



Centre for
Cancer Biomarkers



CCBIO Newsletter

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DIRECTOR'S COMMENTS

Dear all,

We are now well into the continuation phase of CCBIO2.0 – with a high level of engagement and activity. There will be increased focus on application of our findings and innovation initiatives, as well as on science communication.

The leadership will remain stable, except for the fact that Carina Strell has been appointed as co-director in addition to Line Bjørge, effective from January 1st, 2025. They will both provide strategic advice, Carina towards basic studies, and Line towards clinical studies, although with overlap when needed. We believe that this appointment will further strengthen the CCBIO2.0 leadership. The co-directors will both support the Masterclass program, and they will be active in communicating with industry.

The research teams have secured multiple grants this fall from various external sources, and the research school have announced the spring courses (please see the list of planned events at the end). Notably, Agnete Engelsen has now stepped down as leader of the research school, effective from December 1st, 2024, and we would like to thank her for all the hard work, and for the enthusiastic and stimulating leadership! From the same day, Erling A. Hoivik is the new leader.

In this edition of the newsletter, you can read about meetings and courses, scientific papers, grants to CCBIO2.0 teams, appointments, and PhD thesis defences. Congratulations to all of you on your achievements! And welcome to the new faces in the CCBIO2.0 family.

A special congratulations to CCBIO2.0 PI Bjørn Tore Gjertsen on the opening of C-MYC in September, the new K.G. Jebsen Medical Research Centre for Myeloid Blood Cancer!

We are now actively planning the CCBIO2.0 Annual Symposium in May, please take down the dates and participate to shape our research initiatives and environments.

Finally, thanks to all of you in the extended CCBIO2.0 family, researchers and administration, for the hard work. Be careful and stay safe - Merry Christmas and best wishes for 2025!

Keep up all the good work!

Best regards, Lars A. Akslen, Director

*Capturing cancer complexity
and clinical challenges*

Successful CC BIO–VBP meeting 2024



This meeting at Solstrand August 28–31, 2024 was the 2nd Research Meeting in the INTPART collaboration between CC BIO and the Vascular Biology Program (VBP), Boston Children's Hospital and Harvard Medical School, the first being the Iceland meeting in 2019. In 2019, 48 participants met in Iceland, and this year, 57 gathered at Solstrand.

The INTPART project is an RCN-supported reinforcement of existing collaborations between CC BIO and Boston Children's Hospital and Harvard Medical School, following Lars A. Akslen's collaboration with the Folkman lab since 2004 and later with strong support from the subsequent director of VBP Marsha A. Moses as well as from Bruce Zetter, member of the CC BIO SAB since 2013.

Some of the speakers during the meeting had to compete with thunder and lightning from the shifting Western Norway weather, not unlike the dramatic surroundings at the scientific eruptions meeting on Iceland in 2019. Nevertheless, indoors the atmosphere was much more welcoming, facilitating great sessions and networking.

Although very diverse backgrounds and research fields, the spectrum of methods and results were highly interesting for all participants.

"The CC BIO-VBP partnership has been very rewarding over the years" says Lars A. Akslen. "With a joint interest in the tumor microenvironment and vascular biology in particular, the complementary nature of this network gives promise for the future."

[Read full report in this article.](#)



Photos by Ingvild Festervoll Melien

New biomarker identified for therapeutic intervention for reducing tumor progression

The result of years of collaboration between CC BIO PI Jim Lorens and Rolf Brekken and other colleagues in the USA, Finland, Romania and Norway, is now published in *Science Signaling*, with research identifying nuclear AKT3 as a new biomarker of advanced malignancy and revealing the pathway that activates AKT3 to drive epithelial-to-mesenchymal transition in pancreatic cancer.

This builds on previous work in the Brekken and Lorens labs on identifying how AXL promotes tumor progression.

The receptor tyrosine kinase AXL promotes tumor progression, metastasis, and therapy resistance through the induction of epithelial-mesenchymal transition (EMT). In this work, Arner et al. showed that activation of AXL resulted in the phosphorylation of TANK-binding kinase 1 (TBK1) and the downstream activation of AKT3 and Snail, a transcription factor critical for EMT. Mechanistically, this showed that TBK1 directly bound to and phosphorylated AKT3 in a manner dependent on the multiprotein complex mTORC1.

[Read more in this article.](#)



Jim and Rolf. Photo by Ingvild Festervoll Melien

Helse Vest support to many CC BIO projects, postdocs and PhDs

The Western Norway Regional Health Authorities (Helse Vest) has recently announced their project funding for 2025, and we are happy to see many CC BIO names in their announcement.

