



"CAPTURING CANCER COMPLEXITY AND CLINICAL CHALLENGES"

CCBIO1 Newsletter

DIRECTOR'S COMMENTS

EDITOR: eli.vidhammer@uib.no

Dear all

Despite the chronic covid challenges, much has been going on lately. Recently, the Falch Lecture, co-organized by CCBIO, became an amazing event. Robert S. Langer from MIT, this years' speaker at the Falch lecture and legendary scientist and innovator, presented an overview of his extraordinary career and achievements. Read the story and follow the link to the video in this newsletter. Dr. Langer has also accepted our invitation to be present at next years CCBIO Annual Symposium (May 2022).

Congratulations to a lot of people, for receiving awards, funding from the Norwegian Cancer Society, and for defending thesis work. In particular, congratulations to Dr. Carina Strell from Uppsala University for receiving a TMS Starting Grant. Welcome to Bergen and CCBIO - we look forward to working with you! To all new faces, welcome to the CCBIO family!

To the CCBIO and the Neuro-SysMed research schools, thank you very much for organizing the joint CCBIO-Neuro-SysMed courses this fall: Clinical Trials, Patient and Public Involvement in Medical and Health Research, and Health Innovation. These courses were extremely well received, and you are encouraged to read the full stories below. Please also read other information on upcoming events, and calls for funding.

Please remember to attend the last research seminar this fall (December 16), given as a webinar by professor Eystein Jansen, a scientific "giant" at UIB, on the subject "Climate Research in Bergen - Strategic choices and challenges that paved the way". Dr. Jansen is a professor in paleoclimatology, UiB, Academic Director Academia Europaea Bergen Knowledge Hub, Vice Director SapienCE Centre of Excellence, and Member of the ERC Scientific Council. A different topic (for CCBIO) but very exciting. Do not miss it.

Finally, thanks to all of you at CCBIO for all the work and good spirits during these uncertain times - science must go on. Be careful and stay safe - Merry Christmas and warm wishes for 2022!

Best regards, Lars A. Akslen, Director

Programs and Research Teams

Mechanisms of Tumor-Microenvironment 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

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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TRUE BELIEVER IN THE MAGIC OF SCIENCE

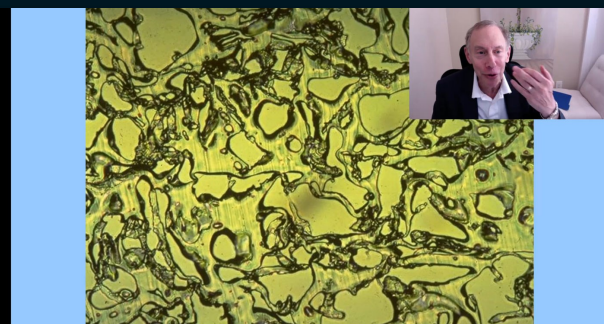
November 9, Professor Robert S. Langer, Massachusetts Institute of Technology, presented the Falch Lecture entitled "Creating and implementing breakthrough technologies in biotechnology and nanotechnology". Through a live streaming from MIT, the around 200 people in Store Auditorium enjoyed a truly inspirational talk, motivating them to pursue their ideas and keep asking the fundamental questions.

Dr. Langer was nominated to the [Falch Lecture](#), hosted by the Medical Faculty at the University of Bergen, by CCBIO Director Lars A. Akslen and the Neuro-SysMed Director Kjell-Morten Myhr.

On the examples of his own work, Dr. Langer connected with the audience when describing his trials and tribulations, as well as his journey to academic recognition. The audience got to experience a "scientific giant" whose accomplishments can only be described in historic terms. The attendants also met the human who through dedication and sheer perseverance overcame scientific, institutional and entrepreneurial barriers, especially during the early years.

The fact that it took Moderna - a company co-founded by Langer - only 64 days from receiving the genetic code of SARS-CoV-2 from Chinese scientists, to administering Moderna's COVID-19 vaccine for the first time to humans, is truly mind-boggling. At the same time, Langer showed that this is the result of a combination of visionary science and entrepreneurial preparedness and maturity. See a [video from the talk here](#).

