FRONTIER

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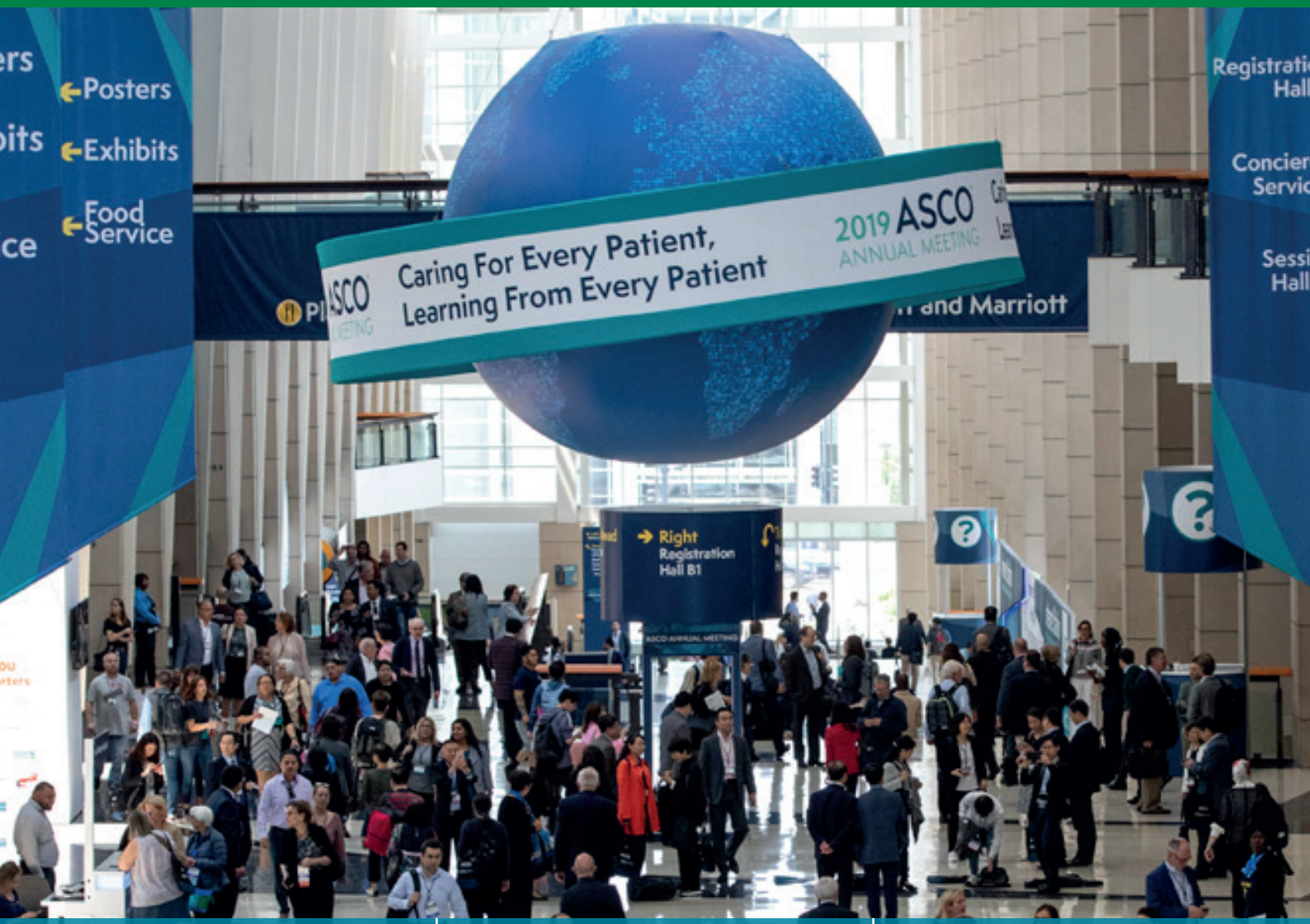

Alligator at ASCO

Two of Alligator's five projects were presented at one of the world's largest scientific congresses.

Interview with Jeffrey Yachnin

Jeffrey Yachnin MD, PhD, Prinicpal Investigator for the Phase I study of Alligator's drug candidate ATOR-1015.

