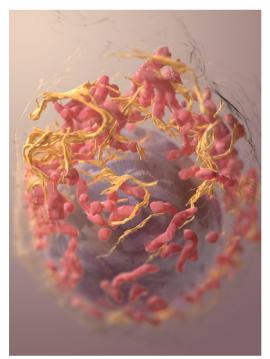


Introduction

Avexxin Oncology AS is a Norwegian subsidiary company to the Swedish biotechnology company Coegin Pharma AB as part of Coegin Pharma AB's hub & spoke "portfolio" biotech model, with clear benefits to investors. Avexxin Oncology AS will develop the promising novel and proprietary cancer drug candidate AVX420 further, and will primarily be financed separately from Coegin Pharma AB.

The goal of the hub & spoke business model is to focus on identifying new ground-breaking project with clear potential for value addition with the following phases: Identification \Rightarrow Financing \Rightarrow Value addition \Rightarrow Exit.

Coegin Pharma AB's hub & spoke model offers lower costs, more flexible financing, increased focus and an effective exit process. It is governed by a senior management team supported by a skilled professional board of directors.



The image illustrate the tumor microenvironment surrounding the tumor

The cancer market

The global therapeutics market for cancer drugs is 166 billion USD, consisting of mix of old and newer drugs. The world's largest cancer drug is MSD's Keytruda® (pembrolizumab) which is indicated for several cancers and has an annual turnover of 17 billion USD.

Despite available drugs like chemotherapy and immunotherapy, a large unmet need persist for new cancer treatments that are both efficacious and safe.

Cancer remains one of the leading causes of death and is on the rise globally, in Sweden, approximately 62.000 new cases of cancers are diagnosed each year. Leukemi ranks as the number one cancer diagnosed in children and ranks as top 10 most common cancer in adults. Breast cancer is the most common cancer in women, except for skin cancers, and triple negative breast cancers with a poor outcome accounts for 15%.



Triple Negative Breast Cancer (TNBC)



In 2020 **2.3M** women had breast cancer¹

TNBC has a less favorable prognosis and accounts for 10-15% of all breast cancers²



Treatments for more advanced cases is warranted, as the survival rate of advanced TNBC patients within 3 months after recurrence is as low as 25%²



TNBC cost the society up to €300K per patient per year and overall, with an estimated global cost to society up to €100 Billion per year³

ferences:

https://www.who.intinews-roomliact-sheets/detail/breast-cancer, 2) https://www.cancer.org/cancer/breast-cancer/about/bres-of-breast-cancer/bride-negative.html



Acute Lymphoblastic Leukemia (ALL)



Yearly in US 6K new cases and 1:4 die from ALL⁴

Although rare, ALL is the most common type of leukaemia that affects children⁵



The 5-year relative survival rate for ALL is as low as 68.8% 90% in children 30-40% in adults⁶



ALL cost the society more than €500K per patient per year and overall with an estimated global cost to society up to €3 Billion per year⁷

4) https://www.cancer.org/cancer/acute-lymphocytic-leukemia/about/key-statistics.html, 5) https://www.chop.edu/conditions-diseases/acute-lymphoblastic-leukemia-



An opportunity for novelty in the cancer market

Despite available and effective cancer drugs, a large unmet need persists for new cancer treatments that are both safe and efficacious.

Existing treatments often only act on one modality, for example chemotherapies damage the genes inside the nucleus of cells that are dividing, other treatments work to stimulate the immune system to destroy cancer cells (e.g. Keytruda®). AVX420 is inhibiting cPLA2α, a key enzyme which causes release of arachidonic acid resulting in the activation of multiple inflammatory and proliferative processes, involved in several processes being upregulated in cancer biology, hence acting multifaceted.

Several effective cancer treatments also act on healthy cells resulting in severe side effects. cPLA2α inhibitors including AVX420 are believed to have a more favorable safety profile based on preclinical and clinical studies.