[Read more here](#).



Meeting before the Falch lecture: Bob Langer (top screen), Yves Aubert, Helge Røder, Agnete Engelsen, Gottfried Greve, Kjell-Morten Myhr, and Lars Akslen.

BJØRN TORE GJERTSEN – A TRUE TRANSLATIONIST

On October 20, CCBIO hosted a Celebration Seminar to celebrate the awarding of the King Olav V's Prize for Cancer Research 2021 to Professor Bjørn Tore Gjertsen. Leaders from the university and the hospital as well as close colleagues gave highly praising speeches and scientific talks.

Bjørn Tore Gjertsen is one of the Principal Investigators at CCBIO since the startup in 2013, and co-director since 2016. CCBIO's Director Lars A. Akslen gave a short introduction where he described Gjertsen as one of the true "translationists" in Norwegian cancer research, with strong focus on basic studies combined with exceptional clinical engagement and commitment to his patients, colleagues, and students.

Congratulatory speeches were also given by Per Bakke, dean of the Faculty of Medicine, Eivind Hansen, CEO of Helse Bergen, Astrid Olsnes Kittang, head of the Hematology section, Haukeland University Hospital (HUS), Eystein Husebye from the management of the Department of Clinical Science, UiB, and Steinar Skrede, assistant director at the Medical Clinic, HUS.

The scientific part of the program was composed by close colleagues who have collaborated with Gjertsen during his career, and a talk by Gjertsen himself.

Read more and see more photos [here](#).



This year's award recipient together with earlier Bergen recipients of the prize: Back row: Lars A. Akslen (2009), Per Magne Ueland (1992), Olav Dahl (2013), Rolf Bjerkvig (2015). Front row: Stein Ove Døskeland (1995), Bjørn Tore Gjertsen (2021), Per Eystein Lønning (1999). Photos by IngvildFestervoll Melien.

SUCCESS FOR COLLABORATION COURSES

During this fall, CCBIO has been running three courses in collaboration with Neuro-SysMed, the popular and already established Clinical Trials course, now as a hybrid solution course for the first time in the CCBIO Research School, in addition to the brand new and highly relevant courses Patient and Public Involvement in Medical and Health Research, and Health Innovation. The experiences so far indicate that the collaboration on these courses will certainly continue.

"The collaboration on these courses is a good example of the snow-ball effect and a clear synergy," says Elisabeth Wik, leader of the CCBIO Research School. "Both centers have benefited from both parties contributing to each others' course ideas," she continues. "It has been a pleasure to see the good collaboration between course leaders and coordinators from CCBIO and Neuro-SysMed, and the accompanying high quality of the courses we have hosted this fall. The collaboration with Neuro-SysMed's research school leader Nina Grytten Torkildsen has been particularly inspiring for me. We have been able to provide better support to the course coordinators because we have bounced ideas together, and together made an effort for the courses. Kjetil Harkestad, PhD coordinator the Department of Clinical Medicine also deserves lots of credit for great administrative work with the courses. We will constantly be stretching towards providing even better courses, will be running these courses again, and likely develop other collaborative courses," Wik concludes.

Nina Grytten Torkildsen agrees with Wik. "The close collaboration with Elisabeth Wik has contributed to establishing a solid structure at our research school from the start in the spring of 2021, and this is valuable experience in the next stage of developing our course portfolio," she adds. "The collaboration with course leaders and coordinators from Neuro-SysMed, CCBIO and VIS has been inspiring and educational, and we will maintain this fruitful collaboration in the coming years," Torkildsen says.

Read the full reports from the two new courses on these links:

[Strengthening the focus on Health Innovation](#) and [Bringing the patient perspective into research](#)



A whole lot of happy course organizers and contributors!

CARINA STRELL TO START RESEARCH PROJECT IN BERGEN

The Trond Mohn Foundation has now announced that Carina Strell will be one of three candidates at the University of Bergen (UiB) to be awarded with a TMS starting grant, for her project Understanding Early Breast Cancer Evolution in Space and Time (EvoMaps). Strell has a long-term collaboration with the Lars A. Akslen group and her project will be embedded at CCBIO.