- **Line Bjørge** receives open project support with NOK 1.264.000 for 2025 for her group's three-year project "Holistic Ovarian cancer PrEdiction (HOPE)", which aims to integrate clinical, molecular, and functional predictors with innovative technologies, enabling the incorporation of immunobiological insights into medical decision-making processes.
- **Emmet Mc Cormack** receives open project support of NOK 2.330.000 for 2025 for the project "Development of a new immunotherapy for Myelodysplastic syndrome patients based on CAR T cell technology - MyCAR."
- **Lars Andreas Akslen** receives continued open project support with NOK 1.500.000 for 2025 for the project "Stratification of breast cancer by proteomic classification."
- **Oddbjørn Straume** receives continued open project support with NOK 1.208.000 for 2025 for the project "Targeting AXL to improve immunotherapy: Deep clinical biomarker analysis for precision medicine."
- **Arne Östman** receives continued open project support with NOK 1.500.000 for 2025 for the project "Novel biomarkers and combination treatments for ER+ breast cancer."
- **Bjørn Tore Gjertsen** receives continued open project support with NOK 1.500.000 for 2025 for the project "Single cell immune and signaling profiling guiding cancer therapy."
- **Camilla Krakstad** receives continued open project support with NOK 1.500.000 for 2025 for the project "Clinical implementation of imaging and molecular markers for Endometrial Cancer: Final analyses of data from the multiregional MOMATEC2 2 study."
- **Daniela Elena Costea** receives continued open project support with NOK 1.500.000 for 2025 for the project "Predictive Biomarkers for Immunotherapy in Head and Neck Cancer."
- **Ingfrid Helene Salvesen Haldorsen** receives continued open project support with NOK 1.500.000 for 2025 for the project "AI-assisted radiogenomic tumor profiling for customizing gynecologic cancer treatment."
- **Hanna Dillekås** receives a 3-year 20% clinical study grant for the project "PET-MR for responsevaluering av brystkreftpasienter som får neoadjuvant behandling."
- **Kari Strøno Wagner-Larsen** receives a 6-year 50% postdoc grant for the project "Novel imaging markers guiding prognostication and targeted treatment in uterine cervical cancer."
- **Sturla Magnus Grøndal** receives a 3-year 100% postdoc grant for the project "The role of regulatory dendritic cells in resistance to AXL-inhibition", and a grant for a research stay abroad.
- **Rasmus Olai Collett Humlevik** receives continued PhD support for his project "Age-dependent differences in immuno-angiogenic responses in breast cancer — implications for diagnosis and outcome."
- **Ankush Gulati** receives continued PhD support for his project "FDG PET-CT in gynecologic cancer: diagnostic staging performance, incidental findings and impact on therapeutic delay."
- **Jostein Sæterstøl** receives continued PhD support for his project "Advanced functional imaging-, and abdominal adiposity markers for better prognostication and tailoring treatment in endometrial cancer."
- **Kristine Eldevik Fasmer** receives continued postdoc support for her project "Novel PET imaging methods for improved non-invasive lymph node staging and prognostication in endometrial cancer."
- **Stein-Erik Gullaksen** receives continued postdoc support for his project "Response prediction by CyTOF & CiteSeq single cell immune and signaling profiles."

Congratulations to all! You can see [the complete Helse Vest announcement in this article](#) (in Norwegian).

Support from The Norwegian Cancer Society to three of CC BIO's projects



The Norwegian Cancer Society has recently allocated their 2024 grants to current cancer research projects. Eight researchers from Bergen made the final cut, including three from CC BIO.

In total, the Norwegian Cancer Society received 141 submissions that were assessed by independent international experts. 27 top researchers made the cut and will be granted up to NOK 8 million each. Breast cancer, colon cancer and rectal cancer are the dominant cancer types, with various forms of immunotherapy and precision medicine dominating both submitted and granted projects.

Carina Strell is one of CC BIO's researchers who has been favored in this year's allocation, with NOK 8 million. Two years ago, she received NOK 2 million from the Norwegian Cancer Society's grant for pioneering projects. Her aim at the time was to develop a tool to map how cancer cells respond to immunotherapy. This new grant gives her the opportunity to test the tool, and hopefully be able to identify who will benefit from immunotherapy and who will not.

Granted NOK 8 million from the Norwegian Cancer Society, Bjørn Tore Gjertsen and his group will continue their work on development of new methods to adapt treatment for acute myeloid leukemia (AML).

Donald Gullberg receives NOK 5.06 million from the Norwegian Cancer Society for the project *Targeting the pro-tumorigenic integrin $\alpha 1 \beta 1$ in pre-clinical models*.

[Read more here.](#)



KREFTFORENINGEN

C-MYC officially opened



CC BIO PI Bjørn Tore Gjertsen has had other reasons to celebrate this fall, as the first annual symposium and official opening of the new K.G. Jebsen Medical Research Centre for Myeloid Blood Cancer (C-MYC) took place on the 11-12th of September at Grand Bergen.

Gjertsen is Centre director of C-MYC, and is joined by professor and co-director Simona Chera (Department of Clinical Science at UiB) and professor Eivind Dale Valen (Department of Biosciences at UiO). This trio of principal investigators form the scientific and operative nucleus of the Centre.

The opening symposium included a broad range of current topics on AML research, featuring many renowned international speakers. Among them the scientific advisory board members Konstanze Döhner ("Molecular measurable residual disease monitoring in Acute Myeloid Leukemia (AML)") and Kirsten Grønbeek ("Targeting Epigenetics: A new strategy in myeloid cancer prevention?"). CC BIO PI, Professor and Chair of the C-MYC board Roger Strand lamented the importance of responsible research when it comes to interaction with society and patient and societal participation.

[Read all about the opening on this page.](#)



The centre organisation Co-director and professor Simona Chera, Director and Professor Bjørn Tore Gjertsen and Professor Eivind Dale Valen. Photos: Ingvild F. Melfen

Elisabeth Wik appointed as professor of pathology



Photo by Ingvild Festervoll Melien

Congratulations to Elisabeth Wik with the well-deserved recent appointment as professor at the University of Bergen!