(Reference Nature, biopharma dealmakers, 01 March 2022 https://www.nature.com/articles/d43747-022-00033-5)

Overall, there is a great need for new drugs with novel and effective ways of targeting cancers and with an improved safety profile.

The financial opportunity in the cancer market is substantial. The total headline value of the biopharma licensing, collaborations and joint ventures for which financial details were disclosed was \$213.5 billion, up from \$198 billion in 2020. with cancer-focused deals accounting for 29% of the 1.968 deals signed in 2021. Financial terms were only disclosed for 130 of the 574 cancer deals announced, with a headline figure of \$73.1 billion. Biopharma M&A activity was worth \$118.4 billion in 2021, down 32% compared with 2020, and cancer-focused M&A's in 2021 were valued at \$19.7 billion.

The top ten licensing deals in oncology in 2021 with a projected deal value over \$1 billion with upfront payments in the range of 30 mUSD to 1 bUSD.

Series A funding and preclinical licensing deals in similar cases

Series A fundings in Europe for pre-clinical oncology companies/assets (blood and breast cancer) since 1. January 2018 has an average value of 27m\$.

The most resent deal value of top small molecule licensing deals in breast cancer and leukemia had an average deal size of 589 mUSD.

fundings				
	RS Research	17-Dec-2021	12.00	Turkey
	Leucid Bio Ltd	21-Oct-2021	15.87	United Kingdom
	TriArm Therapeutics Ltd	27-Sep-2021	40.00	China
	ADCendo Aps	29-Apr-2021	61.65	Denmark
g	BAKX Therapeutics Inc	27-Jul-2021	852	USA

resent top small molecule licensing deals Deal value of most

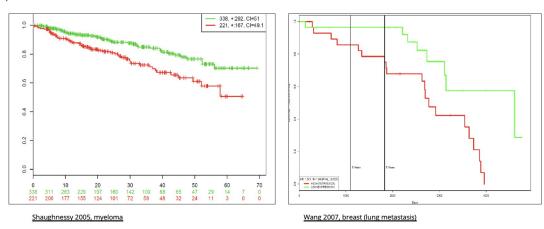
Company	Deal Date	Value (mUSD)	HQ location	Investor
CDR-Life Inc	13-Apr-2022	76.00	Swizerland	RA Capital Mangement LP, Omega Fund Management LLC Jeito Capital
RS Research	17-Dec-2021	12.00	Turkey	OneLife Ventures, Eczacibasi Momentum, Gen liac ve Saglik Urunleri AS
Leucid Bio Ltd	21-Oct-2021	15.87	United Kingdom	Future Fund, Epidarex Cepital Management LLP, Sofinnova Partners SAS, 2invest, Vulpes Investment Management Pvt Ltd
TriArm Therapeutics Ltd	27-Sep-2021	40.00	China	HT Capital Investment Ltd, LO Co-Investment Fund SCA, Efung Capital, Panacea Venture Healthcare Fund I LP, Virtus Inspire Ventures, Wuhan Ruifu Medical Health Equity Investment Ltd, Gimpo Health Fund
ADCendo Aps	29-Apr-2021	61.65	Denmark	Novo Seeds, RA Capital Management LP, Ysios Capital Partners, HealthCap, Glide Healthcare Partners BV
BAKX Therapeutics Inc	27-Jul-2021	852	USA	Ipsen SA
Systems Oncology LL	15-Sep-2020	370	USA	Bayer AG
Ikena Oncology Inc	31-Jan-2019	545	USA	Celgene Corp

The role of cPLA2a in cancer

There is substantial evidence that $cPLA2\alpha$ plays a key role in the development of cancer and inflammation. Furthermore, high $cPLA2\alpha$ levels correlate with metastasis and poor prognosis of several cancers. Even poor treatment outcomes of existing treatments have been shown to be correlated with high $cPLA2\alpha$ levels, and inhibiting $cPLA2\alpha$ in combination with existing standard of care treatments, for example radiation, increases the treatment response in preclinical models.