"I would like to understand the biological mechanisms behind why some women experience recurrent and/or treatment resistant disease while others do not," Carina explains. "The hypothesis is that breast cancer progression and therapy response are not only dependent on the tumor cells alone, but also on the surrounding tissue microenvironment. Using novel molecular tools for advanced tissue analysis, I will perform a systematic exploration of the genetic properties of tumor cells in relation to their surrounding microenvironment over the course of disease progression and the development of treatment resistance," she says.

Read the [full story here](#).



Photo by Melanie Burford, Trond Mohn stiftelse

SUPPORT FROM THE CANCER SOCIETY 2021



Four of CCBIO's PIs received this fall funding from the Norwegian Cancer Society. All in all 176 million NOK is allocated to 25 research projects this year, carefully selected among 143 submitted proposals. Congratulations to Camilla Krakstad, Emmet McCormack, Donald Gullberg and Lars A. Akslen!

Professor Krakstad is supported with NOK 7 993 000 for a project on a new treatment to avoid resistance to chemotherapy in women with uterine cancer. The aim of this project is to identify markers at the start of treatment that can help identify patients with expected good response to chemotherapy. In addition, the group investigate what causes resistance to cytotoxic drugs, so that they can develop new treatment methods that have better effects and less adverse effects. The goal is to provide patients with uterine cancer with more tailored and effective treatment options that can also lead to a better quality of life after treatment.



Professor McCormack is supported with NOK 8 million for a project on immunotherapy development using new animal models. Genetic modification of the patient's own immune cells through the form of immunotherapy called CAR-T has had good results for blood cancers. However, CAR-T has shown disappointing results for solid cancers. Why is that? McCormack aims to solve two major problems to improve CAR-T by exploring new findings made in the laboratory. One is to lower toxicity and the other is to prevent CAR-T cell inactivation in the microenvironment. The goal is to develop new CAR-T to be able to offer this therapy to more patients in Norway.



Professor Gullberg is supported with NOK 5 081 000 for a project developing a new mouse model with the long-term goal to limit tumor growth by blocking the function of connective tissue cells in the tumor's microenvironment. The group has developed specific antibodies to integrin $\alpha 11$, aiming to block tumor growth. They have used a mouse model in which they have replaced the mouse version of the integrin $\alpha 11$ protein with the human version of $\alpha 11$. The effect of the antibodies, which only recognize human $\alpha 11$, will be tested in a breast cancer model in this "humanized mouse". Based on knowledge of the DNA sequences that control the gene expression of the $\alpha 11$ integrin, the group has created a new transgenic mouse strain where molecular scissors (Cre-recombinase) can cut out DNA sequences and inactivate genes in a way that is specific for connective tissue cells. The ultimate aim is that the use of this mouse strain will lead to new knowledge about the importance of tumor support tissue.



Photos by Ingvild Festervoll Melien

Professor Akslen and Postdoc Heidrun Vethe are supported with NOK 7 169 000 for a project on nerve involvement in breast cancer. The aim of the project is to examine the mutual interaction between tumor cells and nerve structures in the tumor microenvironment. It is of particular importance to identify novel mechanisms and associated biomarkers for these processes. The long-term goal would be to provide a better basis for breast cancer stratification and improved treatment.



PRIZE TO CCBIO MASTER STUDENT

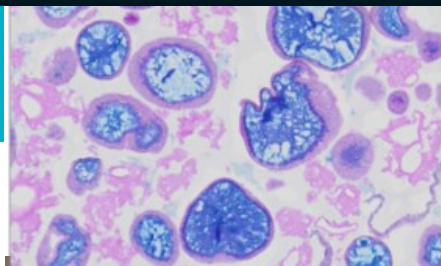
At a recent conference arranged by the Pandemic Centre, CCBIO Master student Camilla Tvedt Ekanger in the Lorens group won a prize for her scientific presentation about the use of human airway and lung organoids in pandemic preparedness.

Camilla has established the organoids, or miniature tumors and miniature lungs, from surgical resection specimens of cancer tissues as well as healthy lung tissues. Through thorough characterization of the models, she has shown that the normal respiratory airway tissues have beating cilia and produce mucus.

