



CCBIO

Newsletter

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DIRECTOR'S COMMENTS

We hope that all of you had a good summer, as there will be a lot to do this fall. Meetings of great value for the CCBIO teams and supported by our centre, have already been arranged, such as the workshops on "Basic R" by CBU/CCBIO on August 16-17, "Network Biology/ Integromics Bioinformatics – Applications Towards Medicine" on August 23-25, as well as the CCBIO Junior Scientist Symposium on August 31st. In the beginning of November, we launch a new course by our research school, CCBIO906 on "Cancer Genomics", directed by Prof. Ola Myklebost. Looking at our calendar, you will also find our monthly CCBIO seminars, thesis defense dates, and other relevant meetings. On December 13-14, 2017, CCBIO organizes a course on Scientific Writing, by Christine Møller and Randy Watnick, as part of the INTPART Program. We recommend this to all PhDs and postdocs.

CCBIO's co-director Prof. Bjørn-Tore Gjertsen has been appointed as Research Director at Helse Bergen. Congratulations! Gjertsen will continue his role in CCBIO.

CCBIO has recently published its second book, "Biomarkers of the Tumor Microenvironment" (edited by Akslen and Watnick, published on Springer), with contributions by Robert A. Weinberg and many others. And we keep on being active in the media. Stay tuned for the weeks and months to come!

Best regards, Lars A. Akslen, Director

CONTACT INFORMATION



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The eight Principal Investigators:

- Lars A. Akslen (Director)
- Bjørn Tore Gjertsen (Co-Director)
- Donald Gullberg
- Anne C. Johannessen
- Karl Henning Kalland
- James Lorens
- Rolf Reed
- Oddbjørn Straume

NEW BOOK FROM CCBIO



CCBIO with editors Lars A. Akslen and Randolph S. Watnick published a new book through Springer Publishing on August 31st.

The title is *Biomarkers of the Tumor Microenvironment - Basic Studies and Practical Applications*. The book contains 22 chapters with more than 500 pages and multiple illustrations, with a general introduction to the topic (prologue) by Robert A. Weinberg. The foreword is written by Jean Paul Thiery. Several CCBIO investigators and affiliated professors have contributed.

This book reviews different aspects of the cancer microenvironment, and its regulation and importance for tumor progression. Practical applications, in terms of how biomarkers are increasingly included in therapy protocols, are also discussed. [Read more here.](#)

And did you catch the news of [CCBIO's first book release](#), in April?



Established by the Research Council of Norway

NEW CCBIO RESEARCH SCHOOL COURSE



We are very happy to introduce the brand new CCBIO Research School course CCBIO906 - Cancer Genomics!

This is an annual course, and the first will take place **November 1-3 2017**.

The course will provide broad understanding of aspects of cancer genome biology and their investigation by next generation sequencing (NGS) technologies. Methods for analysing 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.

The course will give you the skills to formulate problems, plan and carry out NGS analyses on samples from cancer patients. You will also be able to assess the expediency and application of different NGS methods in cancer diagnostics and research, and to know the contact points for NGS analysis and data storage and analysis in the Bergen area. You will have knowledge about relevant literature and methods concerning cancer genomics.

[Read more here](#). Note that registration deadline is **October 2nd**.

THE SAME PRINCIPLES BEHIND THE INTERNET, SOCIAL NETWORKS AND BIOLOGICAL NETWORKS

Keynote speaker Albert-László Barabasi.
Photo: Tomasz Furmanek



NORBIS, supported by CCBIO, DLN and CBU, hosted the "Network Biology/Integromics Bioinformatics – Applications Towards Medicine" workshop at Grand Hotel Terminus in Bergen, August 23rd-25th 2017.

The event aimed at familiarizing researchers and students from interdisciplinary fields with concepts of the network science field, as well as presenting cutting edge research in network biology and medicine. The participants were introduced to graph theory and learned about biological networks; the key goal of the event was to exhibit the universality of principles underlying many complex systems like the internet, social networks and biological networks. The workshop included 10 international and 4 national speakers and 120 participants. [Read more here](#).

Pre-workshop in 'Basic R'

Prior to the NORBIS workshop, CCBIO/CBU also held a workshop in the programming language 'Basic R' for CCBIO juniors. CCBIO has a strategy to strengthen the bioinformatic axis of the center, as they find that increased knowledge in bioinformatic analyses and relevant analysis tools is important to fully understand the different levels of high-throughput data used in cancer research. Read more about the [Basic R-workshop here](#).