High levels of cPLA2α is associated with poor prognosis

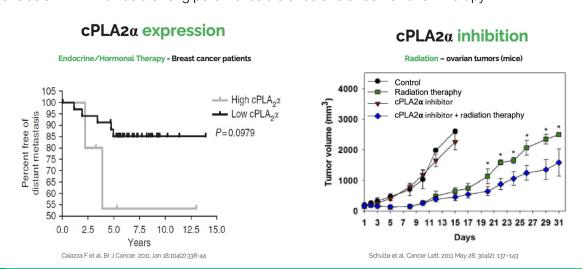
Cytosolic Phospholipase A2 group IVA enzyme (cPLA2α) is an emerging and promising new target for treating cancers. Elevated cPLA2α expression is associated with poor prognosis and survival of cancers (red curves), as compared with patients with no or low levels of cPLA2α expression (green curves).



AVX420 has potential as a stand alone or combination therapies

Low cPLA2 α expression results in poor response in breast cancer and other cancers patients receiving hormone treatment. Inhibiting cPLA2 α furthermore enhances the response to radiation therapy.

In conclusion AVX420 has a strong potential as a standalone or combination therapy.



The history of Avexxin Oncology's drug candidate

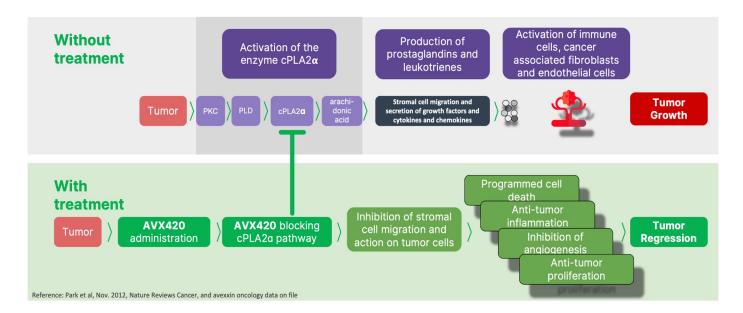
AVX420 is a second-generation small molecule in the AVX family of potent and selective cPLA2α inhibitors¹ and belongs to a chemical class of thiazolyl ketone analogues. AVX420² was developed by professor Berit Johansen NTNU in Trondheim,

Norway and professor George Kokotos Laboratory of Organic Chemistry, University of Athens, Greece, and AVX420 is 10 times more biologically effective than the company's previous AVX analogues.

AVX420 with a specific mode of action inhibiting cPLA2α

The small molecule AVX420 has a novel mode of action based on pioneering research on cPLA2 α with a potential paradigm shift for the treatment of cancers, as a potential single agent or in combination with existing therapies. AVX420 inhibits

cPLA2 α resulting in significantly reduced levels of arachidonic acid, resulting in a pronounced effect on tumor growth inducing programmed cell death, anti-tumor inflammation, inhibition of angiogenesis, and anti-tumor proliferation.



Inhibition of cPLA2 α is predicted to have a therapeutic effect on cancer and inflammatory diseases via a new therapeutic intervention point. AVX analogues are both potent and selective

inhibitors of cPLA2 α and have demonstrated proof-of-efficacy in multiple pre-clinical disease models as well as clinical proof-of-concept in psoriasis¹ and actinic keratosis².

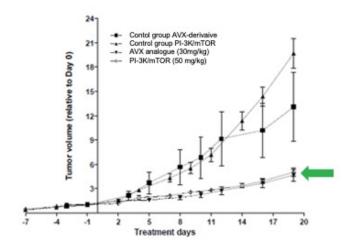
References: 1) Omland SH, Habicht A, Damsbo P, Wilms J, Johansen B, Gniadecki R. A randomized, double-blind, placebo-controlled, dose-escalation first-in-man study (phase 0) to assess the safety and efficacy of topical cytosolic phospholipase A2 inhibitor, AVX001, in patients with mild to moderate plaque psoriasis. J Eur Acad Dermatol Venereol. 2017, Jul;31(7):1161-1167
2) Ortner, V. K., Johansen, B., et al., The Copenhagen Actinic Keratosis Study (COAKS). A decentralised clinical trial to evaluate tolerability, safety and efficacy of daily field-directed topical treatment with cytosolic phospholipase A2 inhibitor, AVX001, in participants with actinic keratosis: protocol for a randomised controlled phase I/Ila trial. BMJ open, 12(10), 2022, e061012.