The realization of Camilla's project was enabled through an outstanding interdisciplinary teamwork with collaborators from various departments at the Medical Faculty, UiB and several departments at Haukeland University Hospital as well as peers at the [University of Iowa](#). Camilla has been exceptionally engaged in research dissemination and she has presented her work at local as well as international Student Conferences.

Read also about this [in StudVest](#) (in Norwegian) about the use of human airway and lung organoids in pandemic preparedness and the potential future impact of the research project.

Photo on top: AB-PAS stained organoids of bronchiolar differentiation. Mucus secreted into the lumen of organoids (blue color). Scalebar: 259 μ m. Photo below: Camilla in the lab, photo by Agnete Engelsen.



COMING CCBIO COURSES

The coming spring, CCBIO offers three of its established courses to newcomers and all who have not been able to attend them yet. We aim for personal attendance in an auditorium at campus Haukeland University Hospital, but will monitor the pandemic measures and consider hybrid or online solutions if necessary.

Regarding registration, applies to all the courses:

Deadline for ECTS providing registration is February 1, 2022, and opens December 13. If you are already enrolled at the UiB, you register through [Studentweb](#). If you are *not* enrolled at the UiB, but need the ECTS, you register through [Søknadsweb](#), where you simultaneously apply for UiB guest student status.

If you don't need the ECTS registered as part of an education/degree, and just want to join the lectures for professional update, you register through another link for each course (see "read more" links for each course).

CCBIO906 Cancer Genomics, February 21-23

This 3 ECTS course will provide broad understanding of aspects of cancer genome biology and its investigation by next generation sequencing (NGS) technologies. Methods for analyzing DNA variation and structure and RNA expression patterns will be covered, as well as nuclear and chromatin structure. Also, ethical, legal aspects, and hereditary predisposition will be taught.

Learn:

- ⇒ What kinds of mutations may predispose for, contribute to, or appear during cancer development
- ⇒ How these variants can be detected by NGS methods and be analysed bioinformatically
- ⇒ How to employ these methods to stratify patients both diagnostically and therapeutically
- ⇒ The different implications of the same aberrations depending on tissue type
- ⇒ Ethical and legal regulations regarding genetic analyses of patient samples

Liv Cecilie Vestheim Thomsen and Erling Høivik have the academic responsibility, and Rebecca Nguyen is the course coordinator.

[Read more here.](#)



Illustration: colourbox.com

CCBIO904 Biomarkers and tumor biology in clinical practice, April 20-22

CCBIO904 covers tumor biological aspects important for the understanding of why cancer develops and which mechanisms are important for tumor growth, metastases and morbidity in patients.

Get a deeper insight into:

- ⇒ Methods to detect molecular changes in malignant lesions.
- ⇒ Tumor biological aspects of cancer.
- ⇒ Oncogenes, tumor-suppressor genes, gene re-arrangements, DNA repair, apoptosis and growth factors.
- ⇒ Different methods applied for "Gen-mapping", DNA analysis and sequencing.
- ⇒ Principals for cytokine therapy, gene therapy, rational "drug design," monoclonal antibodies and protein engineering.
- ⇒ The interaction between tumor cells and microenvironment.
- ⇒ Relevant methods for specimen collection in the clinical setting for use of molecular techniques.

Oddbjørn Straume has the academic responsibility, and Reidun Kopperud is the course coordinator.

[Read more here.](#)



Illustration: CCBIO/colourbox.com

This 2 ECTS course is part of the CCBIO/INTPART program, where students' education and exchange is promoted through collaboration between CCBIO and the Boston based Harvard Medical School and Harvard Kennedy School.

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, assistant professor at the Vascular Biology Program, Harvard Medical School, and Media Advisor Marion Solheim at the Medical Faculty, UiB.