New board members

FRONTIER has spoken to the new members of the Alligator board, Kirsten Drejer och Graham Dixon.

Two Alligator projects presented at ASCO

The American Society of Clinical Oncology (ASCO) is a professional organization for oncologists and oncology professionals from all over the world. Since the organization was founded in 1964, the number of members has grown to nearly 45,000. ASCO issues several publications, including the Journal of Clinical Oncology, and the organization's Annual Meeting is one of the premier scientific congresses in the world, with more than 40,000 visitors. At the 2019 Annual Meeting (May 31-June 4), two of Alligator's projects were presented: ADC-1013, which has been out-licensed to Janssen, and ATOR 1015. Having our projects presented at this world-renowned scientific event for oncology professionals says a great deal about the strong position we have in the field of immuno-oncology.

Janssen presents data for JNJ-7107 (ADC-1013) at ASCO

The Phase I clinical trial for ADC-1013 led by Janssen Biotech, Inc. (Janssen) is now approaching completion. The primary endpoint of the trial is to demonstrate the drug candidate's safety in cancer patients and to define the recommended dose level for the upcoming Phase II trial. The results that Janssen presented at ASCO show that ADC-1013 can be administered in considerably higher doses than any of the other CD40 antibodies in clinical development. The doses used are safe and tolerable, and it was also noted that the maximum tolerated dose has not yet been reached in the trial. This is highly positive and indicates that the drug candidate has a good safety profile at these high dose levels. This is in line with the results from Alligator's first trial with ADC-1013 and, in my opinion, suggests that we have succeeded in our ambition to create a CD40 antibody that stimulates the immune system while minimizing systemic side effects. The trial also shows early signs of clinical efficacy: in ten patients, the cancer disease was stabilized for more than 6 months. This means that the disease process has been halted and that the size of the tumors is no longer growing to any major extent. In addition, one patient presented a partial response, which means that the tumor decreased in size. The results presented at ASCO are promising and further strengthen my confidence in the CD40 field, and in ADC-1013 in particular.

ATOR-1015

The other Alligator project presented at ASCO was the CTLA-4-stimulatory drug candidate, ATOR-1015. Immunostimulation with CTLA-4 has demonstrated impressive clinical efficacy against several cancers, but CTLA-4 stimulation is also associated with severe side effects. Our ambition is that ATOR-1015 will be at least as effective as today's drugs, but considerably better tolerated by patients. ATOR-1015 has the potential to achieve this by seeking out the tumor region and with more selective activation of the immune system.

The Phase I trial was started at the end of 2018 with an introductory dose escalation trial in patients with metastatic cancer. The primary endpoint of the trial is to evaluate safety and tolerability and to define a maximum tolerated dose in order to select the appropriate dose for subsequent Phase II trials. The first patient was dosed in March 2019. Recruitment to the trial is progressing well with three dose levels evaluated for initial safety at hospitals in Lund, Stockholm and Uppsala. ATOR-1015 is intended for the treatment of solid tumors and the Phase I trial will comprise up to 53 patients. The trial results are expected to be presented in the second-half of 2020. Charlotte Russell, Alligator's Chief Medical Officer, presented the trial design and progress for ATOR-1015 at ASCO under the session Developmental Immunotherapy and Tumor Immunobiology.

Per Norlén
CEO Alligator Bioscience

About Alligator
Alligator is a clinical-stage biotechnology company developing antibody-based pharmaceuticals for cancer treatment. The company specializes in the development of tumor-directed immunotherapies and is active in the early phases of drug development, from idea to clinical phase II studies.

Please visit our web:
alligatorbioscience.com

About Frontier
The aim with Frontier is to present Alligator's research & development in brief and general terms.

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CLINICAL TRIALS IN BRIEF

A clinical trial is a study of healthy or sick people to evaluate the efficacy of a drug or treatment method. Clinical trials are divided into four phases.