^{1.} J Med Chem. 2014 Sep 25;57(18):7523-35,

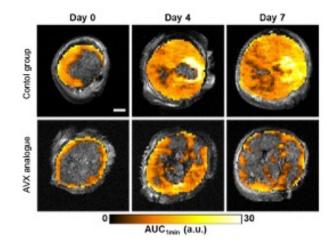
^{2.} Hussin A, 2016, Effects of cPLA2 α inhibition in the MDAMB-468 cell model system for basal-like breast cancer and/or triple negative breast cancer https://ntnuopen.ntnu.no/ntnu-xmlui/bitstream/handle/11250/2421056/anfal%20hussin.pdf?isAllowed=y&sequence=1

Promising data in breast cancer models

AVX analogues have in breast cancer in vivo models shown promising tumor reducing effects in mice. In particular triple-negative breast cancer is sensitive to AVX-analogues, where an action on the tumor growth was observed but also on the vessels supplying the tumor



AVX analogue blocks effectively breast cancer tumor growth in mice (green arrow) and AVX-treated mice had absence of side effects. BEZ235 a dual PI-3K/mTOR inhibitor had similar effects, however treated mice were suffering from severe fatigue.



In the breast cancer mouse model, AVX analogue reduced the tumor blood supply by suppressing endothelial cell proliferation and tumor angiogenesis (lower panel, less yellow/orange shows reduced perfusion and blood supply).

PI-3K inhibitors control the PI-3K enzyme that transmits signals in cells and that helps control cell growth. Despite being effective, they are often associated with notable side effects that can be serious or fatal, including infection, diarrhea, liver problems, rash, and inflammation of the lungs.

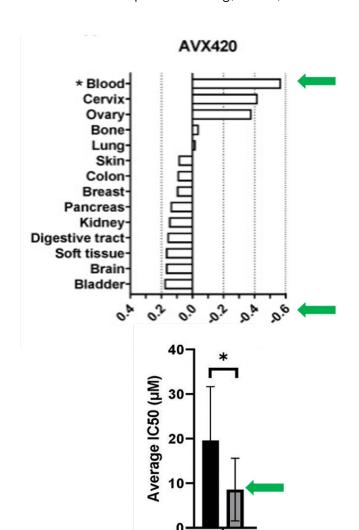
Novel unpublished data have shown that AVX-analogues synergize effectively with selected PI-3K inhibitors, being able to lower the concentration of the PI-3Kinhibitor, likely to be safer for the patients and still maintain efficacy.

Reference: Kim E et al. BMC Cancer (2016) 16:1915, Kokotos G et al, J Med Chem. 2014 Sep 25;57(18):7523-35 https://www.fda.gov/science-research/fda-grand-rounds/saga-phosphatidylinositol-3-kinase-pi3k-inhibitors-05122022

Promising data in leukemia models

In a screen of the effect of AVX420 in 66-cancer lines, a broad anti-cancer action was observed. Apart from lung, colon, renal and

other cell lines, interesting activity was seen in leukemia lines. AVX420 is very potent in selected leukemic cell lines such as acute lymphoblastic leukemia (ALL).



The relative sensitivity of tissue type compared to panel average showed that **blood cancer cell lines** (green arrows, $\Delta 10\log$ IC50 values displayed) were **highly sensitive to AVX420**.

Blood cancer cells are highly sensitive to AVX420 (hematological cancers, green arrow) than for solid cancers (8.5 µM, and 19.5 µM).

