NEWSLETTER MARCH 2010

OSLO BIO UPDATE

A newsletter from Oslo Teknopol covering activities in the life science cluster in the Oslo region.

IN THIS ISSUE

"THE TUMOURS FELL OFF BEFORE OUR EYES"

Following Algeta and Clavis, is PCI the next big thing in cancer from Norway?

"Norwegian Medical Sensation: Removes cancer with light – The tumours almost fell off" ran the recent front page of Norwegian daily newspaper VG reporting the first results from PCI Biotech's ongoing phase I/II study at University College Hospital (UCH) in London.

Colin Hopper, surgeon and responsible for the phase I/II study told VG that he was very surprised with the effects of the PCI light directed technology: *"The cancer tumours became almost black and fell off in front of our eyes."*

Photo: Scanpix, Fredrik Solberg

A cancer patient at UCH in London being treated by PCI Biotech's light-directed therapy.

Patient sends personal thank you

So far seven patients with different kinds of cancer have been treated. One of the patients, John O´Reilly (66), had a tumour at the back of the tongue and would not have survived regular surgery. Following PCI treatment the tumour was removed within 40 minutes, and now the doctors can't find any trace of the cancer. O`Reilly told VG how grateful he was for the new treatment and that he sends his personal thanks to Kristian Berg, professor at the Norwegian Radium Hospital, where the technology was originally developed.

For more details page 6.

VIEWPOINT

Photo: Werner Christie

As a former health minister and WHO adviser, Dr Werner Christie has a wealth of experience in planning modern healthcare systems.

CHINA INCREASINGLY INTERESTED IN NORDIC HEALTH MODEL

By Werner Christie, MD. Chairman, Public Advice Asia, Beijing

Former Norwegian health minister Dr Werner Christie is now heavily involved in promoting Sino-Norwegian life science collaboration. In the year of EXPO 2010 where life sciences and medtech will feature prominently in the Norwegian exhibit, he gives his personal view of the potential.

After 2 years as special advisor in Biotechnology for Norway in San Francisco 1999-2000 I found that the dynamics, dreams and developments in Asia were becoming comparable to those in the US in many but not all ways. These challenges and contrasts from the east triggered my inherent curiosity, and generated an assignment as Science and Technology counselor at the Norwegian Embassy in Beijing and later as chairman of Public Advice International's China operations, a global consulting company focusing on the health, food environment and CSR sectors in China. These interfaces between science, technology, enterprises and politics both Chinese and European, offered a unique opportunity to experience the scientific developments on both sides and gave rise to many reflections on similarities and disparities.

As viewed from the middle Kingdom, Norway is a remote and fairly unfamiliar society for most Chinese. What they usually associate with the country is that Norway is small and beautiful, cold and clean.

However, as China rapidly moves into the centre of the world scene in one sector after another, the Nordic experience and Norway in particular is receiving more and more attention and curiosity from the Chinese, not only for its science and technology, but also for its way of organizing an innovative dynamic partnership between a vibrant private and comprehensive public sector.

China is no longer just a cheap manufacturing base for western products, providing cheap labor and softer regulations on human resource and environmental management. It is a country rapidly developing itself as a research hub for domestic and international needs, - an innovative technology nation with growing ambitions for entering the global competitive market with their own homegrown brands. It also represents a huge and growing domestic market with a rapidly expanding middle class with more and more sophisticated needs and demands.

So why would a small and remote country like Norway be of much interest to a dynamic country, 30 times bigger, and with a human capital base 300 times that of Norway rapidly developing their own scientific and technological skills driven by a millennium old passion for excellence?

I have experienced that the Chinese have made a note of the fact that the Norway together with other Nordic countries consistently appear on the world competitive index together with or sometimes even ahead of other much more dedicated free-market economies. This apparent paradox is not well recognized and even less understood in the US, where innovation Silicon Valley style rules the mindset: Free capital and angel investors drive the process, while independent entrepreneurs and innovators run the show with as little government involvement and regulation as possible. Income differences and economic incentives are big, while taxes are low; most services including healthcare and higher education are more or less market based.

