







DIRECTOR'S COMMENTS

Dear all

CCBIO has now entered the continuation phase, following a 10-year period with core CoE (SFF) funding from the Research Council of Norway (2013-2023). CCBIO 2.0 will continue a range of activities that we have established during these years: the many scientific initiatives and collaborations within CCBIO and with international and national partners, our education programs through the CCBIO Research School for Cancer Studies (RSCS) and the CCBIO Masterclass Program, our communication and media efforts, and the many structural and softer activities to create and promote a scientific community that can support excellent research and career development for our young candidates. This next phase of CCBIO is supported by UiB (central level) and many sources for external funding. Thank you to all for the outstanding work through the years – so far!

The RSCS has been coordinated by Elisabeth Wik since 2018. She has now decided to step down. Agnete Engelsen has been appointed as the new coordinator, with Erling Høivik as assistant coordinator. We would like to thank Elisabeth for her excellent work during these years, and we appreciate that she will still be available as an advisor. At the same time, we are very thankful that Agnete and Erling will continue the good work!

In this issue of the newsletter, you can read about our latest activities and achievements. Please take some time to map out future courses and events, as well as possibilities for funding. You can also read about new faces – and we wish both Tessa and Lars welcome to the CCBIO family.

Best regards, Lars A. Akslen, Director

Capturing cancer complexity and clinical challenges

Finalists for a K. G. Jebsen Centre for Medical Research







The Kristian Gerhard Jebsen Foundation is planning two new K. G. Jebsen Centres for Medical Research at Norwegian medical faculties and university hospitals. From the Bergen medical community, 2 of the 4 prequalified projects come from the CCBIO community. The same two are now in the national final.

This is a funding scheme for translational medical research aiming for the highest international level. The intention is to establish two new K.G. Jebsen Centers in 2023 that each may receive a maximum of 4.5 MNOK a year for a duration of five years. See the terms of the call here. In total 7 projects are in the national final, and among these are:

From Bjørn Tore Gjertsen's group, building on recent publications (in Nature and Cancer Discovery) on how functional diagnostics with cancer cell signaling can be used to optimize treatment in acute myeloid leukemia.

The Akslen team incl. Heidrun Vethe propose a center around studies of cancer neuroscience, a rapidly expanding field in current cancer research. They propose that nerve involvement represents a new hallmark of cancer, and that understanding this process might open possibilities for improved diagnostic stratification and identify new treatment targets in cancer patients. They plan plan to develop sensitive methods to extract spatial location of nerve elements and study how they interact with tumor cells and other stromal cells in the tumor microenvironment. A translational research center could bridge basic and patient-oriented research to improve scientific understanding of nerve involvement in cancer and to create new potential for therapy.

Reflective leadership workshop



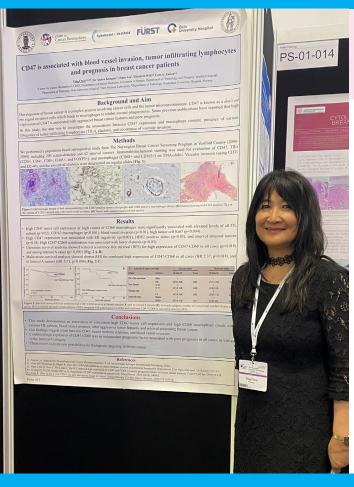
Postdoc Katrin Kleinmanns, as part of the CCBIO Masterclass program building future research leaders, attended July 18-20 the EMBO Solutions Laboratory Leadership Course for postdocs in Leimen near Heidelberg, Germany.

The course contained a multifaced program including communication skills, emotional intelligence, giving feedback and criticism, delegation as well as conflict management, to name a few.

"The workshop encouraged me to reflect on myself and others," Katrin explains. "Knowing the differences of being a manager and a leader and learning strategies on how to implement your values allow you to influence others to reach a common goal while taking care of the needs and development of everyone involved. We were confronted with questions such as 'What kind of leader do you want to be?' 'Which qualities are you finding in excellent leaders?' 'Did you ever think about the key elements of a high performing team?'