Novel unpublished data indicate that in an acute lymphoblastic leukemia liquid tumor animal model, where AVX420 was injected IV, a significant dose dependent effect was observed after just 3 weeks. Very interestingly the cell viability was investigated, and programmed cell death was identified. Direct cell death by necrosis might

Solid Cancer

AVX420

Hematological Cancer

be largely related to side effects of anticancer therapies.

Hence, with these novel data we may see significantly less side effects in the clinic with AVX420 as compared with standard therapies.

This is an important milestone towards further preclinical and clinical development.

Reference: Mahammad N, at al., Inhibition of Cytosolic Phospholipase A2a Induces Apoptosis in Multiple Myeloma Cells. Molecules. 2021 Dec 9;26(24):7447 Lee SY, Ju MK, Jeon HM, Jeong EK, Lee YJ, Kim CH, Park HG, Han SI, Kang HS. Regulation of Tumor Progression by Programmed Necrosis. Oxid Med Cell Longev. 2018 Jan 31;2018

Avexxin Oncology builds on a strong Norwegian and North American scientific foundation

AXV420 is developed by prof. Berit Johansen at NTNU in Trondheim, Norway supported by several peer reviewed publications, supported by prof. Edward Dennis, UC San Diego and prof. George Kokotos, University of Athens, Greece. The work on the role of cPLA2α and the role of AVX analogues has extensively been investigated by prof. Berit Johansen, and prof. Bjørn Tore Gjertsen, Haukeland University Hospital, Bergen, Norway, prof. Magne Børset, St. Olav's University Hospital, Trondheim, Norway and prof. Joseph Bonventre, Harvard Medical School, Boston, USA. This work is supported by strong global patents in place and with protection beyond 2040.

Avexxin Oncology's world Leading Scientific Advisors and Key Collaborators



Professor Berit Johansen - International Expert in cPLA2 Compounds and inventor of the AVX-compounds Department of Biology, Faculty of Natural Sciences, Norwegian University of Science and Technology (NTNU).

Dr. Johansen is a Professor and Ph.d. in Molecular Genetics. She has a vast experience in molecular biology, inflammation, cancer research and cPLA2. Dr. Johansen did hold distinguished positions at: UCLA, US; University of Uppsala, Sweden; NTH, Department of Technical Biochemistry; at Unigen, University of Trondheim, Norway; Institute of Molecular Genetics, University of Göttingen, Germany; Biogen Research Corporation, Cambridge, MA; Department of Chemistry and Biochemistry, University of California, San Diego, CA., and Harvard Medical School, Boston, MA, USA.



Professor Edward A. Dennis - International Expert in PLA2 Department of Chemistry Biochemistry, University of California, San Diego, USA

Dr. Dennis is distinguished Professor of Chemistry and Biochemistry and pharmacology, and Chair of the Department of Chemistry and Biochemistry at UCSD. The Dennis group has studied the structure and function of phospholipases for about three decades. He has contributed significantly to the AVX chemistry.



Professor Joseph Bonventre - International Expert in Renal Diseases and PLA2 Brigham and Women's Hospital, Renal Unit, Harvard Medical School, Boston, USA

Dr. Bonventre is Chief of the Renal Unit and Director of the Bioengineering Division at Brigham and Women's Hospital and has had a long-standing interest in various aspects of cellular injury and repair mechanisms in the kidney with a special emphasis on the role of inflammation, biomarkers and stem cells. One of his key focus research areas has and is still PLA2, contributing to the understanding of cPLA2a as a target..



Professor George Kokotos - International Expert in Chemical Synthesis of PLA2 Compounds Laboratory of Organic Chemistry, University of Athens, Greece

Dr. Kokotos is Chairman of the Department of Chemistry at University of Athens. The department is working in the field of organic, bioorganic and medicinal chemistry. Dr. Kokotos has for decades studied chemistry in order to create suitable therapeutic compounds targeting cPLA. He is a collaborator of Professor Ed Dennis in several research projects in the field, and he is co-inventor of several of Coegin Pharma's cPLA2 inhibitors.