What informed observers in the communist ruled Chinese capitalist economy may have discovered, is that the Nordic countries do it very differently, but seem to reach the same results: Despite high taxes, low economic incentives, and plenty of state regulation and intervention, we still rank among the top ten nations for competitiveness. Indeed Norway has, together with Iceland, even been ranked the two most developed countries in the world by a complex UNDP index for almost a decade. For the exact opposite reasons why the Americans often consider the Nordic countries almost communist, Chinese people have often remarked: *"But you must be the real communist countries, you have successfully implemented equity, solidarity and generous welfare for all, while maintaining economic growth and stability, high employment and strong technology and innovation!"*

These facts illustrate that innovation is about more than science, technology, innovation entrepreneurship and marketing. It is also about what the Chinese like to call "Soft Technology"; legal systems and economic regulations, civil society organization, institutions and bargaining traditions, norms, procedural routines, politics, ethics and spirit. This is where Norway has its own version of the so-called "Nordic Model" that we share with our neighbours.

This cooperative model also impacts our science innovation. Similar to the way in which Norway and other Nordic countries

has been a recognized leader in comprehensive breeding programs, from plants via cattle and hogs to salmon, tilapia and other marine species. Norway is not only a major fish exporter, we also hold patents and major global market segments for marine OMEGA 3 oils, fish vaccines and fingerling production, also in China. The first Chinese cattle from Norwegian bulls have just been born, and there are indications that their fertility is significantly enhanced. The Norwegian Centre of Excellence in Aquaculture Feed and Nutrition has established productive partnerships with Chinese Academy of Science institutes.

The Norwegian founded diagnostic company Axis Shield and biobead innovator and producer Dynal are both well established in China, and now parts of multinational companies. Medical research collaboration between Norwegian and Chinese institutions is also well established, both in cancer and several other fields.

In addition to several multinationals in the food, health and environmental, and public policy sectors, China is currently working with DNV, the Norwegian accreditation, quality assurance and risk management specialist, to support the recently announced huge Chinese health reform process. Probably more ambitious and comprehensive than even Obama's US health reform efforts, it will generate huge opportunities for all sorts of life science technologies from Norway, the Nordic countries and elsewhere.

Just some idea of that potential is the by the fact that the Chinese Healthcare system has 17000 hospitals, 58000 health centres and 299 000 minor treatment units. The Chinese medical devices market alone is worth 10 billion Euros a year, with an annual growth rate of 15%.

These few examples indicate that Norway, even though small has unique technologies, innovations and opportunities to serve the rapidly growing and demanding Chinese market, as well as many other regions of the world. Norway is competitive not just because we are similar to other modern industrial states, but also because we are different. You could say Norwegians do it the NorWay!

NORWEGIAN LIFE SCIENCES TO FEATURE AT EXPO 2010

"Better City, Better Life" is the theme for the EXPO 2010, which is open from 1 May to 31 October 2010. A total of 70 million people are expected to visit EXPO 2010, and Norway, the country of forests, fjords, mountains and coastlines, will invite theme into a stunning Expo pavilion consisting of 15 model "trees" each offering different experiences.
Norway's life sciences expertise will feature, particularly in medtech, oncology and aquaculture through exhibits, seminars and other activities.
For more information: ***www.expo2010.no***

Illustration: Norway at EXPO 2010

BUSINESS NEWS

The latest from Nordiag, Algeta, Clavis, HUNT, GA, DiaGenic, Nutri Pharma/Bionor Immuno and Lytix.