Reflecting on my path so far, I believe communication is a very important soft skill. Communication comprises not just words but signals and emotions and therefore it is important to be aware of them. After the course, I felt motivated, enthusiastic, scared, optimistic, stressed and prepared to implement some key elements into my daily work and private life," Katrin concludes.

Best poster at pathology conference



Pathologist Ying Chen, a member in Lars A. Akslen's research group, participated in the «35th European Congress of pathology» has won the award for the Best Poster Presenter in the Poster Session, breast pathology.

The poster title is «CD47 and CD68 expression is associated with blood vessel invasion, tumor infiltrating lymphocytes, and prognosis in breast cancer patients».

The study is based on investigating the relationships between cancer cells and the tumor microenvironment in a population-based series from the Norwegian Breast Cancer Screening Program in Vestfold County. This work was published in «The Journal of Pathology: Clinical Research» in January 2023.

Congratulations to Ying!



Brilliant performance at Forsker Grand Prix





Forsker Grand Prix took place in Bergen September 27, where nine young researchers were competing for Best Presenter, getting only four minutes to convey their research in front of an auduence and three judges. Among the nine was CCBIO's and the Department of Clinical Science's PhD Candidate Christiane Helgestad Gjerde.

Although Christiane did a brilliant job and got a full score from one of the judges, the margins were so slim, and the winner was Emilie Hernes Vereide from the Institute of Marine Research, presenting her research on how anthropogenic noise in the ocean affect animal plankton.

Christiane's supervisors Line Bjørge, Emmet McCormack and Katrin Kleinmanns were nevertheless immensely proud of their PhD candidate. She presented her project on the development of better preclinical models for ovarian cancer through the establishment, characterization and appliation of an organoid platform. She has grown cancer cells on peritoneum from pigs, together with immune cells and supporting cells that are normally found in cancerous tumors. The peritoneum is like a membrane around the organs in the abdomen, where ovarian cancer tend to spread to.

Read more here.

Best PhD at Nordic Obs & Gyn congress



The Nordic Federation for Obstetrics and Gynecology gathers Nordic gynecologists and obstetricians for a congress every two years, this year in August in Trondheim. David Forsse, who carried out his PhD in Professor Krakstad's research group in 2018-2021, was awarded Best PhD by the Norwegian Gynecological Association in 2022 and was invited to the congress to present his thesis along with the best PhD theses from the other Nordic countries.

The title of his dissertation is "Novel preoperative biomarkers and evaluation of altered treatment strategies to improve outcome for endometrial cancer patients", with Professor Krakstad as main supervisor and Professor Trovik as cosupervisor. David Forsse continues to work with gynecological cancer as consultant at the Women's Clinic.

Recent doctoral defense



Cecilie Fredvik Torkildsen defended September 26, 2023 her doctoral dissertation "Rethinking High-Grade Serous Ovarian Carcinoma: Comprehensive Bioprofiling for Enhanced Identification of Surgical Phenotypes and Treatment Outcomes".

Supervisors were Researcher Liv Cecilie Vestrheim Thomsen, Professor Line Bjørge and Associate Professor Ragnar Kvie Sande.

This project aimed to identify novel biomarkers for surgical stratification and treatment outcomes of HGSOC patients through targeted next-generation sequencing and longitudinal analysis of serum metabolites, lipoprotein subfractions, and cytokines.

Overall, the findings suggest that broad strategies for tumor and treatment characterization are necessary to improve outcomes for HGSOC patients.

See the press release here. Cecilie's thesis is available in BORA.

New faces in the CCBIO family



Welcome to new members in the CCBIO groups!

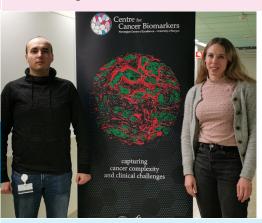
Tessa Lohr is a new PhD candidate from The Netherlands and will be connected to the research group of Lars A. Akslen. She started her project in June and will work on the project "The Role of Axon Guidance and Neural Interaction in Breast Cancer", where she is studying the interaction between the peripheral nervous system and breast cancer, with special emphasis on the role of axon guidance factors. Main supervisor is Heidrun Vethe, and Lars A. Akslen is co-supervisor.