Our former CCBio Research School leader (in the period 2018–2023) kept a 20% position at the university when she took on the Head of Department of Pathology position at Haukeland University Hospital. She has been a cancer researcher since 2007, completed her PhD in 2013 under the supervision of Helga Salvesen and Lars A. Akslen, and has been associated with CCBio from the start. She is currently running the CCBio research group [Breast Cancer of the Young - Bergen \(BCY-B\)](#) together with Erling A. Hoivik, established in 2019.

Elisabeth herself emphasizes the appointment to professor as an achievement for her entire research environment.

"I would like to extend my warm thanks to all who have collaborated in various projects, for great contributions to the studies in the BCY-B group, for all mentoring advice and opportunities for development in educational projects, for administrative support and advice, and not least to the students and my PhD candidates. You all contributed to my achievements and made research and teaching that much more rewarding and fun," Elisabeth says.

We look forward to more great research from Professor Wik!

Cecilie Fredvik Torkildsen awarded with Kolbjørn Brambani grant



Congratulations to Cecilie Fredvik Torkildsen with the awarding of the Kolbjørn Brambani Cancer Grant 2024, presented at the Onkologisk Forum meeting 2024 in Bergen 21-22. november.

Cecilie Fredvik Torkildsen is a senior consultant, PhD, at the Women's Clinic at Stavanger University Hospital (SUS) and an associate professor at the University of Bergen (UiB).

Cecilie is associated with Line Bjørge's research group at UiB/CCBio, named "Precision Medicine in Ovarian Cancer." Her main project currently focuses on immunoprofiling patients with high-grade serous ovarian cancer. So far, immunotherapy has shown disappointing effects in ovarian cancer patients. Why does immunotherapy work so poorly? Are there elements in these tumors that can be modified to make immunotherapy effective?

From February 2025, she will begin a fellowship in the UniversitätsKlinikum Heidelberg, Women's Clinic, Germany. This position will primarily involve advanced cancer surgical training, but she will also continue her research activities.

Torkildsen received the Kolbjørn Brambani Cancer Research Grant to continue this research project, which will, among other things, allow her to establish a control cohort during her stay in Heidelberg. Additionally, the funds will be used to cover additional costs associated with the international stay that are not covered by the fellowship position. This support is essential to make an international stay financially feasible.

The Kolbjørn Brambani Cancer Research Grant was shared with Pernille Bjerre Trent, Oslo University Hospital (grant of NOK 200.000 each).

KOLBJØRN BRAMBANI KREFTFORSKNINGSSTIPEND 2024

Surgical training / fellowship

Stavanger - Bergen - Heidelberg

Immunophenotyping of HGSOc

mechanistic insights and biomarker / target identification

stratifications

PERMIT guidelines for PM research

PERMIT METHODOLOGY

Scoping reviews
(mapping, gap identification)

Gap analysis workshop

Working sessions, workshops
with stakeholders, first draft of
recommendations

Consensus building exercises

Finalization through
collaborative writing

Vibeke Fosse from the Mc Cormack and Bjørge groups contributed in the work of the PERMIT guidelines, now published in *Nature Scientific Reports*, providing guidelines for designing and implementing all stages of personalised medicine (PM) research.

The PERMIT project developed methodological recommendations for each stage of the PM research pipeline. A common methodology was applied to develop the recommendations in collaboration with relevant stakeholders. Each stage was addressed by a dedicated working group, specializing in the subject matter. A series of scoping reviews that mapped the methods used in PM research and a gap analysis were followed by working sessions and workshops where field experts analyzed the gaps and developed recommendations. Through collaborative writing and consensus building exercises, the final recommendations were defined. They provide guidance for the design, implementation and evaluation of PM research, from patient and omics data collection and sample size calculation to the selection of the most appropriate stratification approach, including machine learning modeling, the development and application of reliable preclinical models, and the selection and implementation of the most appropriate clinical trial design. The dissemination and implementation of these recommendations by all stakeholders can improve the quality of PM research, enhance the robustness of evidence, and improve patient care. [Read the complete publication here.](#)

3-month research stay in Boston

Earlier this year, one of CCBio's students got the opportunity to have a 3-month research stay in Boston, due to CCBio's INTPART collaboration with Harvard Medical School and Boston Children's Hospital. PhD Candidate Tessa Lohr reports of a great experience, highly recommending it to other young researchers.

"For my exchange to Boston, I had the opportunity to work in the lab of Dr. Michael S. Rogers. The Rogers lab focuses on endometriosis, blinding eye disease and cancer. The lab developed a model of endometriosis-associated pain and uses this model to identify and validate new and repurposed therapeutic targets. During my stay, I worked together with Victor Fattori, who has profound experience in working with nerves and performing pain studies. Victor taught me how to isolate and work with dorsal root ganglia. Combining this with my project on breast cancer, the goal was to create a co-culture in vitro model to study the interaction between breast cancer and neurons.