NORDIAG'S ARROW TAKES FLIGHT

With restructuring complete and an oversubscribed share issue completed, NorDiag reported recently operating growth of 43% in 2009. The company has also signed two significant sales collaboration agreements with test manufacturers for their Arrow instrument. The first, with Molzym, a is for an integrated solution for sepsis (blood poisoning) testing using their SepsiTest™ which will be launched around the middle of this year. The second is with Hain Lifescience GmbH, to put their recently WHO approved TB test on the Arrow. For more information visit ***www.nordiag.com***

DIAGENIC AND FERRER INCODE CLOSE ADtec DISTRIBUTION AGREEMENT

DiaGenic ASA and Ferrer inCode have signed a distribution agreement for the blood-based ADtect test for early diagnosis of Alzheimer's disease coving a total of 32 countries. This will give Ferrer inCode the exclusive right to sell and market ADtect initially in Germany, Belgium, the Netherlands, Luxemburg, France, Italy, Spain and Portugal, then followed by Latin America. More at ***www.diagenic.com***

LYTIX'S ONCOPORE INTO PHASE I

Another company carrying high expectations, Lytix Biopharma, has received approval from the Norwegian Medicines Agency and the Swedish Medical Products Agency to commence Phase I clinical trials of OncoporeTM (LTX-315) for the treatment of cancer. More at ***www.lytixbiopharma.com***

AFFITECH DIVESTS LAST VACCINE PROJECT TO FOCUS ON GPCR ANTIBODIES

Affitech has announced it has finalised the terms of an agreement with KAEL-GemVax of Korea under which KAEL-GemVax acquires the remaining rights to the GV1001 vaccine. The agreement allows Affitech to focus exclusively its breakthrough CBAS drug discovery technology on indentifying therapeutic antibodies to G-Protein Coupled Receptors (GPCR) rather than its previous cancer vaccine business. More at ***www.affitech.com***

NUTRI PHARMA ACQUIRES BIONOR IMMUNO AS

Nutri Pharma recently completed the acquisition of vaccine developer Bionor Immuno AS. Bionor has developed a novel vaccine platform technology that has successfully completed Phase I and II clinical studies and can be used both for preventative and therapeutic purposes. The acquisition aims to add significant value to shareholders short and long-term by combining two strong R&D traditions into one integrated biotechnology company.
Read more at ***www.nutripharma.no***

CLAVIS PHARMA RECEIVES US ORPHAN DRUG DESIGNATION TO TREAT PANCREATIC CANCER...

Following their $380 million partnership deal with Clovis Oncology, Clavis Pharma reported that the FDA has authorised orphan drug designation to CP-4126 for treatment of pancreatic cancer. The US Orphan Drug Act provides incentives to expand drug development for diseases affecting less than 200,000 people in the USA, and if the trial of CP-4126 is successful it may be further developed to treat more common diseases.

Photo: Schwarz Communication

Olav Hellebø has taken over at Clavis Pharma.

...AND APPOINTS NEW CEO

The company also announced that Olav Hellebø has been appointed Chief Executive Officer. He joins Clavis from his position of Senior Vice President at UCB Pharma where he led the launch of Cimzia®, UCB's new antibody drug for the treatment of rheumatoid arthritis and Crohn's disease.
More at ***www.clavispharma.com***

HUNT TO EXPAND BIOBANK REMIT?

HUNT could be the beneficiary of a recent Norwegian government task force report, which recommended forming a single company to commercialise the country's biomaterial assets. Currently HUNT's remit covers the HUNT biobank in central Norway. Its non-profit business model with income being reinvested in the Norwegian health system has attracted considerable praise. HUNT also announced that it is hosting a session on Population Based Biobanks at this year's BIO Convention in Chicago.
www.huntbiosciences.com

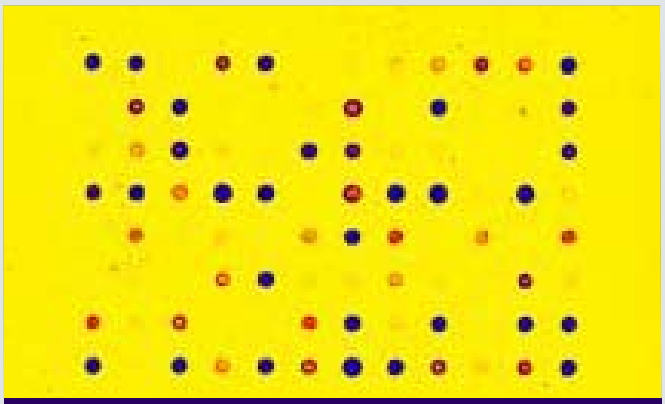


Illustration: Genetic Analysis

GA develops GA-Map profiles of gut microflora, which could lead to more accurate/earlier diagnosis of a range of diseases including Crohns.