Lars Muhl is a new researcher (50%) connected to the Strell group. Lars received his PhD in 2009 from the Justus-Liebig-University in Giessen, Germany and shortly after moved to Sweden to work at the Karolinska Institutet (KI) in Stockholm, where he has been working in projects dealing with different aspects of vascular biology. In 2017, Lars joined the group of Prof. Christer Betsholtz at KI to become introduced to the emerging technology of single-cell RNA-sequencing. Since then, Lars' research has been focused on the molecular characterization of vascular and perivascular cells. At UiB, Lars' research activities will be focused on a new exciting project that aims to decipher the reaction of cardiac vascular cells to breast cancer-related radiotherapy treatment, using single-cell transcriptomic analysis.

Coming CCBIO Research School events

Elisbeth Wik has now stepped down as leader of the CCBIO Research School as she has taken on new responsibilities at the hospital. We thank Elisabeth for a brilliant job these years, and for having developed the research school significantly in her period! In her place, we now have Agnete Engelsen and Erling Høivik, who have taken on the task with great enthusiasm. Wik is continuing on in an advisory role. Engelsen and Høivik welcomes all to the research school. *PhD students may opt to have the affiliation to CCBIO's Research School for Cancer Studies registered on their UiB Diploma, as long as they join the flagship course CCBIO Junior Scientist Symposia (CCBIO901)*. In addition to the annual symposium and the regular seminar series (CCBIO902), they are now announcing the following CCBIO Research School courses for the coming term.



Junior Scientist Symposium, December 6, 2023

This seminar series is a perfect place to meet and interact with other young scientists. We anticipate lively and interesting discussion also this time. Join us for a perfect occasion for professional input and networking! Senior researchers are also welcome. This is simultaneously an ECTS providing course, <u>CCBIO901</u>.

When: December 6, 2023 at 09.00-13.00

Where: Auditorium B302, Sentralblokken, Haukeland University Hospital 3rd floor

Registration: on this link

Program: will be <u>announced here</u> closer to the date.

Coordinators/chairs: Mari Kyllesø Halle and Vladan Milosevic.

ECTS: 3. (For the series. Missed deadline in Studentweb? Contact Kjetil Harkestad.)



CCBIONEUR911: Clinical Trials course, January 17-19, 2024

The completed program qualifies for a Good Clinical Practice (GCP) certificate and covers several aspects of clinical trials – from design planning to execution – with learning examples from cancer research and neurological research alike. A 2 ECTS course, also open for non-ECTS participation. See program here.

Topics in the course:

- What is a clinical study?
- Study design
- The pharmaceutical company perspective
- The patient's perspective
- Ethics
- GCP overiview and concepts
- Practical running of a clinical trial
- Formalities and regulations
- Writing a protocol
- Applications and funding
- Contracts
- Translational research protocols
- Clinical trials as part of normal clinical operations
- Success factors
- Clinical trials in the future

Academic responsible are Line Bjørge and Øivind Torkildsen. More info here.



CCBIO903: Cancer research: Ethical, economic and social aspects, April 8-12, 2024 + June 3-6, 2024

This unique 5 ECTS course focuses on ethical, economical and societal aspects of cancer and cancer research and aims to equip cancer researchers with tools for reflecting on the limits, challenges and opportunities of their own research, as well as provide an understanding of the outside-the-lab context, with discussions on the broader ethical, social, economic and political implications of their research.

Such knowledge is not only important on a personal level as a researcher, but also in funding proposals to be able to clarify any ethical issues related to the implementation of projects, and be better equipped to provide an explanation of how such issues will be dealt with.

Academic responsible are Roger Strand and Anne Blanchard.

More info here.



CCBIONEUR910: Patient and public involvement in medical and health research, March/April 2024

This 2 ECTS 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.

Planned for March/April 2024 (exact dates to be announced soon). Academic respinsible are Nina Jebsen (CCBIO), Kjell-Morten Myhr (Neuro-SysMed) and Tone Skår (VIS). The course is a collaboration between CCBIO and Neuro-SysMed.