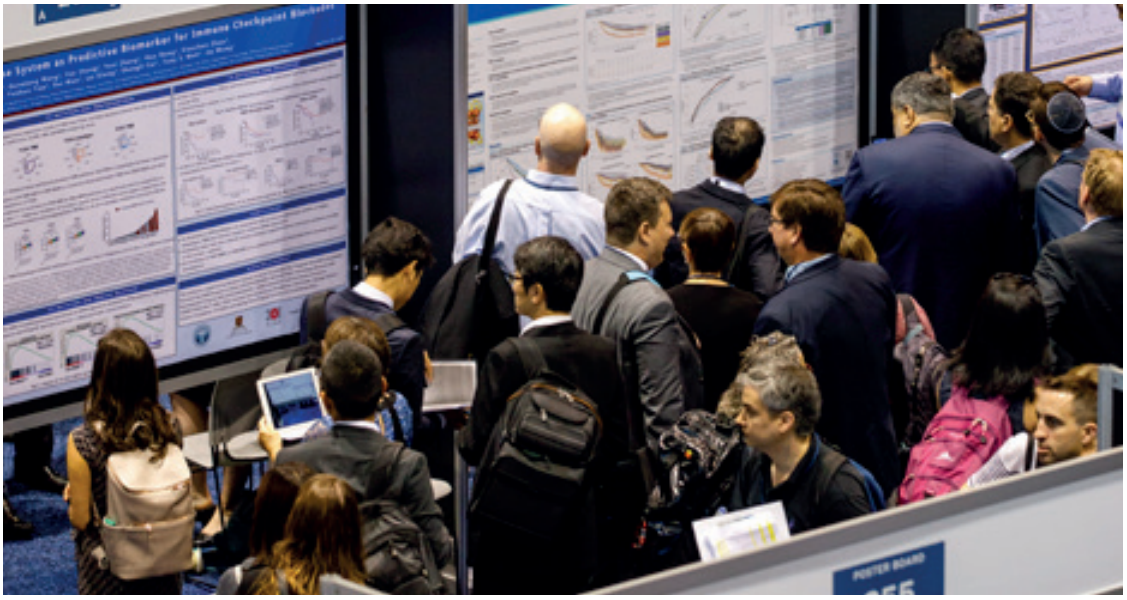
Phase I aims to find out whether the compound can be given to humans with an acceptable safety profile, and how much of the drug should be given.

In **Phase II**, the compound is tested in patients with the disease under study to produce evidence that the drug is effective for its intended use.

In **Phase III**, the efficacy of the compound is tested in larger patient groups. At the same time, a number of other trials are conducted to test safety, interaction with other drugs, formulations and so forth. After these clinical trials, the documentation is compiled in a Marketing Authorization Application that is submitted to the authorities in the relevant countries.

Phase IV. Following approval, Phase IV trials are performed to document the "real-world" effectiveness of the drug.

The first-known clinical trial was performed by Royal Navy surgeon, James Lind (1716-1794). On board the *HMS Salisbury*, he conducted an experiment on treatments for scurvy. He tested six different treatments on twelve crew members. By giving two men oranges and lemons, he demonstrated that scurvy could be treated with citrus fruits.



ADC-1013 showcased at ASCO, the world's largest oncology conference

Promising safety and tolerability data from a second Phase I clinical study of ADC-1013 in cancer patients were presented at the ASCO 2019 Annual meeting held in Chicago on May 31- June 4. The results showed that side effects were generally mild and transient.