LIEN RETURNS AS GA CHAIRMAN

Having secured new funding from Akershus Teknologifond (ATF) and exiting shareholders Genetic Analysis has also attracted former Axis-Shield CEO Svein Lien as Chairman. Along with leading business entrepreneur Dag Terje Tian, he joins life sciences start-up expert Ann-Kristin Hageløkken and founder scientist Professor Knut Rudi on a restructured board. Read more at ***www.genet-analysis.com***

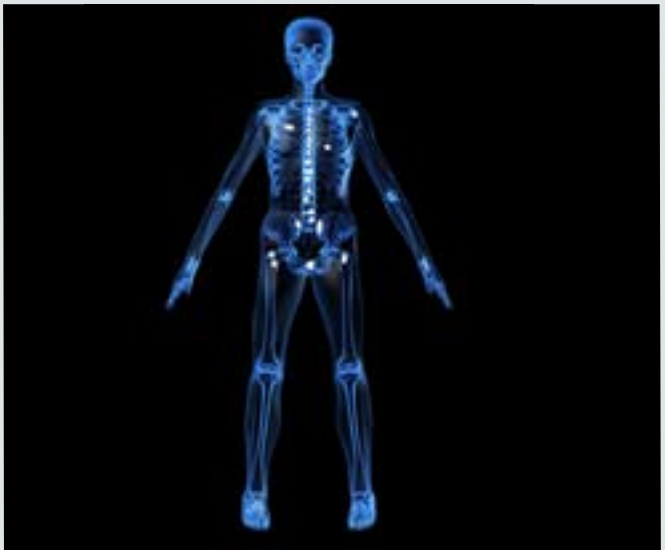


Photo: Algeta.

Already in Phase III for prostate cancer, Algeta has started Phase II trials of Alpharadin to treat endocrine refractory breast cancer.

THE NANSEN NEUROSCIENCE NETWORK

WORKING HARD FOR A HEALTHY BRAIN

Neuroscience, medtech and oncology are three areas in which Norway excels. Following the success of the Oslo Cancer Cluster, neuroscience seemed a natural choice for a similar model.

The Centre of Molecular Biology and Neuroscience (at University of Oslo) has in collaboration with Molecular Imaging Lab in Trondheim (at the University of Trondheim), supported by several other academic and industrial groups in Norway, taken the initiative to form the Nansen Neuroscience Network(NNN). Innovation Norway's health sector team has been instrumental in bringing this initiative forward, providing funding and interim management. Stein Lorentzen-Lund was recently recruited to replace Innovation Norway's Ole Jørgen Marvik as project manager.

Illustration: NNN

The Nansen Neuroscience Network will aim to translate world class research in for example aquaporins and imaging into new diagnostics and treatments.

Photo: Stein Lorentzen-Lund

Stein Lorentzen-Lund is the new "brains" behind the Nansen Neuroscience Network.

The name has been inspired by the explorer, humanitarian and diplomat, Fridtjof Nansen, also a prominent neuroscientist, who pioneered routes to the mind. About 120 years ago Nansen earned the first Norwegian doctorate degree in neuroscience, demonstrating that the brain consists of individual, separate nerve cells. Since then, Norwegian scientists have given a number of seminal contributions to our knowledge about the brain, including memory (LTP), glutamate transmitters and more recently the importance of aquaporins in brain function.

The Nansen Neuroscience Network will be organized as a nation-wide knowledge network aiming to connect brain science and industry. NNN is committed to improve quality of life through innovation, research and development of diagnostics, therapeutics and preventive measures.