Learn:

- ⇒ How to organize your ideas and improve your manuscript
- ⇒ How to use clear writing
- ⇒ How to organize your results and message
- ⇒ How to avoid common mistakes
- ⇒ Present the problem statement
- ⇒ How to write titles and abstracts
- ⇒ How to use proper grammar, punctuation and numbers
- ⇒ What makes a manuscript memorable
- ⇒ Writing a convincing cover letter
- ⇒ How to avoid death by PowerPoint

Elisabeth Wik has the academic responsibility, and Vandana Ardawatia and Harsh Dongre are course coordinators. [Read more here](#).



CCBIO SEMINAR WITH A DIFFERENT PERSPECTIVE



Photo by NordForsk/
Terje Heiestad, Flickr

Welcome to the last CCBIO Seminar this year, December 16, as a webinar in Zoom.

In the last seminar of the year, we traditionally look at our research from a slightly different perspective. Perhaps there are somethings to learn from the strategic choices and challenges of another field?

Speaker is [Eystein Jansen](#), UIB, Bjerknes Centre for Climate Research.

Title: "Climate Research in Bergen - Strategic choices and challenges that paved the way"

Time and place: December 16 at 14:30 in Zoom. Access code will be available [here](#).

Abstract: Will be available [on this page](#). Open to all!

NEW FACES

Welcome to new members in the CCBIO family!



Amalie Bark Kvamme is a new student from the [Medical Student Research Programme](#) at The Faculty of Medicine, connected to the research group of Elisabeth Wik. Amalie is in her third year as medical student. She is working on the project "Trefoil factor 1 (TFF1) in primary tumors and metastases in breast cancer of the young", where she is studying TFF1 protein and mRNA expression in primary and metastatic breast cancer, and its relation to age, clinico-pathologic features, resistance to endocrine therapy, and metastasis promoting processes.

Main supervisor is Elisabeth Wik, and co-supervisor is Lars A. Akslen. Amalie is currently part time on this project parallel with her studies, but will be committed to one year of full-time research as of August 2022.



Elisabeth Mayerhofer is a new guest researcher in Costea's group from October until Christmas 2021. She has a master's degree in chemistry and comes from the collaborative [group of Prof. Anke Krueger](#) from Julius-Maximilians-University of Wuerzburg, Germany.

The aim of the internship at the Experimental Pathology Research Group at CCBIO is to gain cell culture knowledge and skills, and to test the uptake and cytotoxicity of dipeptide functionalized nanodiamonds. The work is performed under the supervision of Postdoctor Harsh Dongre. Based on these results, novel nanodiamond particles targeting cancer cells will be individually tailored and synthesized within the collaborative project between the two groups.



Rasmus Olai Collet Humlevik (MD) is new PhD candidate connected to the research groups of Elisabeth Wik and Lars A. Akslen. He is currently doing internship in Verdal, Trøndelag, and has in his pre-PhD work been linked to the Breast Cancer of the Young project in CCBIO. Rasmus will start March 2022 as PhD candidate at the project "Age-dependent differences in immuno-angiogenic responses in breast cancer – implications for diagnosis and outcome", where he will explore age-related differences in tissue-based immune-related and angiogenesis markers in breast cancer. Elisabeth Wik is main supervisor, and Lars A. Akslen is co-supervisor.

RECENT DOCTORAL DEFENSE

Astrid Børretzen defended October 22, 2021 her doctoral dissertation "Epithelial-mesenchymal transition, angiogenesis, and molecular markers in aggressive prostate cancer."

Astrid has done her work at the Department for Clinical Medicine and CCBIO. Main supervisor was Professor Ole Johan Halvorsen, and co-supervisors were Professor Lars A. Akslen and Professor Christian Beisland.

In this work, focus has been on different protein biomarkers in prostate cancer. In order for the cancer cells to more easily be able to invade surrounding tissues and spread in the body, they need to be detached from each other and become more mobile. In this study, the selected biomarkers reflected such change and were associated with more aggressive tumor features and poorer prognosis. If several of the biomarkers were expressed simultaneously in the tumor, this had an even greater effect on the outcome. Furthermore, the findings showed a connection between increased blood vessel formation and change to a more mobile and invasive cell type.



Photo by Jørgen Barth.