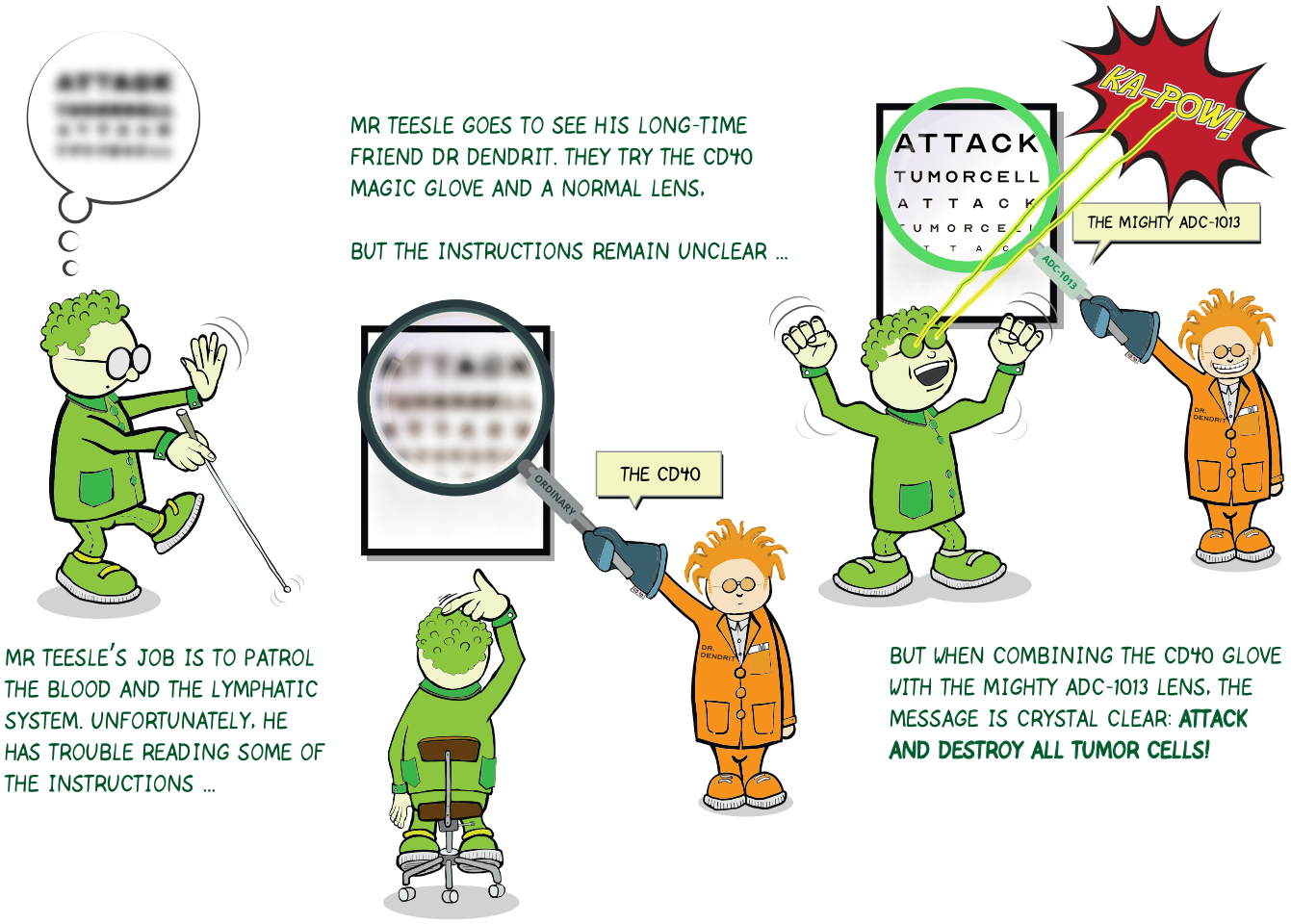
ADC-1013 is an immunostimulatory antibody for the treatment of metastatic cancer. The drug candidate is since 2015 out-licensed to Janssen Biotech, Inc. (Janssen), which is running all continued clinical development. To date, ADC-1013 (called JNJ-7107 by Janssen) has generated revenue of almost SEK 400 million for Alligator. The license agreement with Janssen comprises predefined milestone payments with a potential total value of about USD 695 million (approximately SEK 6 billion). If the commercialization is successful, Alligator will also be entitled to incremental royalties based on global net sales.

The ADC-1013 clinical program has comprised two Phase I studies. The first study was conducted by Alligator and focused on intratumoral administration. The results from that study showed that ADC-1013 was well-tolerated at clinically relevant doses.

The second study is performed by Alligator's partner Janssen and results were presented at ASCO this June. A total of 95 patients were treated intravenously with ADC-1013, with and without corticosteroid pre-treatment for mitigation of infusion related reactions. To date, doses up to 2,000 µg/kg with steroids and up to 1,200 µg/kg without steroids are shown to be safe and tolerable. These dose levels are significantly higher than the doses seen as limiting for other CD40 agonists in development. Notably, the maximum tolerated dose for ADC-1013 has not yet been reached.

After treatment completion, the patients are assessed for response. If a reduction of disease by 30% or more can be measured on clinical examination or x-rays and scans – it is called partial response. The term stable disease means that the cancer burden has essentially not changed. Stable disease could still mean that the cancer has responded, for example, if cancer would have been expected to get worse but has stayed the same.