COMING CCBIO EVENTS

- 28.09.17, [CCBIO Seminar](#), speaker Nuno M. Coelho, "DDR1 expression, collagen-dependent activation and signalling in cancer and tissue fibrosis".
- 26.10.17, [CCBIO Seminar](#), speaker Jan Jacob Schuringa
- 01.-03.11.17: CCBIO Research school course [CCBIO906 - Cancer Genomics](#).
- 02.11.17, [CCBIO Special Seminar](#), speaker Rameen Beroukhim
- 17.-18.11.17, [The Second Scandinavian Seminar on Translational Pathology](#), Sigtuna, Sweden. Focusing on tissue based tumor research.
- 23.11.17, CCBIO Seminar
- 23.11.17, CCBIO901, Junior Scientist Symposium
- 13.-14.12.17, [CCBIO/INTPART course in Scientific Writing](#), Bergen.
- 21.12.17, CCBIO Seminar

OTHER RECOMMENDED COMING EVENTS

- 27.09.17, Oslo Innovation Week, meeting on [Antibiotic Resistance and Cancer](#).
- 27.09.17, Oslo Innovation Week, meeting on [Cancer Research and Innovation – Benefits for Patients](#)
- 28.09.17, Oslo Innovation Week, meeting on [Cancer Research and Innovation – The Need for Registrations and Data Analytics](#)
- 03.10.17, Forskningsveiledning for ph.d.-veiledere, UiB, Bergen. (Norw. only.) For all main and co-supervisors at the Medical Faculty, UiB. Registration [here](#). Program [here](#).
- 19.-20.10.17, [Health Data Analysis Event 2017](#), Oslo. Insight into the trends in the big data field, updating on innovation projects in health data analysis.
- 07.-10.11.17, course: [Multimodal Imaging of Small Animals](#), MIC, Bergen. Include MR imaging, PET/CT imaging, optical imaging (OI) and ultrasound (US).

GJERTSEN NEW RESEARCH DIRECTOR AT HELSE BERGEN



Photo: Ingvild Festervoll Melien

CCBIO Co-Director and PI Bjørn Tore Gjertsen has been appointed as research director at Helse Bergen, Haukeland University Hospital.

The research director has a central role in regional tasks linked to Helse Vest's research funds, research support, health registries and method assessment. Important tasks for the research director are the follow-up of the regional tasks which the Dept. of Research and Development performs on behalf of Helse Vest. The Dept. of Research and Development among other coordinates work between Helse Vest's cooperative bodies and the regional health organization, and the higher education institutions in the region. In addition, the section is responsible for allocating and following up on Helse Vest's research funding, approximately 200 million kroner per year. See news articles [here](#) and [here](#) (in Norwegian only).



NEXT YEAR'S CCBIO ANNUAL SYMPOSIUM

Make sure to save the date for the 6th CCBIO Annual Symposium, which takes place at Solstrand Hotel & Bad May 23-24 2018!

[Read more here.](#)

DEEP LEARNING AT THE JUNIOR SCIENTIST SYMPOSIUM



Erlend Hodneland during his lecture.

This semester's first CCBIO Junior Scientist Symposium took place already on August 31st, early in the semester, but still well visited with about 40 participants.

In the symposium's key lecture, researcher Erlend Hodneland from Christian Michelsen's Research AS enlightened us about computerized machine learning. In particular he discussed "deep learning" as a tool to improve biomedical sciences, with examples demonstrating use based on imaging data.

In fact, the imagination on how these algorithms could be applied on specific projects was sparked for PhD candidates presenting afterwards with projects ranging from global data-smaller datasets-larger cohort studies, and single biomarkers, many with the possible benefit of applying deep learning.

The junior researchers (see [program](#)) had all prepared high quality presentations from interesting projects on endometrial cancer, oral squamous cell carcinoma, AML and breast cancer. Some showed projects that were just initiated, while others were at the brink of publication, and this ensured a good discussion, all within the aims and spirit of the symposium.

Next symposium is planned at the 23rd of November. The CCBIO Junior Scientist Symposium is part of the CCBIO Research School course CCBIO901, giving 3 ECTS.



CCBIO SNAPSHOTS



CCBIO DOCTORAL DEFENSES



Stefan Hinz defended Friday September 8th 2017 his dissertation "Mechanisms of AXL mediated cell plasticity and drug resistance". Supervisors: Professor James B. Lorens and PhD Gro Gausdal. [See press release.](#)

SEMINAR ON SCIENTIFIC WRITING

Several CCBIO-INTPART seminars and courses will take place the coming years. December 13th and 14th this year, we launch the first seminar in this series; a two-day seminar on Scientific Writing. This is a seminar you should not miss!



Photo: Ingvild Festervoll Melien

CCBIO, through Lars A. Akslen and Roger Strand, received in 2015 funding from NFR and SiU for an [INTPART program](#), where students' education and exchange is promoted through collaboration between CCBIO and the Boston based Harvard School of Medicine and Harvard Kennedy School.

[Christine Møller](#), an experienced lecturer in medical and scientific writing and assistant editor of [APMIS](#), will take the students through a mix of lectures on 'how to improve your writing' and practical exercises.