New blood vessel formation is important for cancerous tumors to grow and spread in the body. Astrid studied active vascular formation in tissues from prostate cancer, and from the corresponding area in the tumor, various parameters related to new vessel formation were obtained from MRI of the patients. The results from the tissue studies correlated positively with the results from the imaging studies. Furthermore, a high degree of blood vessel formation, both in tissues and estimated in imaging studies, was associated with a poorer disease prognosis. The study has provided additional knowledge about biomarkers in prostate cancer and the findings may be useful in future assessment and treatment of this patient group. See the [press release](#).

REDUCTION IN PRICE FOR THE HYPERION

The pricing structure for using the Hyperion Imaging System has been revised. From the third hour within a single experiment, you will now be charged 600 NOK per hour. The rate for the two first hours is unchanged at 1 100 NOK.

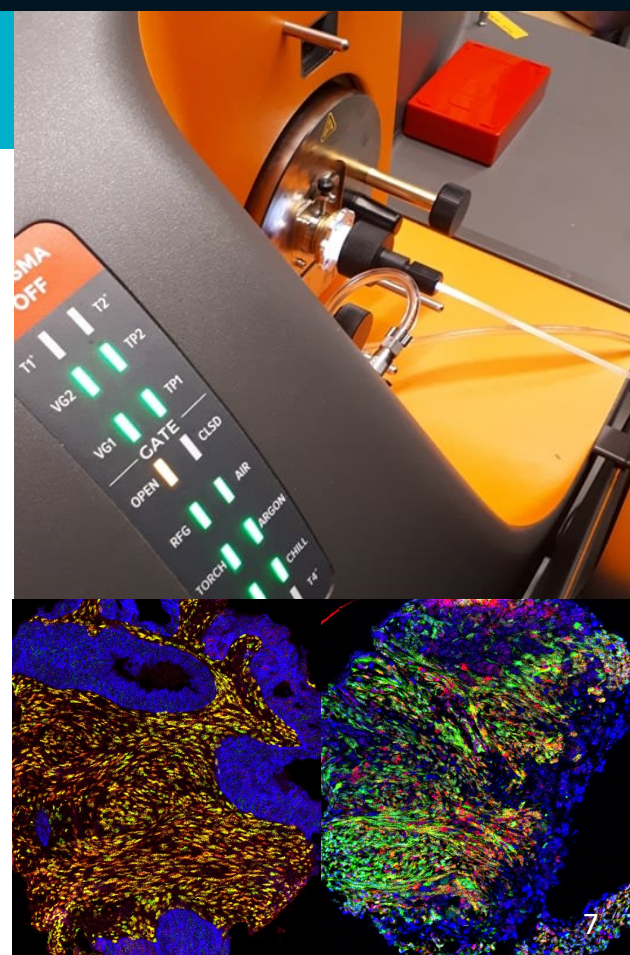
We do this to make it easier for the researchers to prioritize long experiments and thereby better enabling them to realize the Hyperion's full potential. Our hope is that researchers and projects will use the instrument more frequently and intensely.

The decision was taken jointly by the instrument owners CCBIO and the Department of Clinical Medicine, and is in itself an experiment. If leading to a considerable increase in use, this pricing structure will be retained. If not leading to a considerable increase in use, the change may be reversed in June 2022.

If you need more practical information about the Hyperion and its research potential, please feel free to contact [Jørn Skavland](#) at [FLOW](#). If desirable, the engineers from FLOW and researchers from CCBIO can visit your department or research group to jointly present both the Hyperion's specs and possibilities and examples of research data from the Hyperion.

Hence, we encourage you all to both spread the word and make much use of this fantastic instrument in the months to come.

[Read more about the Hyperion here.](#)



RELEVANT CALLS FOR FUNDING

Please find funding opportunities on the faculty's web pages. They will be updated every 2 weeks.

Research Council of Norway (NFR):

Researcher Project

Calls open: 15. December 2021. **Deadline:** 2. February 2022
[Researcher Project for Scientific Renewal](#) - NOK 4 -12 million; 36-72 months
[Researcher Project for Young Talents](#) - NOK 4 -8 million; 36-48 months
[3-year Researcher Project with International Mobility](#) - NOK 3 -3.9 million; 36 months

Webinars for applicants:

7. December 2021, 10:00 - 11:00 (English). Register [here](#)

Collaborative Project

Call open: 15. December 2021. **Deadline:** 9. February 2022
[Collaborative Project to Meet Societal and Industry-related Challenges](#) - 24-48 months

Webinar for applicants:

See recorded webinar [here](#) (Norwegian).