The next step is a founding meeting which will take place mid-May 2010 and will be open to academic groups, organizations, industry etc. with an active interest in brain science and activities that are compatible with the NNN vision.

MEDCOAST SCANDINAVIA COLLABORATION TO BEAT ALZEIMER'S DISEASE

While there is an extremely large demand for therapeutic solutions in the neuroscience field, extensive resources are needed to make progress. Therefore, from April 21-23, top researchers and representatives from industry and hospitals in Norway and Sweden will meet for the 3rd "Cognitive Neuroscience – from molecule to patient" conference at Hankø, Norway. The meeting has a broad focus, aiming to facilitate the exchange of ideas between clinical, imaging, neuro-chemical, genetic and basic research groups. It will also emphasise science-innovation-industry relations, and development of ideas for commercialisation.

"Presently, we are unable to stop or postpone the major dementia diseases. To achieve this goal, we must be able to identify disease development at a much earlier stage prior to extensive brain damage, and we must understand the factors eliciting disease initiation and early progression" says organiser Professor Tormod Fladby, who heads the Neurology Department at Akershus University Hospital outside Oslo. For more information: ***www.medcoast.org***

Photo: Scanpix, Fredrik Solstad

PCI's patented photosensitiser Amphinex first coats tumour cell walls and is then activated by a laser to weaken them and allow cancer drugs to enter and destroy the tumours.

PCI SHINES NEW LIGHT ON

LOCALISED CANCER TREATMENT

Last year Algeta and Clavis put Norwegian ca ncer treatment innovation truly on the world map. Already in 2010, PCI Biotech is staking a strong claim to be the next shining light to emerge from what is becoming one of the hottest biotech spots in the world. Fresh from reporting extremely promising initial Phase I/II trial results for its lead product Amphinex®, CEO Per Walday explains the company's background and goals.

What are PCI's aims?
We believe that our patented photochemical internalisation (PCI) technology has the ability to revitalise the localised cancer treatment market – from head and neck cancers to bladder cancer.

What are the company's origins?
PCI Biotech was established in 2000 as a subsidiary of the Norwegian pharmaceutical company Photocure ASA which has had success with PDT (photodynamic therapy). After an 'incubation' period, the decision was taken in 2008 to demerge PCI Biotech from Photocure and list on the Oslo Axess stock market for small cap companies. In fact PCI is often quoted as one of the few successful biotech IPO's that year.

What is Photochemical Internalisation?
PCI is a novel light directed drug delivery technology. Originating from world leading research at the Norwegian Radium Hospital, the PCI technology was developed to introduce therapeutic molecules in a biologically active form specifically into diseased cells. The company's lead candidate is the proprietary photosensitiser Amphinex®. The PCI method involves first injecting Amphinex® and thereafter a therapeutic drug to be specifically delivered to the diseased cells. When these are illuminated the cells' endosomes are ruptured to allow successful intracellular delivery of the drug. PCI can enhance the delivery of all molecules taken up by the cell by endocytosis. This includes most types of macromolecules, drugs carried by antibodies or nanoparticles, as well as some small molecule drugs. In cancer in particular, PCI enables more effective use of cytotoxic compounds by enhancing their effects at the target site.

It is also worth mentioning that the PCI technology has been validated by several external experts, and that PCI Biotech receives substantial public funding from the Norwegian Research Council and from the EU, particularly from the prestigious Eurostars scheme.

What are the advantages?
The PCI technology has a great number of advantages as it can:
• enhance and target drug delivery
• improve the efficiency of macromolecule delivery
• allow the therapeutic use of molecules that it has hitherto been impossible to use, due to e.g. too low delivery efficiency or too high toxicity in non-target tissues.

Progress so far?
We have rapidly moved through preclinical testing and are currently trialing our patented photosensitising agent Amphinex® in combination with Bleomycin in a Phase I/II study in a range of different cancer patients at University College Hospital (UCH) in London, UK. As you can see from the front page, the trial is proceeding well, with recruitment expected to finish by summer and final results by the end of 2010.