[Randy Watnick](#), associate professor at the Vascular Biology Program, Harvard School of Medicine, contributes to the seminar. The program will also include topics like 'clear writing', punctuation and comma exercises, 'improving your abstract' and tips for the cover letter. There should be something to learn for all of us! Seminars like this is not frequently offered at the Medical Faculty, and *we strongly encourage students at all levels, including postdocs, to prioritize this and attend!*

Program/registration will be available [here](#). Save the date, Dec. 13 & 14!

PUBLICATIONS



You can find the CCBIO publications [on this pubmed link](#). See the last 5 below.

- Mjos S, Werner HMJ, Birkeland E, Holst F, Berg A, Halle MK, Tangen IL, Kusonmano K, Mauland KK, Oyan AM, Kalland KH, Lewis AE, Mills GB, Krakstad C, Trovik J, Salvesen HB, Hoivik EA. [PIK3CA exon9 mutations associate with reduced survival, and are highly concordant between matching primary tumors and metastases in endometrial cancer](#). Sci Rep. 2017 Aug 31;7(1):10240. doi: 10.1038/s41598-017-10717-z.
- Pilskog M, Beisland C, Akslen LA, Bostad L, Haug Å, Heinrich D, Hjelle KM, Straume O. [Predictive value of C-reactive protein in patients treated with sunitinib for metastatic clear cell renal cell carcinoma](#). BMC Urol. 2017 Aug 31;17(1):74. doi: 10.1186/s12894-017-0267-6.
- Yttersian Sletta K, Tveitarås MK, Lu N, Engelsen AST, Reed RK, Garmann-Johnsen A, Stuhr L. [Oxygen-dependent regulation of tumor growth and metastasis in human breast cancer xenografts](#). PLoS One. 2017 Aug 23;12(8):e0183254. doi: 10.1371/journal.pone.0183254. eCollection 2017.
- Vistad I, Bjørge L, Solheim O, Fiane B, Sachse K, Tjugum J, Skrøppa S, Bentzen AG, Stokstad T, Iversen GA, Salvesen HB, Kristensen GB, Dørum A. [A national, prospective observational study of first recurrence after primary treatment for gynecological cancer in Norway](#). Acta Obstet Gynecol Scand. 2017 Aug 10. doi: 10.1111/aogs.13199. [Epub ahead of print].
- Romaine A, Sørensen IW, Zeltz C, Lu N, Erusappan PM, Melleby AO, Zhang L, Bendiksen B, Robinson EL, Aronsen JM, Herum KM, Danielsen HE, Sjaastad I, Christensen G, Gullberg D. [Overexpression of integrin \$\alpha 11\$ induces cardiac fibrosis in mice](#). Acta Physiol (Oxf). 2017 Aug 3. doi: 10.1111/apha.12932. [Epub ahead of print].

RECENT CCBIO IN THE MEDIA

- 14.09.17, Den Norske Tannlegeforenings Tidende, "[Biomarkører - fremtidens verktøy i kreftbehandlingen?](#)", Daniela E. Costea.
- 04.09.17, Forskerforum, "[Immunforsvarets frontliner](#)", Agnete Engelsen.
- 30.07.17, VG, "[Fars gener bidrar til at mor får svangerskapsforgiftning](#)", Liv Cecilie Vestrheim Thomsen.
- 22.07.17, BT Magasinet, "[Bruker designermus for å løse kreftgåten](#)", Lars A. Akslen, Bjørn Tore Gjertsen, Oddbjørn Straume, Line Bjørge, Monica Hellesøy, Stein Erik Gullaksen.
- 16.07.17, Khrono, "[Ny forskningsdirektør i Helse Bergen](#)", Bjørn Tore Gjertsen.
- 13.07.17, På Høyden, "[Gjertsen ny forskningsdirektør i Helse Bergen](#)", B.T. Gjertsen.
- 09.07.17, Firdaposten, "[Vert ny forskningsdirektør ved Helse Bergen](#)", B.T. Gjertsen.
- 09.07.17, Helse Bergen nettavis, "[Bjørn Tore Gjertsen er ny forskningsdirektør](#)", Bjørn Tore Gjertsen.
- 06.07.17, På Høyden, "[Eg er blitt betre på small talk](#)", Anne Christine Johannessen.
- 29.06.17, iFinnmark, "[Nå kommer varmen – men husk at huden ikke glemmer solskader](#)", Oddbjørn Straume.
- 27.06.17, På Høyden, "[Forskningsrådet deler ut én milliard](#)", Inge Jonassen.

CCBIO'S ANNUAL REPORT

Did you miss out on the CCBIO Annual Report 2016? No problem, you can find the report [on this link](#).



(Give it a minute to download, it is a large pdf document, full of all the exciting research CCBIO has done during the last year!) It is also available in paper print at our office.