Horizon Europe—European Research Council:

[Starting Grants](#): Researchers of any nationality with 2-7 years of experience since completion of PhD. 1,5 million Euro, 5 years. Deadline 13 January 2022

[Consolidator Grants](#): Researchers of any nationality with 7-12 years of experience since completion of PhD. 2 million euros, 5 years. Deadline 17 March 2022

Innovation relevant funding possibilities: Researchers at the Faculty of Medicine can apply for funding to support research with innovative potential from national and international sources. [Read more here](#).

Note: January 14, [Horizon Europe info day at UiB](#). Sign up before Dec. 31.

EMBO:

[EMBO \(European Molecular Biology Organization\) Fellowships](#) - Research on the molecular mechanisms of life at all levels.

[Short-term](#) Fellowships fund research exchanges of up to 3 months between laboratories in eligible countries.

[Long-term](#) Fellowships are awarded for a period of up to 2 years and support post-doctoral research visits to laboratories throughout Europe and the world. **Deadline:** throughout the year.

TRAVEL GRANTS

ERASMUS+ Employee Mobility: All employees at UiB (including technical, administrative, scientific staff and research fellows) can apply for a scholarship for mobility to an institution, organization or university in Europe to receive training, new knowledge and new experiences through exchanges, in addition to increasing international cooperation between UiB and European institutions in EU countries, Iceland, Lichtenstein, Macedonia, Serbia and Turkey. Visit ERASMUS+ Employee Mobility [web page](#) for more details. **Deadlines:** 20. August and 20. January

[Helse Vest](#) - granted for 6 or 12 months. Postdoctoral fellowship applicants are especially encouraged to apply for an overseas fellowship over the course of their fellowship period. **Deadline:** continuing.

[Research Council of Norway](#) offers for a scholarship for research stays abroad applies to PhD candidates and Post Doctors in projects with full or partial funding for the Research Council for a minimum of 24 months. The research stays abroad may last for a minimum of 3 months and a maximum of 12 months. **Deadline:** continuing.

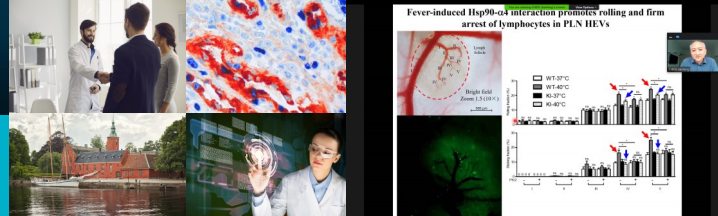
See much more and important information on this Medical Faculty page:

- [External funding opportunities](#)



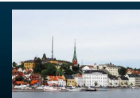
COMING CCBIO EVENTS

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](#).



- December 16, [CCBIO Seminar](#), speaker [Eystein Jansen](#), UIB, Bjerknes Centre for Climate Research, Zoom.
- January 20, [CCBIO Seminar](#).
- February 17, CCBIO Seminar.
- February 21-23, [CCBIO906 Cancer Genomics](#) course.
- March 31, CCBIO Seminar.
- April 20-22, [CCBIO904 course, Biomarkers and tumor biology in clinical practice](#).
- April 28, CCBIO Seminar.
- May 9, CCBIO Satellite Symposium.
- May 10-11, CCBIO's 10th Annual Symposium.
- May 23-24, [CCBIO908 Scientific Writing and Communication Seminar](#).
- June 16, CCBIO Seminar.