During my time in the Rogers lab, I worked on experiments related to my research in Bergen, but also got to help with experiments that other lab members were working on. I liked this balance of progressing in my own research and implementing the techniques used in the Rogers lab into this field, as well as familiarizing myself with experimental work on endometriosis to better understand what the group was working on. I enjoyed participating in the weekly lab meetings. It was inspiring to hear other lab members talk about their projects and to see all the different techniques this group is familiar with. I also got to present updates on my own project several times which provided me with helpful feedback from fellow lab members.

Visiting a laboratory with a different research topic than the research group in Bergen, I was able to expand my field and learn about new techniques, not least improving my techniques for cell culturing. It taught me to ask the right questions to enable me to work independently towards the end of the 3-month stay. I am grateful that I got to learn many new skills to bring home with me."

[Read the full report here.](#)

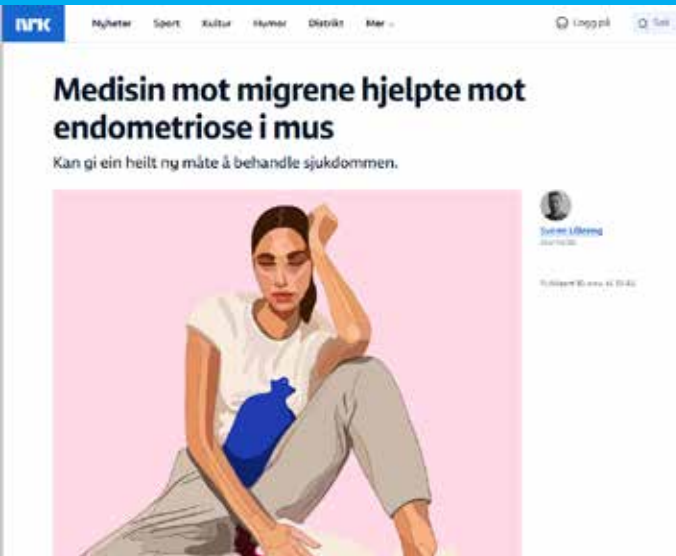


Lab work

Library studies

New friends in the park

NRK news story on work in the Rogers lab



Speaking of our friends in Boston, Michael Rogers made the headlines of the Norwegian national news channel NRK, explaining his lab's research on endometriosis.

Rogers had just returned from the CC BIO-VBP meeting at Solstrand when NRK reached him.

There is a comorbidity between endometriosis and migraine and the integral role of immune cells and inflammation in endometriosis, so the Rogers team [investigated the role of CGRP-mediated \(calcitonin gene-related peptide\) neuroimmune communication in endometriosis](#). They found that mouse and human endometriosis lesions contain both CGRP and its coreceptor, receptor activity modifying protein 1 (RAMP1). In mice, nociceptor ablation reduced pain, monocyte recruitment, and lesion size, suggesting that nociceptor activation and neuropeptide release contribute to endometriosis lesion growth and pain.

[Read the NRK news story here](#) (in Norwegian).

AI in pathology boosts interest



Photo by Ghazal Lessan Toussi

Speaker of the CC BIO Seminar Sept. 26, [Marit Valla](#), drew a full auditorium with her talk *AI: A revolution within medical image analysis*. This topic seemed to resonate with the interests of many researchers at campus, and chair for the seminar, Agnete Engelsen, reported that she had rarely seen the auditorium this packed.

Valla mainly focused on the use of AI in pathology. She presented research results within digital pathology and AI analysis in breast and lung cancer, and showed examples of AI-based image analysis in other fields of medicine. Valla leads the research group Artificial intelligence and digital pathology in cancer (AICAN) which studies the use of artificial intelligence in the interpretation of histopathological slides from cancer. AICAN is a cross disciplinary research group involving NTNU, St. Olavs hospital, Levanger hospital and SINTEF. They use artificial intelligence in the interpretation of histopathological slides from cancer. The group's goal is to establish methods able to predict biological properties and prognosis in breast and lung cancer. They use established biobanks from NTNU/St. Olavs hospital, and collect tissue from collaborating partners nationally and abroad.

Marit Valla has longstanding collaboration with CC BIO researchers, in particular Lars A. Akslen and Elisabeth Wik.

Professor Norheim in new role in Boston



Photo by Ingvild Festervoll Melien

Ole Frithjof Norheim is currently on the move to Boston, where he as of January 1, 2025 will be taking on a new position as Mary B. Saltonstall Professor of Ethics and Population Health at the Harvard T.H. Chan School of Public Health.

At the Department of Global Health and Population, he will teach ethics and continue his work as Lead Editor of the Disease Control Priorities project (DCP4), which works with partners in low-income countries to develop frameworks and criteria for health care priority setting and produce evidence to help guide decisions.

This move means that he will step down from directing the Bergen Centre for Ethics and Priority Setting in Health (BCEPS), where Professor Ingvild Sandøy will take over the Centre leadership. His work as associate professor at CC BIO is also discontinued. We are very grateful for Ole Frithjof's contributions to CC BIO's efforts on ethics and priority setting in cancer research, and wish him all the best with this exciting new role in Boston!

Successful Methods of Cancer Biomarker Research course



CCBIO recently held its signature course Methods in Cancer Biomarker Research (CCBIO905, September 25-27, 2024) at Haukeland University Hospital, providing the attending students with a full panel of standard and advanced methods with relevance for cancer biomarker research.