Read more about the course here.

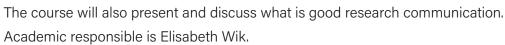


CCBIO908: Scientific Writing and Communication Seminar, May 21–22, 2024

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.

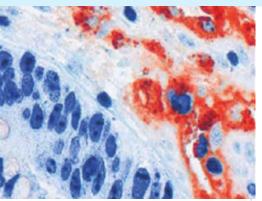
Learn how to:

- 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



More info here. Also open for non-ECTS participation.





CCBIO904: Biomarkers and tumor biology in clinical practice, May 29-31, 2024

This 4 ECTS course covers broad tumor biological topics that are important for understanding how cancer occurs, the mechanisms that control tumor growth, proliferation and morbidity. The course will focus especially on tumor biological changes that may have or already have significance for personalized cancer treatment and clinical trial studies of new diagnostics and treatment.

- Get a broad understanding of all aspects of tumor biology based on updated knowledge.
- Gain deeper insight into how knowledge about tumor biological changes affects our strategies to customize assessment and treatment for this group of patients.

Academic responsible is Oddbjørn Straume.

More info here.

Relevant calls for funding



Here is an overview of upcoming deadlines for funding, relevant to CCBIO students and researchers. For more details, please check the links below and find more at the Medical Faculty'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

NFR Infrastructure. 2-200 MIO NOK, 5 years. Establishment or upgrading of research infrastructure of national importance. Deadline: 21 June 2023 (sketch) / 15 November 2023 (full)

NFR <u>Qualification - Research Commercialisation</u> from Publicly Funded Research.

200.000-500.000 NOK, 3-12 months. The funding must be used to clarify the commercial potential of promising research results. **Deadline: open-ended**

NFR <u>Doctoral Project in the Public Sector</u>. Doctoral scholarships, 3-4 years. The public sector PhD-scheme (OFFPHD) is intended to expand research activities in public sector bodies, to increase researcher recruitment within the public sector and to promote greater collaboration between academia and the public sector. The applicant must be a public sector body. **Deadline:** continuous

NFR Researcher Project for Young Talents. 4-8 million NOK over 3-4 years. For researchers in the early stages of their careers and who have demonstrated the potential to conduct research of high scientific quality. **Deadline:** November 2023

NFR Three-year Researcher Project with International Mobility (FRIPRO). 4-4,4 MIO NOK, 3 years. For reseachers with a doctoral degree. Must hold a masters or PhD from a Norwegian research institution. Mobility requirement: two years abroad, one year in Norway. Deadline: continuous

NFR Researcher Project for Early Career Scientists (FRIPRO). 4-8 MIO NOK, 3-4 years. All thematic areas. Applicants must hold a PhD, defense date within the last 2-7 years. Deadline: continuous

NFR Researcher Project for Experienced Scientists (FRIPRO). 4-12 MIO NOK, 3-8 years. Must have approved doctoral at least 6 years ago. All thematic areas. **Deadline:** continuous

NFR Qualification - Research Commercialisation from Publicly Funded Research. 200.000-500.000 NOK, 3-12 months. The funding must be used to clarify the commercial potential of promising research results. Deadline: continuous

World Cancer Research Fund International. For innovative and original research into the role of diet, nutrition and physical activity in either Cancer Prevention or Cancer Survivorship. Investigator Initiated Grants: 350.000 GBP, 4 years. Pilot and Feasibility Grants: 60.000 GBP, 2 years. Deadline (project outline): 6 November 2023

ERC <u>Starting Grant.</u> For talented early-career scientists of any nationality with 2-7 years of experience since completion of PhD, who have already produced excellent supervised work, is ready to work independently and shows potential to be a research leader with a scientific track record showing great promise. Up to 1,5€ million, 5 years. **Deadline: recurring. Next: 17 October 2023**

Horizon Europe / ERC Consolidator Grant. Up to 2€ million, 5 years. For researchers of any nationality with 7-12 years of experience since completion of PhD, who want to consolidate your independence by establishing a research team and continuing to develop a success career in Europe. You can also apply if you have recently created an independent, excellent research team and want to strengthen it. Deadline: 12 December 2023