Why bleomycin?
We chose bleomycin to demonstrate the efficacy and benefits of our approach. Bleomycin is known to be taken up by endocytosis and it is the lack of effective intracellular delivery that is most probably hampering its effectiveness as a cancer drug. By delivering it only at the target sites through PCI-induced endosomal release, we effectively potentiate the local antitumour effect at low systemic doses, thereby also limiting harmful side effects.

What is the trial protocol?
Patients are first injected with Amphinex. After 4 days, which allows the Amphinex to be taken up by the endosomes, the bleomycin is injected. Four hours later the laser is focused on the tumour site and the Amphinex activated, releasing the bleomycin that has been trapped in the endosomes. Evidence from the trial shows that the tumours disappear within a few weeks.

What is the strategy?
We are currently focused on improving localized cancer treatment. The ongoing Phase I/II trial aims at attracting collaborations with companies having therapeutic molecules, which could benefit from the PCI drug delivery technology. Such collaborations could range from joint product development to out-licensing of the PCI technology. We have identified opportunities in several indications where our technology could be used. Currently we have preclinical studies ongoing in bladder cancer, where we see the possibility of complimenting surgical intervention and chemotherapy to prevent remission.

PCI also has potential in RNA delivery?
We are members of an EU consortium looking at this area, and it is true that PCI for some indications does seem to have the potential to solve the problem of delivering RNA-based therapeutics.

So the future looks bright?
Yes, we are delighted with the UCH trial results so far, not just from a technical point of view. We took the decision to include head and neck cancer patients. This is one of the most difficult cancers to treat and to make such progress brings the whole PCI team great satisfaction.
www.pcibiotech.no

Photo: PCI Biotech

Prince Charles recently visited UCH in London and saw for himself the encouraging results from PCI Biotech's Phase I/II trials.

OSLO MEDTECH CLUSTER

Following its granting of Arena status, the Kathrine Myhre and her team at Oslo Medtech Cluster have wasted no time in moving forward with announcing what promises to be an exciting year of events.

Domestically along with regular meetings on topics of interest such as the Q&A forum described below, there will be collaboration with other Arena-cluster such as the MedITNor cluster in Trondheim and the IKT-Grenland cluster in Telemark. The Cluster will also work for bringing both international markets and competent capital closer to the Norwegian medtech companies. Further momentum comes from new members. 4 joined in January alone – Hewlett Packard (which has invested heavily in medtech R&D in Norway), regulatory experts Haflan Resources, neurodiagnosis specialists MentisCura As and well-known diagnostics company Axis-Shield. This gives a total of 46 members with a further 4 applications pending.

QA & Regulatory Forum relaunched

On February 11th, the medtech QA & Regulatory Forum was re-launched – for the first time as a workgroup under the new Oslo Medtech organization. The objective of this workgroup is to create an arena where OMT members can share their knowledge and discuss these important topics.

"The turnout for the first meeting was excellent and promises well for the future," says Kathrine Myhre, OMT Project leader. *"30 people from 17 companies showed up for our first meeting! I think this shows that QA and Regulatory issues are an important area for the OMT members, and an area where many companies see that they can benefit from sharing their knowledge. These workgroup meetings will be very much an activity for the members – by the members. Our hope is that even more will join us and contribute to the forum - both with their questions and concerns and with their knowledge and experience."*

China on the agenda...

Plans are also underway for a Norwegian Expo for medtech and health ICT in China in September during the World Expo in Shanghai this summer to capitalize on growing interest in China in Norwegian medical technologies. With some of the most modern hospitals in Europe, Norway has been a testbed for the latest thinking in this field and is looking to export this expertise as China embarks upon a massive expansion of its healthcare system.