This is a bi-annual 5-ECTS course in the CCBIO Research School for Cancer Studies, equipped to provide an understanding of the various methodologies and their application in basic and translational cancer research. Organizers Akslen and Engelsen want to send their sincere thanks to all the coordinators involved, and to the expert lecturers for offering their valuable time to engage, challenge, and inspire the attending PhD students.

"The students are extremely fortunate to have this great line-up of experts sharing their knowledge on cancer biomarker research and methods, and we believe most students appreciated the opportunity to learn from the best," Engelsen says.

[Read the full report here.](#)



CCBIONEUR910 course – Patient and Public Involvement in Medical and Health Research



Registration is now available in StudentWeb for this spring's CCBIONEUR910 course in May 7-9. Make sure to register early, as this is a popular course.

The course aims to inspire increased user participation in research trials and will present methods on how to involve user representatives. This is highly relevant to all biomedical research fields, and Patient and Public Involvement is documented to positively impact the relevance and efficacy in medical research. Knowledge of this will help in funding proposals, as explanation of planned user participation is often required by funding agencies.

When: May 7-9, 2025

Place: On-site participation, room at EITRI, campus Haukeland University Hospital

Program: Not yet available, see [similar program for last year](#) for reference.

Registration: through [Studentweb](#) (UiB students) or [Søknadsweb](#) (guest students). Deadline **February 1**. [Separate registration form](#) for user/patient representatives. In case of very many registrations, we might need to consider the group of participants after the deadline. Students at the CCBIO and Neuro-SysMed research schools will have priority, as will students from the partner organizations.

Responsible for the course: The course is a collaboration between CCBIO, Neuro-SysMed, REMEDY, NorHEAD, MATRIX, NorCRIN and FORMI, and the project is supported by the Dam Foundation through Nasjonalforeningen for folkehelsen. Nina Jebesen (CCBIO), Kjell-Morten Myhr (Neuro-SysMed) and Tone Skår (Neuro-SysMed and VIS) are academic responsible for the course.

More info: [Available on this page.](#)



CCBIO908 course – Scientific Writing and Communication Seminar



We are continuing the success from earlier years with the seminar in Scientific Writing May 20-21, 2025, in the extended CCBIO/Harvard INTPART collaboration. Save the date!

Learn how to:

- Organize ideas, results and messages in a scientific paper
 - Improve titles and abstracts
 - Present a clear problem statement
 - Use punctuation, grammar and numbering in a text
 - Write an informative and convincing cover letter
- The course will also present and discuss what is good research communication.

Lecturers are:

- **Christine Møller**, an experienced lecturer in medical and scientific writing with many years of experience as assistant editor of APMIS (Acta Pathologica Microbiologica et Immunologica Scandinavica).
- **Randy Watnick**, Vascular Biology Program, Harvard Medical School.
- **Diane Bielenberg**, Vascular Biology Program, Harvard Medical School.
- Media Advisor **Marion Solheim**, UiB.

Even with the introduction of AI, there is something to learn for all of us! We strongly encourage students and fellows at all levels, including postdocs, to prioritize this and attend! Senior staff are also very welcome.



When: May 20–21, 2025

Place: On-site participation, Birkhaugsalen, Haukeland University Hospital

Program: Not yet available.

Registration: through [Studentweb](#) (UiB students) or [Søknadsweb](#) (guest students).

Deadline **February 1**. If you don't need the ECTS (studiepoeng) registered as part of an education/degree, and just want to join the lectures for professional update, you register through [this separate link](#).

Responsible for the course: CCBIO, with academic responsible Erling A. Høivik.

More info: [Available on this page](#).

Inspirational last CCBIO seminar of 2024



CCBIO has a tradition of using the December meeting in its seminar series to add a different perspective and encourage our research environment to think outside of the box. This December, we had the pleasure of welcoming back Fran Balkwill, who has a unique experience in addition to her cancer research career.

Fran Balkwill is Professor of Cancer Biology at Barts Cancer Institute, Queen Mary University of London, and Deputy Centre Lead in the Centre for Tumour Microenvironment. She is especially interested in translating knowledge of cancer biology into new biological treatments for cancer. The focus of this talk, however, was on Balkwill's parallel career in public engagement and informal science learning. Balkwill described how her initial experience of science journalism inspired her parallel career with writing science books for children, and how fruitful collaborations with illustrators developed and made her books transformative for her young readership. She explained how she founded and directs an informal biomedical science learning center, Centre of the Cell, which was the very first science center to be located within a center for biomedical research laboratories.

[Read more in this article.](#)

Recent doctoral defenses

Congratulations to the following completed PhDs related to the CC BIO groups!



Kari Strøno Wagner-Larsen defended November 15, 2024 her doctoral work at the University of Bergen with the thesis "*Advanced MRI for developing more personalized treatment strategies in uterine cervical cancer*". Main supervisor has been Professor Ingrid S. Haldorsen. Co-supervisors have been Professor Camilla Krakstad and Professor Noeska Smit.