Trond Mohn Foundation (TMS) Starting Grants 2023. The Trond Mohn Foundation awards grants towards research, research supporting activities and translational research in Bergen. Deadline (prequalification round): recurring, March each year

EMBO Postdoctoral Fellowships. 2-year fellowships with obligatory mobility, relocation allowance and support for children. Eligibility: 0-2 years after obtained PhD, extensions are possible due to career breaks as parental leave, military service/civil service or other extraordinary circumstances. Applicants must have at least one first (or joint first) author primary research paper accepted for publication or published in an international peer reviewed journal at the time the application is complete. **Deadline:**

Helse Vest mobility grant - 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: continuous

Research Council of Norway mobility grant - Scholarship for research stays abroad for 3 -12 months for PhD candidates and Post Doctors in projects with funding from the Research Council. Deadline: continuous

DAM Foundation, Doctoral grants (Forskning). 1,5-3 MIO NOK, 4 years. Support for health research aimed at target groups in Norway which contributes to promoting living conditions, physical and mental health, coping, quality of life or social participation. The applications are sent through a volunteer oganisation like the Norwegian Red Cross, The Norwegian Cancer Society, the National Association for Publich Health etc. Deadline: recurring. February each year.

DAM Foundation, Research grants (Forskning). 1,5-3 MIO NOK for 3 years. Stiftelsen Dam is one of Norway's largest foundations and provides funding for health and research projects that will provide better health through participation and activity for people in Norway. The applications are sent through a volunteer oganisation like the Norwegian Red Cross, The Norwegian Cancer Society, the National Association for Publich Health etc.

Deadline: recurring. February each year

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 <u>CCBIO web calendar</u>.







December 6, Junior Scientist Symposium, Bergen

December 14, <u>CCBIO Seminar</u>, Thomas Barker

January 17-19, CCBIONEUR911: Clinical Trials course 2024, Bergen





Other relevant coming events

Events from collaboration partners and other relevant events.

- October 8, Nordic AML webinar, updates on AML guidelines and classifications, new data and treatments, as well as mutations and biomarkers, Nordic AML group
- October 10, Nordic Webinar: Measurable residual disease during the course of AML, the Nordic AML Group
- October 20-24, ESMO Congress 2023, in Madrid or online
- October 25-27, <u>42nd Congress of the European Society of Surgical Oncology</u>, Florence.
- November 2-3, årets helsetjenesteforskningskonferanse, av Nasjonalt nettverk for helsetjenesteforskning og Universitetet i Stavanger. Stavanger. Info kommer, save the date. Emne: <u>Nasjonal helse- og samhandlingsplan 2024.</u>
- November 6, Precision breast cancer prevention in Norway, Oslo Cancer Cluster
- November 9, BBB Seminar, <u>Cell biology of myelin formation</u>, <u>dynamics</u>, <u>and disease</u>, Bradley Zuchero, Bergen
- November 9-11, <u>Advanced Breast Cancer</u>, the <u>Seventh International Consensus</u> <u>Conference (ABC 7)</u>, Lisbon (hybrid format)
- November 16, <u>RNA-based therapeutics and personalized neoantigen cancer vaccines</u>, guest lecture by Dr. Özlem Türeci, Chief Medical Officer, BioNTech and Professor, Mainz University Medical Ctr & Helmholtz Institute for Translational Oncology. Institute for Cancer Research, Oslo University Hospital, Oslo.
- November 29-30, NLS Days 2023 (Nordic Life Science Days), Copenhagen
- December 5-9, San Antonio Breast Cancer Symposium, San Antonio, Texas
- December 6-8, the ESMO Immuno-Oncology Congress, Geneva, and online
- December 7, BBB Seminar, <u>Radiosensitization of radioresistant cancers</u>, Bente Sandvei Skeie, Bergen



Publications

You can find the CCBIO publications on this pubmed link. See the most recent 5 below.

