewin CB, **Russnes HG**, Ursin G (2022)
Incidence of breast cancer subtypes in immigrant and non-immigrant women in Norway
Breast Cancer Res, 24 (1), 4

Holland P, **Quintana EM**, **Khezri R**, Schoborg TA, **Rusten TE** (2022)
Computed tomography with segmentation and quantification of individual organs in a D. melanogaster tumor model
Sci Rep, 12 (1), 2056

Høye E, Fromm B, Böttger PHM, Domanska D, **Torgunrud A**, **Lund-Andersen C**, **Abrahamsen TW**, Fretland ÅA, **Dagenborg VJ**, **Lorenz S**, Edwin B, **Hovig E**, **Flatmark K** (2022)
A comprehensive framework for analysis of microRNA sequencing data in metastatic colorectal cancer
NAR Cancer, 4 (1), zcab051

Ji X, Lin L, Fan J, Li Y, Wei Y, Shen S, Su L, Shafer A, **Bjaanaes MM**, Karlsson A, Planck M, Staaf J, **Helland Å**, Esteller M, Zhang R, Chen F, Christiani DC (2022)
Epigenome-wide three-way interaction study identifies a complex pattern between TRIM27, KIAA0226, and smoking associated with overall survival of early-stage NSCLC
Mol Oncol, 16 (3), 717-731

Kryeziu K, **Bergsland CH**, Guren TK, **Sveen A**, **Lothe RA** (2022)
Multiplex immunohistochemistry of metastatic colorectal cancer and ex vivo tumor avatars
Biochim Biophys Acta Rev Cancer, 1877 (1), 188682

Kyte JA (2022)
Strategies for Improving the Efficacy of CAR T Cells in Solid Cancers
Cancers (Basel), 14 (3)

Lampart A, Sluzalska KD, Czyrek A, Szerszen A, Otlewski J, **Wiedlocha A**, Zakrzewska M (2022)
Nuclear Localization Sequence of FGF1 Is Not Required for Its Intracellular Anti-Apoptotic Activity in Differentiated Cells
Cells, 11 (3)

Malani D, Kumar A, Brück O, Kontro M, Yadav B, Hellesøy M, Kuusanmäki H, Dufva O, Kankainen M, Eldfors S, Potdar S, Saarela J, Turunen L, Parsons A, Västrik I, Kivinen K, Saarela J, Räty R, Lehto M, Wolf M, Gjertsen BT, Mustjoki S, **Aittokallio T**, Wennerberg K, Heckman CA et al. (2021)
Implementing a Functional Precision Medicine Tumor Board for Acute Myeloid Leukemia
Cancer Discov (in press)

Mansilla-Soto J, Eyquem J, Haubner S, Hamieh M, Feucht J, Paillon N, Zucchetti AE, Li Z, Sjöstrand M, Lindenbergh PL, **Saetersmoen M**, Dobrin A, Maurin M, Iyer A, Garcia Angus A, Miele MM, Zhao Z, Giavridis T, van der Stegen SJC, Tamzalit F, Rivière I, Huse M, Hendrickson RC, Hivroz C, Sadelain M (2022)
HLA-independent T cell receptors for targeting tumors with low antigen density
Nat Med (in press)

Mateus D, **Wiedlocha A** (2022)
FGF-FGFR signaling promotes the development of invasive cervical cancer
FEBS J (in press)

Meyer-Myklestad MH, Medhus AW, **Lorvik KB**, Seljeflot I, Hansen SH, Holm K, Stiksrud B, Trøseid M, Hov JR, Kvale D, Dyrhol-Riise AM, Kummen M, Reikvam DH (2022)
Human Immunodeficiency Virus-Infected Immunological Nonresponders Have Colon-Restricted Gut Mucosal Immune Dysfunction
J Infect Dis, 225 (4), 661-674

Meyer-Myklestad MH, Medhus AW, Stiksrud B, **Lorvik KB**, Seljeflot

I, Hansen SH, Holm K, Hov JR, Kvale D, Dyrhol-Riise AM, Kummen M, Trøseid M, Reikvam DH (2022)
Probiotics to HIV-Infected Immunological Nonresponders: Altered Mucosal Immunity and Microbial Diversity Restricted to Ileum
J Acquir Immune Defic Syndr, 89 (1), 77-86

Namløs HM, **Skårn M**, **Ahmed D**, **Grad I**, **Andresen K**, **Kresse SH**, **Munthe E**, Serra M, Scotlandi K, Llombart-Bosch A, **Myklebost O**, **Lind GE**, **Meza-Zepeda LA** (2022)
miR-486-5p expression is regulated by DNA methylation in osteosarcoma
BMC Genomics, 23 (1), 142