The overall objective of this thesis was to identify reliable and novel magnetic resonance imaging (MRI)-based biomarkers relevant for prognosis and treatment in cervical cancer, aiming to refine risk stratification and promote personalized treatment strategies that improve patient outcomes. Wagner-Larsen's doctoral work includes four studies showing that traditional as well as advanced, computer-assisted MRI analyses (radiomics) improve the risk assessment of patients with cervical cancer. Overall, this research might lead to more tailored treatment for this patient group. [Read more here.](#)

Sturla Magnus Grøndal completed his PhD October 14, 2024 at the University of Bergen with his doctoral work "*Mechanisms of Immune Dysregulation through AXL Receptor Tyrosine Kinase Signaling in Cancer and Fibrotic Diseases*". Main supervisor has been Professor James B. Lorens, and co-supervisor has been Professor Silke Appel.

The protein AXL is linked to the development of cancer as well as fibrosis and is upregulated in inflammation, where it promotes disease by altering the functions of immune cells. In this PhD work, Grøndal has investigated how blocking of AXL can prevent development of cancer and fibrosis. The team found that AXL blocking improved the efficacy of immunotherapy in a mouse model of breast cancer and reduced fibrosis in mouse models of liver and kidney fibrosis. Overall, the results suggest that AXL signaling leads to dysfunction in myeloid cells in cancer and fibrotic diseases and supports the use of AXL blockade as a therapeutic treatment.

[Read more here.](#)



Hilde Eide Lien completed September 13, 2024 her PhD at the University of Bergen with her doctoral work "*Single cell expression patterns in endometrial cancer and novel biomarkers for improved treatment*". Main supervisor has been Professor Camilla Krakstad and co-supervisors were Professor Ingrid S. Haldorsen and Professor Lars A. Akslen.

This PhD work addresses the problem with inaccurate risk classification through two sub-studies, where the group investigated whether cellular patterns or biomarkers can help identify patients who are inaccurately risk classified. Overall, the work has identified markers with prognostic relevance in endometrial cancer, which can contribute to improved risk stratification and thus better treatment of patients.

[Read more here.](#)



Austin James Rayford completed October 11, 2024 his PhD degree at the University in Bergen with his thesis "Studies on the effect of AXL inhibition in non-small cell lung cancer". Main supervisor has been Professor James B. Lorens and co-supervisors were Agnete Engelsen and David Micklem.

Overall, the results from Rayford's doctoral work provide increased insight into the complex mechanisms of AXL-mediated resistance development and cell type-specific effects of AXL inhibition in NSCLC. These findings provide a strong scientific rationale for current and future clinical trials incorporating AXL inhibitors with ICI therapy to improve NSCLC patient outcomes, hopefully leading to more patients in the future being able to experience long-term effects of their cancer treatment. [Read more here.](#)





Karen Rosnes Gissum defended June 28, 2024 her PhD thesis "Unveiling the Complexities: Patients' and Healthcare Providers' Perspectives on Understanding and Managing Ovarian Cancer" at the University of Bergen. Supervisors have been Professor Line Bjørge, Professor Roger Strand, Professor Ingvild Vistad, Associate Professor Sigrunn Drageset, and Researcher Liv Cecilie V. Thomsen.

This is a unique CCBio doctorate work focusing on the patient and healthcare worker perspective and not the actual research. Nevertheless, objective measures like biomarkers were seen as sources of reassurance, control, and hope for the patients facing the severity of this disease.

Despite extensive documentation on ovarian cancer as a disease, information on the illness and patient and healthcare worker perspectives of living with ovarian cancer are still lacking. This project aimed to investigate how patients and healthcare professionals understand and act upon the illness and disease trajectory of ovarian cancer.

[Read more here.](#)

Christiane Helgestad Gjerde defended her dissertation "*Development of Advanced 3D Ovarian Carcinoma Models*" at the University of Bergen June 24, 2024. Main supervisor has been Professor Line Bjørge, with co-supervisors Professor Emmet McCormack and Researcher Katrin Kleinmanns.

In this work, the group established a 3D *in vitro* model of high-grade serous ovarian carcinoma to assess the efficacy of traditional chemotherapy and novel cell-based immunotherapies. This model makes out a more realistic mini tumor, making it possible to test which therapy that works on this type of cancer. The knowledge provided from this model can lead to developing new cancer therapy, and save time from not attempting treatment that does not work.

[Read more here.](#)



New faces in the CCBIO family

Welcome to new members in the CCBIO groups!



Johanna Letzner is a PhD student at the K.G. Jebsen Centre for Myeloid Blood Cancer (C-MYC), with co-supervisor Bjørn Tore Gjertsen. She is affiliated with the Western Norway University of Applied Sciences, with main supervisor Maria Omsland. She holds a master's degree in developmental biology from UiB, where she studied zebrafish as model organisms in research on neurodegenerative diseases. Her PhD project focuses on chronic myeloid leukemia and mechanisms that are involved in disease progression and treatment related side-effects.



Marte Kristensen has joined Bjørn Tore Gjertsen's research group as a Master's student. Currently in her second year of the Molecular Biology Program at the Faculty of Science and Technology at the University of Bergen, Marte will be working on the project "*Characterization and Functional Testing of p53 Isoforms in Healthy and Tumor Cells*." Her work will be supervised by Vibeke Andresen, Tuyen Hoang, Lalit Rane, and Bjørn Tore Gjertsen.