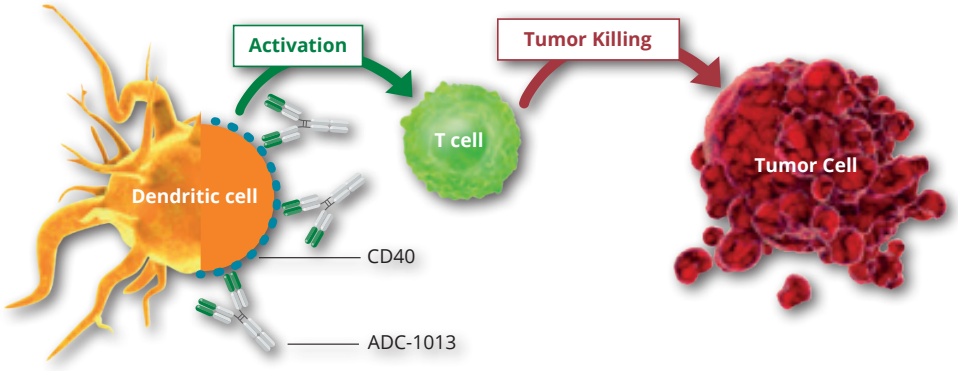
Early evidence of clinical activity in the second ADC-1013 Phase I study included a partial response in a patient with renal cell cancer and ten patients with stable disease during at least 6 months. Experiencing several stable disease statuses in this patient population is very encouraging. These patients are severely ill with a short life expectancy, making it difficult to confirm any efficacy of treatment. The primary aim of the study is to assess safety and the recommended dose for Phase II.



Right strength with ADC-1013.

T cells are a type of white blood cell that constitutes an important part of the body's immune system. The T cells are trained to recognize specific enemies, e.g. viruses. The T cells also have the capacity to attack cancer cells, for instance by reading instructions from the dendritic cells. The problem though, is that the T cells find it difficult to perceive and decode the information on the dendritic cell. This is where the receptor CD40 and Alligator's antibody ADC-1013 come into play.

What does ADC-1013 actually do? In stage 1, ADC-1013 binds to the dendritic cell receptor named CD40. The dendritic cell does not attack invading substances but can present them to the immune system's T cells which, in turn, can attack and destroy foreign invaders, such as cancer tumors. One problem is that T cells cannot always "see" the information presented by the dendritic cell. The information is there, but not sufficiently "readable." That is where ADC-1013 comes in. When ADC-1013 binds to the dendritic cell's CD40 receptor, the picture suddenly becomes clear and the T-cell understands what it is supposed to do – to attack and destroy the cancer tumor.



The antibody ADC-1013 has in clinical phase I studies shown good tolerability and early signs of clinical effect. ADC-1013 is outlicensed to Janssen Biotech, Inc. To date, the outlicensing has generated revenues of approximately SEK 400 million.

ATOR-1015 CLINICAL STUDY DESIGN ON ASCO

Charlotte Russell, Chief Medical Officer at Alligator Bioscience, presented the clinical study design for the bispecific drug candidate ATOR-1015 at ASCO in Chicago, in the session Developmental Immunotherapy and Tumor Immunobiology.

The Phase I study is a first-in-human dose-escalation study in patients with advanced solid malignancies (NCT03782467). The primary aim of the study is to investigate the safety and tolerability of ATOR-1015 and to identify the maximum tolerated dose/recommended dose for subsequent Phase II studies. The first patient was dosed in March 2019 and the study results are expected to read out in the second half of 2020.

The study starts with an accelerated dose titration phase with one patient cohorts, followed by a modified 3+3 design with at least three patients per dose level. At the maximum tolerated dose, or at a lower dose level, an expansion cohort is planned with up to 14 patients, for additional safety and efficacy evaluation.

Read the poster:

Interview with Jeffrey Yachnin at Karolinska University Hospital.

Jeffrey Yachnin MD, PhD, Prinicpal Investigator for the Phase I study of Alligator's drug candidate ATOR-1015, a tumor-localizing CTLA-1 antibody. Jeffrey Yachnin is Oncologist and Senior Consultant Urological Cancers, Section Head Phase-I Unit, Center for Clinical Cancer Studies, Karolinska University Hospital, Stockholm.