Nilsen A, **Hillestad T**, **Skingen VE**, **Aarnes EK**, **Fjeldbo CS**, **Hompland T**, **Evensen TS**, **Stokke T**, Kristensen GB, **Grallert B**, **Lyng H** (2022)
miR-200a/b/-429 downregulation is a candidate biomarker of tumor radioresistance and independent of hypoxia in locally advanced cervical cancer
Mol Oncol (in press)

Nissen-Meyer J, **Skotland T**, **Boye E** (2022)
Are doping tests in sports trustworthy?: Athletes suffer from insufficiently defined criteria for doping tests: Athletes suffer from insufficiently defined criteria for doping tests
EMBO Rep, e54431 (in press)

Normann LS, Haugen MH, Aure MR, Kristensen VN, Mælandsmo GM, **Sahlberg KK,** (2022)
miR-101-5p Acts as a Tumor Suppressor in HER2-Positive Breast Cancer Cells an ImprovesTargeted Therapy
Breast Cancer: Targets and Therapy (In Press)

Ouellet V, Erickson A, Wiley K, Morrissey C, Berge V, Moreno CS, **Tasken KA,** Trudel D, True LD, Lewis MS, Svindland A, Ertunc O, Vidal ID, Osunkoya AO, Jones T, Bova GS, Lamminen T, Achtman AH, Buzza M, Kouspou MM, Bigler SA, Zhou X, Freedland SJ, Mes-Masson AM, Garraway IP et al. (2022)
The Movember Global Action Plan 1 (GAP1) - Unique Prostate Cancer Tissue Microarray Resource
Cancer Epidemiol Biomarkers Prev (in press)

Sikkeland J, Ng MYW, Nenseth HZ, Unal B, Qu S, Jin Y, **Simonsen A**, Saatcioglu F (2022)
STAMP2 suppresses autophagy in prostate cancer cells by modulating the integrated stress response pathway
Am J Cancer Res, 12 (1), 327-336

Sivanesan S, **Taskén KA**, **Grytli HH** (2022)
Association of β-Blocker Use at Time of Radical Prostatectomy With Rate of Treatment for Prostate Cancer Recurrence
JAMA Netw Open, 5 (1), e2145230

Skotheim RI, **Axcrona U**, **Axcrona K** (2022)
Re: Fibroblast Growth Factor Receptor 1 Drives the Metastatic Progression of Prostate Cancer
Eur Urol (in press)

Sohlberg E, Pfefferle A, **Heggernes Ask E**, **Tschan-Plessl A**, Jacobs B, Netskar H, **Lorenz S**, Kanaya M, Kosugi-Kanaya M, Meinke S, Mörtberg A, Höglund P, Sundin M, Carlsson G, Palmblad J, **Malmberg KJ** (2022)
Perturbed NK-cell homeostasis associated with disease severity in chronic neutropenia
Blood, 139 (5), 704-716

Strømme JM, Johannessen B, Kidd SG, Bogaard M, Carm KT, Zhang X, Sveen A, Mathelier A**, Lothe RA, Axcrona U, Axcrona K, Skotheim RI** (2022)
Expressed prognostic biomarkers for primary prostate cancer independent of multifocality and transcriptome heterogeneity
Cancer Gene Ther. (In press)

Søreng K, Pankiv S, Bergsmark C, **Haugsten EM**, Dahl AK, de la Ballina LR, Yamamoto A, Lystad AH, **Simonsen A** (2022)
ALFY localizes to early endosomes and cellular protrusions to facilitate directional cell migration
J Cell Sci, 135 (4)

Wolf J, **Helland Å**, Oh IJ, Migliorino MR, Dziadziuszko R, Wrona A, de Castro J, Mazieres J, Griesinger F, Chlistalla M, Cardona A, Ruf T, Trunzer K, Smoljanovic V, Novello S (2022)
Final efficacy and safety data, and exploratory molecular profiling from the phase III ALUR study of alectinib versus chemotherapy in crizotinib-pretreated ALK-positive non-small-cell lung cancer
ESMO Open, 7 (1), 100333 (in press)

Xia YY, Gronwald J, Karlan B, Lubinski J, McCuaig JM, Brooks J, **Moller P**, Eisen A, Sun S, Senter L, Bordeleau L, Neuhausen SL, Singer CF, Tung N, Foulkes WD, Sun P, Narod SA, Kotsopoulos J, Hereditary Ovarian Cancer Clinical Study Group (2022)
Contraceptive use and the risk of ovarian cancer among women with a BRCA1 or BRCA2 mutation
Gynecol Oncol (in press)

Zhao X, Hendriks IA, Le Gras S, Ye T, Ramos-Alonso L, Nguéa P A, Lien GF, Ghasemi F, Klungland A, Jost B, **Enserink JM**, Nielsen ML, Chymkowitch P (2022)
Waves of sumoylation support transcription dynamics during adipocyte differentiation
Nucleic Acids Res (in press)

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