Kristine Mjelle Sjaastad is a new PhD student at the Gynecologic Cancer Research Group. Kristine completed her MD at Trinity College, University of Dublin. She also holds an intercalated master's degree in molecular medicine from Trinity College. She is dividing her time between research and part time employment as a physician at the Women's Clinic, Haukeland University Hospital. Her PhD project will focus on summarizing the Momatec2 trial, confirming the overall and recurrence free survival when omitting lymphadenectomy in low/intermediate risk endometrial cancer patients. She will investigate patient reported outcomes on quality-of-life following treatment of the disease, as well as explore the role of molecular subgroups on clinical treatment. Camilla Krakstad is her main supervisor and Jone Trovik her co-supervisor.



Jostein Sæterstøl is a PhD candidate in the Bergen Cancer Imaging Research Group and at the Mohn Medical Imaging and Visualization Centre (MMIV). He holds a master's degree in physics from the University of Bergen, focusing on detector technology for positron emission tomography (PET). He has been working as a Medical Physicist at the Centre for Nuclear Medicine/PET, Haukeland University Hospital, for more than a decade. His PhD project explores the value of image-based biomarkers from dynamic magnetic resonance imaging (MRI) and PET examinations, with a goal of determining markers for improved staging, prognostication, and treatment tailoring in endometrial cancer. His main supervisor is Kristine Fasmer, and Ingfrid Haldorsen is his co-supervisor.



Helia Hashemi is a master's student in Biomedical Sciences at the University of Bergen, with an expected graduation in June 2025. She holds a bachelor's degree in Biotechnology and currently focusing on immune checkpoint interactions in oncology as part of her thesis work. Helia is affiliated with the research group of Carina Strell, who is her main supervisor, with Anna Gorbunova and Ghazal Lessan Toussi as co-supervisors. Her academic journey reflects a strong interest in translational cancer research and advancing innovative therapeutic strategies.

Find relevant calls for funding



For current calls of funding, please see the Faculty of Medicine's page on [External funding opportunities](#). Do you have concrete plans to apply for funding, want to discuss funding possibilities for your idea, or want more information on a specific call, please send an email to: medforsk@uib.no

Note: even if there are many various deadlines, the Faculty of Medicine now has introduced the internal deadlines March 15 and September 15.

First, you submit your intention of applying for external funding in [this registration form](#), and a notification of your plans will be sent to the Head of Department, Head of Administration, a financial officer and research advisors at the Faculty of Medicine.

All applications must be approved by the department's management. This form is a tool intended to ensure that these administrative processes are taken care of.

Coming CCBio events



Make sure to save the dates in your calendar, and register when applicable. You can see all planned CCBio events in the [CCBio web calendar](#).

- January 30, [CCBio Seminar](#), Bergen, speaker Austin James Rayford
- February 20, [CCBio Seminar](#), Bergen, speaker Eirik Malinen
- March 27, [CCBio Seminar](#), Bergen, speaker tba
- April 24, [CCBio Seminar](#), Bergen, speaker Stein Erik Gullaksen
- May 7-9, [CCBIONEUR910, Patient and Public Involvement in Medical and Health Research](#) course
- May 13-14, [CCBio's 13th Annual Symposium](#), Solstrand
- May 20-21, [CCBio908, Scientific Writing and Communication Seminar](#)
- May 22, [CCBio Seminar](#), Bergen, speaker Marcus Buschbeck
- June 12, [CCBio Seminar](#), Bergen, speaker tba
- October 29-30, the [9th Scandinavian Symposium on Translational Pathology \(ScanPath\)](#), at Solstrand outside of Bergen

Other relevant coming events



Events from collaboration partners and other relevant events.

- January 16, [BBB seminar](#), speaker Tomonori Takeuchi, Bergen
- January 23, [Oslo Cancer Crosslinks 2025](#), " Bridging innovations to improve clinical outcomes for cancer patients," Oslo. Note: limited number of travel vouchers are available for clinicians and healthcare personnel based in Norway (domestic travel). Contact Oslo Cancer Cluster.
- February 11-12, [Norway Life Science 2025](#), " From Health Data Access to Value and Groundbreaking Research," Oslo
- February 13, BBB seminar, speaker tba, Bergen
- March 13, [BBB seminar](#), speaker Ilaria Testa, Bergen
- March 17-19, [BIO-EUROPE SPRING](#), Milan, Italy
- March 20-22, [ESMO Sarcoma and Rare Cancers congress](#), Lugano, Switzerland
- April 10, [BBB seminar](#), speaker Felipe Opazo, Bergen
- April 25-30, [AACR Annual Meeting 2025](#), American Association for Cancer Research, Chicago, Illinois, USA
- May 30-June 3, [2025 ASCO Annual Meeting](#), Chicago, Illinois & online
- June 16-19, [EACR 2025](#), Annual Congress of the European Association for Cancer Research Lisbon, Portugal
- September 23-23, [EACR conference: Goodbye Flat Biology: ex vivo to in vivo models of cancer](#), Essen, Germany
- October 17-21, [ESMO Congress 2025](#), Berlin, Germany
- November 12-14, [ESMO AI & Digital Oncology](#), Berlin, Germany

Publications

You can find the CCBIO publications on [this pubmed link](#). See some of the most recent below.