- Falini B, Gjertsen BT, Andresen V. The acidic stretch and the C-terminal nuclear export signal motif of NPM1 mutant: are they druggable in AML? Leukemia. 2023 Sep 22. doi: 10.1038/s41375-023-02037-1. Online ahead of print. PMID: 37740103 Review.
- Bartaula-Brevik S, Leitch C, Hernandez-Valladares M, Aasebø E, Berven FS, Selheim F, Brenner AK, Rye KP, Hagen M, Reikvam H, McCormack E, Bruserud Ø, Tvedt THA. Vacuolar ATPase Is a Possible Therapeutic Target in Acute Myeloid Leukemia: Focus on Patient Heterogeneity and Treatment Toxicity. J Clin Med. 2023 Aug 25;12(17):5546. doi: 10.3390/jcm12175546. PMID: 37685612.
- Ali HRW, Suliman S, Osman TA, Carrasco M, Bruland O, Costea DE, Ræder H, Mustafa K. Xeno-free generation of human induced pluripotent stem cells from donormatched fibroblasts isolated from dermal and oral

- tissues. Stem Cell Res Ther. 2023 Aug 9;14(1):199. doi: 10.1186/s13287-023-03403-7. PMID: 37559144.
- Schuster C, Akslen LA, Straume O. <u>β2-adrenergic</u> receptor expression in patients receiving bevacizumab therapy for metastatic melanoma. Cancer Med. 2023 Sep;12(17):17891-17900. doi: 10.1002/cam4.6424. Epub 2023 Aug 8. PMID: 37551424.
 - Fløisand Y, Remberger M, Bigalke I, Josefsen D, Vålerhaugen H, Inderberg EM, Olaussen RW, Gjertsen BT, Goedkoop R, Geiger C, Prinz PU, Schnorfeil FM, Pinkernell K, Schendel DJ, Kvalheim G. WT1 and PRAME RNA-loaded dendritic cell vaccine as maintenance therapy in de novo AML after intensive induction <u>chemotherapy</u>. Leukemia. 2023 Sep;37(9):1842-1849. doi: 10.1038/s41375-023-01980-3. Epub 2023 Jul 28. PMID: 37507426

Recent CCBIO in the media

Recent media appearances by CCBIO PIs and group members. For all media hits, see CCBIO's web pages.

- 25.10.23, HealthTalk, "Norsk kreftlege presenterte norsk medisin på Europas største kreftkongress", Oddbjørn Straume
- 24.10.23, Onkologisk Tidsskrift, "Induksjonskjemoterapi til lokalt avansert livmorhalskreft kan bli ny standard", Line Bjørge.
- 21.10.23, HealthTalk, "Livmorkreft: Nye data fra studie som imponerte," Line Bjørge.
- 21.10.23, Dagens Medisin, "Presenterte norsk forskning på pasienter med metastatisk melanom", Oddbjørn Straume. 18.10.23, Stavanger Aftenblad, "Kan kirurgisk behandling av eggstokkreft skreddersys?" Cecilie Fredvik Torkildsen.
- 02.10.23, NKS Fredrikke, p. 14-15, "Hvordan gi bedre livskvalitet til kvinner med eggstokkreft", Line Bjørge, Karen Gissum.
- 23.07.23, Onkologisk Tidsskrift, "Overlege: Ruby-studien gir håp for pasienter med spesiell type livmorkreft", Line Bjørge.
- 11.06.23, Bergensavisen, "Hadde kreft i tre føflekker", Emilia Hugdahl.
- 31.05.23, HealthTalk, "Prisdryss fra Inven2: Jan Terje Andersen ble «Årets innovatør» Idéprisen gikk til DogBITE", Pascal Gélébart, Vibeke Fosse, Emmet McCormack.

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 Carina Strell
- Agnete Engelsen

Clinical Applications and Trial Studies:

- Bjørn Tore Gjertsen
- Oddbjørn Straume Line Bjørge

Health Ethics, Prioritization and Economics:Roger StrandJohn CairnsOle Frithjof Norheim

Additional resources. **Bioinformatics and Big Data**

IngeJonassen

Strategic Advice

Rolf Reed

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