Professor Bjørn Tore Gjertsen - International Expert in myeloid leukemia Haukeland University Hospital, Bergen fMRI Group, Norway

Dr. Gjertsen is the medical chief and Consultant Hematologist. He has developed single cell phosphoprotein analysis in myeloid leukemia patient for phenotype analysis of mutations in signalling pathways, explored phosphoprotein signaling response for prognostic information in cancer, as biomarkers for therapy guidance in clinical trials and in elucidation of key physiological responses. In collaboration with Dr. McCormack, establishment of animal models and advanced molecular imaging of myelogen leukemia for development of p53- and signalling-targeted therapy, and researched AVX420 in humanized mouse models.



Professor Magne Børset - International expert in bone marrow cancers St Olavs University Hospital, Trondheim and Norwegian

Dr. Børset is a Norwegian physician, is a senior consultant in clinical immunology and transfusion medicine. He is doing research on molecular oncology, immunology, and cancer cells from patients with multiple myeloma – a type of cancer which is localized to the bone marrow. He has researched AVX420 in in vitro leukemia models.















AVX420 – is a Compound with many strengths

Our goal is to complete the pre-clinical work and initiate, phase 1 first-in-man

AVX420 Compound Strengths

- AVX-molecules in clinic have previously shown a very favorable safety profile
- AVX420 in vivo has compared to other treatments shown on pair efficacy but superior safety
- De-novo mode-of-action likely to be a very attractive compound for supreme efficacy and safety
- · Biomarker for potential responder



AVX420 is likely to be designated fast-track priority review and breakthrough designation and/or Orphan Drug designation

AVX420 a strong opportunity



Intellectual Properties

AVX420 with strong patent coverage with market exclusivity beyond 2040



Oncologists

Increased clinical rational as cPLA2a inhibition **synergizes** with radiation or chemotherapeutic agents



Chemistry, Manufacturing and Controls (CMC)

Proprietary formulation 3-step synthesis of AVX420



Pharma companies

Opportunity to **expand the market**, as very few drugs are effective for TNBC and ALL

9

The patent coverage is beyond 2040 and it includes composition of matter patent, method of use patents for cancer conditions and a new patent for a new formulation.

Further opportunities with the proprietary formulation

AVX420 is intended for intravenous administration, and a new state of the art nano formulation for AVX420 is currently being developed for clinical use in collaboration with SINTEF (a technical research institute in Norway). Recent and highly promising studies in leukemia with AVX420, strongly support further development of AVX420 into an efficient and safe treatment of several cancers to the benefit of patients suffering from cancer where the treatment is insufficient.



Next steps & exit strategy

Roadmap until 2026

2022: The Norwegian company Avexxin Oncology AS continues the ongoing research as well as formulation optimization

2023: Finalize intravenous formulation development for clinical use and initiate mandatory preclinical testing to demonstrate that AVX420 is safe for testing in humans

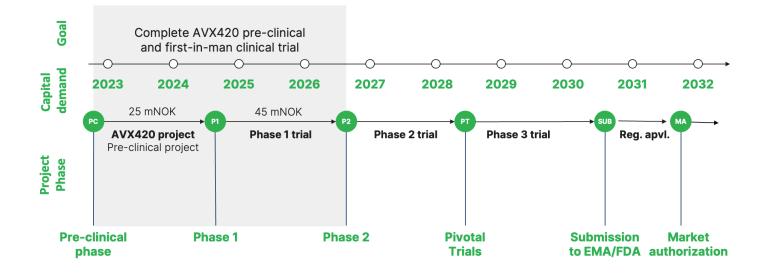
2023: Decide on the first cancer indication to focus the initial clinical development efforts on (e.g. leukemia or breast cancer)

2024: First patient in phase 1 clinical first-in-man testing in cancer patients

2026: Key results of phase 1 first-in-man

Exit strategy

If the phase 1 trial reaches positive safety outcomes and signs of efficacy, Avexxin Oncology AS believe that a significant value of the asset will be in scope and we may aim for an early and attractive exit.