What are the main achievements in cancer treatment over the last years?

"For me this is very clear. The progress of immunotherapy has been quite astonishing during the past years. For a long time, immunotherapy was almost like a mirage. I remember the high hopes we had in the 1980's, and then the many disappointments that followed. Today, targeting the immune system is an increasingly effective therapeutic strategy with remarkable results – for some patients."

From your perspective, what are the pros and cons of immunotherapy?

"The immune system has two properties that are advantageous in treating cancer – one is memory and the other is plasticity. i.e. the immune system can adapt to changes in a given tumor. Present day immune therapy for solid tumors has potentially serious toxicities but these occur in a minority of patients. The positive toxicity profile for those who respond also means that the treatment doesn't impact the quality of life as negatively as chemotherapy."

"The main drawback of immunotherapy is that it doesn't work with all patients – and we still don't know exactly why this is. It is still a minority of patients that respond with a significant and long-lasting tumor reduction. We have some tools that help us in selecting suitable patients for immune therapies, but this area of research is far from mature."

"Another thing I would like to mention relates to the development of new immune therapies. The patient populations in many of the early clinical studies focuses on patient groups where we already see clinical benefit from immune therapies e.g. lung cancer, melanoma, renal cancer and so forth. Of course, we want to broaden the clinical indication for this type of treatment, and this must include studies in populations in which immune therapies have not been shown to be so successful. I would in this respect say how much I appreciate Alligator's approach to the early clinical studies where there are no restrictions with regard to which type of cancer a patient has."

What does the current treatment landscape look like, i.e. what are the current standard of care treatments for a patient with metastatic cancer?

"It very much depends on which kind of cancer we are talking about. Different diagnoses require different treatment methods, ranging from surgery to radiation and chemotherapy. For the future, I can see that a combination of radiation therapy and immunotherapy is one way forward, just as immunotherapy may be successfully combined with chemotherapy. It will be very interesting to explore these possible synergies."

Obviously, the ultimate goal is to cure cancer, how close are we to achieving that goal?

"With the exception of testicular cancers and some cancers with limited spread we have not been able to cure metastatic disease in solid tumors. However, over the last few years, our treatment successes have resulted in the situation where cancer can be looked upon as a chronic disease for some patients. In addition, the impact that immune therapy has had in a limited number of patients whereupon the long-lasting complete disappearance of their cancers suggests that we may indeed be curing some of them."

What would you like to see in future cancer drugs?

"The first criterion is of course that the drug is effective. Second, that there is no or very limited toxicity. And it helps if the drug is easy to administer. The health economic situation is getting tougher by the day, so next on my wish list is cheaper drugs."

"I am optimistic about the future of cancer treatment. With immunotherapy, we are already in a position where we are able to save lives that would have been lost only a few years ago. We need to get better at understanding why some patients respond so well, and others don't. But on the whole, I believe that immunotherapy is the greatest breakthrough in cancer treatment ever, and that the implications will be far reaching," concludes Jeffrey Yachnin.

Interview with the new board members Kirsten och Graham.

Kirsten Drejer has a PhD in pharmacology from Copenhagen University. Drejer is co-founder of Symphogen and served as its CEO for more than sixteen years.

At the AGM on May 9, two new members were elected to the Alligator board, Kirsten Drejer and Graham Dixon. Frontier has spoken to them to see how they look on their roles as board members and how they envision the future of Alligator.

Graham Dixon has a PhD in biochemistry from Swansea University and is the head of R&D for the Zaluvida group, and CEO of its subsidiary Neem Biotech.