- Mirza MR et al. incl. Bjørge L. [Palbociclib plus letrozole in estrogen receptor-positive advanced/recurrent endometrial cancer: Double-blind placebo-controlled randomized phase II ENGOT-EN3/PALEO trial](#). *Gynecol Oncol*. 2024 Dec 9;192:128-136. doi: 10.1016/j.gyno.2024.12.003. PMID: 39657575.
- Kjeldsen MK et al., incl. Bjørge L. [Beyond HRD status: Unraveling Genetic Variants Impacting PARP Inhibitor Sensitivity in Advanced Ovarian Cancer](#). *Cancer Res Commun*. 2024 Nov 26. doi: 10.1158/2767-9764.CRC-24-0294. PMID: 39591206.
- Ha TQ, Andresen V, Erikstein BS, Popa M, Gullaksen SE, Reikvam H, McCormack E, Gjertsen BT. [Preclinical activity of resazurin in acute myeloid leukaemia](#). *Br J Haematol*. 2024 Nov 24. doi: 10.1111/bjh.19872. PMID: 39582120.
- Grøndal SM, Blø M, Nilsson LIH, Rayford AJ, Jackson A, Gausdal G, Lorens JB. [Targeting AXL cellular networks in kidney fibrosis](#). *Front Immunol*. 2024 Nov 4;15:1446672. doi: 10.3389/fimmu.2024.1446672. PMID: 39559366.
- Hjelmeland ME, Lien HE, Berg HF, Woie K, Werner HMJ, Amant F, Haldorsen IS, Trovik J, Krakstad C. [Loss of vimentin expression in preoperative biopsies independently predicts poor prognosis, lymph node metastasis and recurrence in endometrial cancer](#). *BJC Rep*. 2024 Oct 18;2(1):81. doi: 10.1038/s44276-024-00105-2. PMID: 39516342.
- Perez-Fidalgo A et al. incl Bjørge L. [Consensus on drivers of maintenance treatment choice and patterns of care in advanced ovarian cancer](#). *Int J Gynecol Cancer*. 2024 Oct 23;ijgc-2024-005497. doi: 10.1136/ijgc-2024-005497. Online ahead of print. PMID: 39448084.
- Musiime M, Erusappan PM, Cukierman E, Chang J, Molven A, Hansen U, Zeltz C, Gullberg D. [Fibroblast integrin \$\alpha11\beta1\$ is a collagen assembly receptor in mechanoregulated fibrillar adhesions](#). *Matrix Biol*. 2024 Dec;134:144-161. doi: 10.1016/j.matbio.2024.10.006. PMID: 39406317

Recent CCBIO in the media

Recent media appearances by CCBIO PIs and group members. For all media hits, see [CCBIO's web pages](#).

- 08.12.24, HealthTalk, "[Spådom etter sterke ASH-data: KML blir snart vår største leukemi-sykdom](#)," Bjørn Tore Gjertsen.
- 05.12.24, HealthTalk, "[Disse legene reiser til ASH - verdens største blodsykdom-kongress - i San Diego](#)," Bjørn Tore Gjertsen.
- 21.11.24, HealthTalk, "[Norske onkologer om kreftanbudet: – Milliardbeløp som frigjøres](#)," Line Bjørge.
- 14.11.24, UiB News, "[37 millioner til kreftforskning ved UiB](#)," Carina Strell.
- 13.11.24, HealthTalk, "[Norske kreftekspert får millioner i støtte - dette skal de forske på](#)," Bjørn Tore Gjertsen.
- 10.11.24, Tv2, "[Kreftlegane forsvann. Då fekk dødssjuka Ragnfrid panikk](#)," Jone Trovik.
- 08.11.24, UiB News, "[Bjørn Tore Gjertsen fekk Helse Vest sin forskingspris](#)," Bjørn Tore Gjertsen.
- 28.10.24, Helse Bergen, "[Utvikling av KI-verktøy kan effektivisere diagnostikk av tarmpolyppar](#)," Monica Hellesøy, Elisabeth Wik.
- 13.10.24, BA, "[Kvinnehelse-ekspert mener Norge bør velge ny HPV-vaksine: – Av hensyn til folkehelsen må vi ta den beste beslutningen](#)," Mari Kyllsø Halle.
- 02.09.24, HealthTalk, "[Starter med CAR-T på Haukeland i 2025](#)," Oddbjørn Straume.
- 16.06.24, HealthTalk, "[Imponerende KML-resultater: – Pasientene får rask effekt](#)," Bjørn Tore Gjertsen.
- 14.06.24, UiB/Driv, "[Dette forsker vi på](#)," Camilla Krakstad.

Programs and Research Teams

Mechanisms of Tumor Micro-environment Interactions:

- Donald Gullberg
- Karl-Henning Kalland
- Emmet McCormack

Exploration and Validation of Cancer Biomarkers:

- Lars A. Akslen
- Jim Lorens
- Camilla Krakstad
- Daniela Costea
- Elisabeth Wik
- Carina Strell
- Agnete Engelsen

Clinical Applications and Trial Studies:

- Bjørn Tore Gjertsen
- Oddbjørn Straume
- Line Bjørge

Health Ethics, Prioritization and Economics:

- Roger Strand
- John Cairns
- Ole Frithjof Norheim

Additional resources: Bioinformatics and Big Data

- Inge Jonassen

Strategic Advice

- Rolf Reed

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