OTHER COMING EVENTS



- December 15, [Oslo Cancer Cluster December Gathering & Introduction of New Members](#), Digital event.
- January 10-12, [Kreft 2022](#), Faglig Forum, Fornebu, Oslo.
- January 14, [Horizon Europe info day at UiB](#). Sign up before Dec. 31.
- January 26-28, [The 16th Annual Research Presentations by the Research School in Clinical Medicine](#), Haukeland University Hospital, Bergen. (Submission deadline for poster or oral presentation is Dec. 1.)
- January 27, BBB Seminar, speaker [Virginia Man-Yee Lee](#), Institute on Aging and Center for Neurodegenerative Disease Research, Department of Pathology and Laboratory Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA .
- January 27, [Cancer Crosslinks 2022](#), "Getting Ahead of Tumor Evolution—Changing the Premises in the War Against Cancer", Oslo Cancer Cluster. A digital/hybrid event.
- April 8-13, [AACR Annual Meeting 2022](#), New Orleans, USA.
- 20-21 April, [Nordic Life Science Days](#), Malmö, Sweden.
- June 3-7, [ASCO Annual Meeting 2022](#), Chicago, USA + online.



See/hear also [podcast from Bioteknologirådet](#) where Bjørn Tore Gjertsen and Eirik Tranvåg were speakers on a meeting November 29 on Personalized medicine and cancer therapy.



Bioteknologirådet

PUBLICATIONS

You can find the CCBIO publications [on this pubmed link](#) (link shortened through Tinyurl). See the most recent 5 below.

Malani D, Kumar A, Bruck O, Kontro M, Yadav B, Hellesoy M, Kuusanmaki H, Dufva O, Kankainen M, Eldfors S, Potdar S, Saarela J, Turunen L, Parsons A, Vastrik I, Kivinen K, Saarela J, Raty R, Lehto M, Wolf M, Gjertsen BT, Mustjoki S, Aittokallio T, Wennerberg K, Heckman CA, Kallioniemi O, Porkka K. [Implementing a functional precision medicine tumor board for acute myeloid leukemia](#). Cancer Discov. 2021 Nov 17;:candisc.0410.2021. doi: 10.1158/2159-8290.CD-21-0410. Online ahead of print.

Rajthala S, Min A, Parajuli H, Debnath KC, Ljøkjel B, Hoven KM, Kvalheim A, Lybak S, Neppelberg E, Vintermyr OK, Johannessen AC, Sapkota D, Costea DE. [Profiling and Functional Analysis of microRNA Deregulation in Cancer-Associated Fibroblasts in Oral Squamous Cell Carcinoma Depicts an Anti-Invasive Role of microRNA-204 via Regulation of Their Motility](#). Int J Mol Sci. 2021 Nov 4;22(21):11960. doi: 10.3390/ijms222111960.

Mohamed N, Litlekalsøy J, Ahmed IA, Martinsen EMH, Furriol J, Javier-Lopez R, Elsheikh M, Gaafar NM, Morgado L, Mundra S, Johannessen AC, Osman TA, Nginau ES, Suleiman A, Costea DE. [Analysis of Salivary Mycobiome in a Cohort of Oral Squamous Cell Carcinoma Patients From Sudan Identifies Higher Salivary Carriage of Malassezia as an Independent and Favorable Predictor of Overall Survival](#). Front Cell Infect Microbiol. 2021 Oct 12;11:673465. doi: 10.3389/fcimb.2021.673465. eCollection 2021.

Bhopal A, Norheim OF. [Priority setting and net zero healthcare: how much health can a tonne of carbon buy?](#) BMJ. 2021 Oct 28;375:e067199. doi: 10.1136/bmj-2021-067199.

Moshina N, Falk RS, Botteri E, Larsen M, Akslen LA, Cairns JA, Hofvind S. [Quality of life among women with symptomatic, screen-detected, and interval breast cancer, and for women without breast cancer: a retrospective cross-sectional study from Norway](#). Qual Life Res. 2021 Oct 26:1-12. doi: 10.1007/s11136-021-03017-7. Online ahead of print.

RECENT CCBIO IN THE MEDIA

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



07.12.21, Dagens Medisin, "[Automatiserer mer av patologifaget](#)", Ying Chen.

29.11.21, Bioteknologirådet, podcast, "[Persontilpasset medisin og kreftbehandling](#)", Bjørn Tore Gjertsen, Eirik Tranvåg.

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