I think Alligator Bioscience is a highly attractive biotech company focusing on oncology which is of utmost importance.	**What made you accept the Board assignment in Alligator Bioscience?**	Alligator is such an exciting young company with a state-of-the-art technology platform, dynamic team and board. Ultimately, the vision to cure cancer.
The Company's pipeline is exciting with a lot of unlocked potential – for me it will be a great pleasure to see this potential fold out.	**What is most exciting with the company?**	Furthermost, its technology platforms that enables a clear differentiation from the majority of other immuno-oncology companies. And of course, the focus on areas of high unmet medical need.
I will focus on timely execution of the pipeline, including prioritizations of programs if financing becomes an issue. Also to help facilitate business deals for those programs we may decide to out-license – fully or partly. Finally to help introduce people from my network to Alligator Biosciences, in order ensure the right competency mix.	**What questions and areas will you, with your background, focus on in the board work?**	Top priority to start with will be the R&D portfolio and the science behind it. Also, the corporate & R&D strategy to maximize probability of success. And not the least, provide key contacts in the area.
I have operational experience from being a CEO of a biotech company – Symphogen – which focuses on Oncology. Through this 16-years period, I have established a strong network to the oncology world which I am happy to inject as part of serving as board member of Alligator Bioscience.	**What do you bring on to the board from your previous roles within the pharmaceutical industry?**	I have a strong track record in R&D strategy and operational delivery in the biotech sector, with the oncology therapy area as expertisel have a track record of successful collaborations and licensing deals, giving me significant experience in the due diligence and licensing deal processes.
To make sure that we have sufficient resources (financing and human resources) to bring a product to drug approval.	**In your view, what are the greatest challenges for Alligator?**	I believe to stay differentiated from competitor checkpoint inhibitors and continue delivering on ambitious timelines. Also, optimal funding of such a broad portfolio of opportunities.
I trust we will have a broad oncology pipeline, a couple of partnerships with international pharma companies, and hopefully also a product on the market – in return this allow Alligator Biosciences to have a significant higher market value.	**Where in the development do you think Alligator is in five years' time?**	Then we have a clinical stage biotech with a broad portfolio of first in class projects, validated via clinical proofs of concepts. We have executed on the goal to deliver additional successful licensing deals.

FROM AROUND THE ALLIGATOR WORLD

Watch the Alligator movie!

Alligator's vision is to cure cancer. Our tool is immune therapy, i.e. to activate the body's own immune system to kill and destroy the cancer cells.

https://www.youtube.com/watch?v=cLRlKp85QN4

Interview with Alligator CEO

Alligator was recently highlighted in an article by BioStock. Also, CEO Per Norlén was interviewed at the BioStock Dealmaker Forum. If you want to read the article and listen to the interview, click the link below. The article is in Swedish and the interview is in English.

https://www.biostock.se/2019/05/alligator-bioscience-tar-sikte-pa-nya-avtal/

State visit to Ireland

Alligator was honored to be part of the Swedish Business delegation visiting Ireland in May 2019 during the Swedish State visit by their majesties the King and Queen of Sweden.

Positive words from Analysguiden

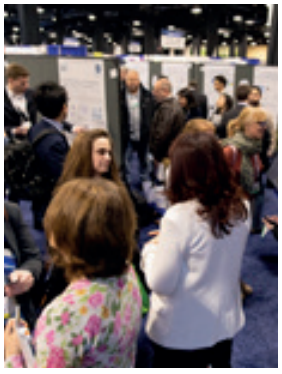
In May, the Shareholders association's "Analysguiden" published an updated analysis of Alligator. Among other things, they wrote that "the results from partner Janssen and recent news in the field bodes well for Alligator's most advanced projects".

https://www.aktiespararna.se/analysguiden/nyheter/analys-alligator-lovande-ron-till-ytan

Alligator presents at PEGS

Alligator had busy days at PEGS Boston in April. Dr Anna Säll presented the new technology platform RUBY™ and Dr Karin Enell Smith presented the drug candidate ATOR-1017, which is expected to enter clinical development later during 2019.

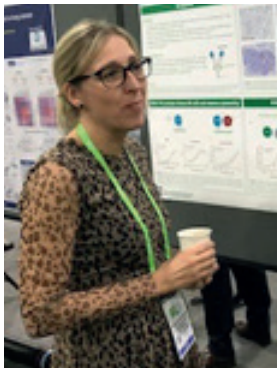
https://alligatorbioscience.se/en/research-and-development/scientific-publications/



The first presentation of ATOR-1144

At AACR in April, Dr Anne Månsson Kvarnhammar gave the first presentation of Alligator's new drug candidate ATOR-1144.

https://alligatorbioscience.se/en/research-and-development/scientific-publications/



New addition to the Alligator coverage universe:
The Dutch bank Kempen & Co with analyst Ingrid Gafanhao initiated coverage in May 2019.
See the complete list of financial analysts covering Alligator: https://alligatorbioscience.se/en/investors/analysts/

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