Management and Board of Directors

- Experienced team with a strong track record, broad Nordic outreach and key competences



John R. Zibert
Chief Executive Officer

- Extensive experience in drug discovery and development
- Chief Medical Officer at Coegin Pharma AB
- Former founder and CEO at the digital CRO Studies&Me, Chief Medical Officer at LEO Innovation Lab, Head of Medical Affairs EU+ LEO Pharma A/S.
- Ph.D. in immunology, M.Sc. human biology / medicine, with academic focus within Dermatology, Oncology, Cancer Biology, and digital health solutions
- Vast experience in clinical study design and execution, dermatology, oncology, research and development, innovation processes and medical affairs.



Berit Johansen
Chief Scientific Officer

- Professor Norwegian University of Science and Technology (NTNU), Ph.D. in Molecular Genetics.
- Vast experience in molecular biology, inflammation and cancer research.
- Inventor of AVX420 and other AVXderivatives
- CSO Coegin Pharma AB
- World leading researcher in academia University of Trondheim, Harward Medical School, UC Sandiego and with experience from the pahramceutical industry Biogen Research Corporation, Cambridge, USA, and Unigen, Trondheim, Norway



Tore Duvold

Chairman of the Board

- Extensive experience in biotech/pharma industries
- CEO Coegin Pharma AB
- SVP and head of research, early development and patent at LEO Pharma
- CEO and co-founder of Aker Biopharma,
 CEO and Board Member of Coegin
 Pharma.
- Ex CEO of Innovation Fund Denmark.
- Associated partner at Copenhagen Institute for Futures Studies



Erlend P. Skagseth
Board Member

- Currently, Managing Partner, Sarsia Seed AS.
- Former experience from Christian Mikkelsen Research, Forinnova, and Sarsia Innovation
- Vast experience in turnarounds, licensing and exits.
- Board Member of Coegin Pharma AB



Thoas Fioretos

Board Member

- Leading expert in the field of leukemia
- Professor at the Department of Clinical Genetics at Lund University
- Co-founder & Board Member of Cantargia AB
- Co-founder and Board Member of Qlucore AB
- Vast experience in cancer research with a focus on leukemia
- Board Member of Coegin Pharma AB

Key publications

Ortner, V. K., <u>Johansen, B.</u>, Kilov, K., Mondragón, A. C., Duvold, T., Kihl, J.R. Zibert & Haedersdal, M. The Copenhagen Actinic Keratosis Study (COAKS). A decentralised clinical trial to evaluate tolerability, safety and efficacy of daily field-directed topical treatment with cytosolic phospholipase A2 inhibitor, AVX001, in participants with actinic keratosis: protocol for a randomised controlled phase I/IIa trial. BMJ open, 12(10), 2022, e061012.

Ashcroft FJ, Mahammad N, Midtun Flatekvål H, Jullumstrø Feuerherm A, <u>Johansen B</u>. *cPLA2α Enzyme Inhibition Attenuates Inflammation and Keratinocyte Proliferation. Biomolecules*. 2020 Oct 2;10(10):1402. <u>LINK</u>

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Feuerherm AJ, Dennis EA, <u>Johansen B</u>. Cytosolic group IVA phospholipase A2 inhibitors, AVX001 and AVX002, ameliorate collagen-induced arthritis. Arthritis Res Ther. 2019 Jan 21;21(1):29. <u>LINK</u>

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Sommerfelt RM, Feuerherm AJ, Jones K, <u>Johansen B</u>. Cytosolic phospholipase A2 regulates TNF-induced production of joint destructive effectors in synoviocytes. PLoS One. 2013 Dec 12;8(12):e83555. <u>LINK</u>

Huwiler A, Feuerherm AJ, Sakem B, Pastukhov O, Filipenko I, Nguyen T, <u>Johansen B</u>. The ω3-polyunsaturated fatty acid analogues AVX001 and AVX002 directly inhibit cytosolic phospholipase A(2) and suppress PGE(2) formation in mesangial cells. Br J Pharmacol. 2012 Dec;167(8):1691-701. <u>LINK</u>