...and the US

To strengthen the possibility for Norwegian medtech companies to build commercial relationships in the US, Innovation Norway and Oslo Medtech will in cooperation prepare for one-to-one meetings in March and a visit Boston and Minneapolis April 18 -23. For more information contact ***www.oslo.medtech.no***

Oslomedtech

EVENT CALENDAR 2010

Meet representatives from the Oslo life science sector at the following events:

MARCH

3 – 5 MareLife International Innovation Workshop at North Atlantic Seafood Forum 2010, Oslo, Norway
www.nor-seafood.com

APRIL

15 AngloNordic Biotech Conference, London, UK
www.anglonordicbiotech.com

18-23 Norwegian medtech in MINNEAPOLIS and BOSTON, USA
www.innovationnorway.no/boston
www.oslomedtech.no

MAY

3 – 6 Scandinavia Pavilion at Bio International Convention 2010, Chicago, USA
www.bio2010.org

11 Partnership for Innovation: From Cancer Research to Cure, Oslo Week, Norway at World Expo 2010 Shanghai, China
www.expo2010.no

INNOVATION IN FISH

North Atlantic Seafood Forum (NASF), the world's leading conference on seafood, will take place in Lillestrøm on 2-4 March 2010. MareLife will, for the second time, be in charge of the innovation workshop, this year in partnership with the European Aquaculture Technology and Innovation Platform (EATIP), and in cooperation with the Institute of Marine Research, Nofima, and The Fishery and Aquaculture Industry Research Fund.

"During last year's MareLife workshop, 15 innovative cases were presented. This time we will have 40 cases, many of which that are follow-ups from last year" said professor Øystein Lie, managing director at MareLife.

The main subject at the workshop is how cross sector collaboration can create new technology and innovation, sustainable solutions and better returns.
www.marelife.no

MARELIFE BIOMARINE INNOVATION NETWORK

MARELIFE HELPS AVOID MACKEREL WARS

Unbeknown to many, the EU and Norway almost came to blows recently over mackerel, until MareLife came to the rescue with a unique genetic study of mackerel stocks that provided the basis for an agreement.

For years the EU have claimed the "Biscaya stock" as an exclusive right. However, the so-called "Western stock" (West of Ireland) and the third "North Sea stock" have been co-managed and shared quota wise. As a consequence of this regime, Norway claims it has been given too small a quota, compared to its historical traditions. Part of this long lasting tension is also based on the fact that Norway for much of the Seventies barred its own fleets from mackerel fishing to protect the stocks. However, during the same period the EU (ironically with the support of Norwegian banks) built up its fleet, continued fishing and landed lots of mackerel in Norway, with the Norwegian mackerel operators left tied up in port as angry spectators.

Last autumn, in response to this, Norway and the Faroe Islands granted themselves an exclusive quota equivalent to the exclusive EU one in Biscaya. This elicited the "war". When the mackerel biomass crossed from the Norwegian to the EU zone, the Norwegians were evicted from that zone when attempting to fish, even though they were entitled to through the standing agreement.

Against this background and during a critical phase of the negotiations between Norway and EU in January 2010, MareLife was able to step in as potential peacemakers by putting results from a unique genetic mackerel research project initiated by MareLife on the table. The project is a collaboration between IMR, Liegruppen and the Norwegian School of Veterinary Science, led by Prof Frode Lingaas. It has been based on state of the art molecular genetics methods, employing two types of genetic markers, so called microsatellites and SNPs. It revealed an extraordinary high level of genetic variation in the North Atlantic mackerel stock, but no evidence of stock segregation to support national stock exclusivities was found. On January 22, having accepted these results, the EU and Norway concluded a long term mackerel fishing framework agreement based on the principle of common management and exploitation of a common stock. The agreement will enhance stock management and ensure predictability for the fishery operators.

According to Øystein Lie of MareLife, the study is typical of the way life science research can be used to provide a basis for sustainable management of fish stocks. This topic along with other relevant issues will be covered in the upcoming International MareLife Innovation Workshop running as a parallel session on the second day of The North Atlantic Seafood Forum, Lillestrøm, Norway 3-4. March, 2010.

For more information ***www.marelife.no***

Photo: Norwegian Seafood Export Council/Eliv Leren

2009 - WHAT A YEAR FOR OSLO CANCER CLUSTER!

Overall 2009 proved to be an amazing year for Oslo Cancer Cluster. And already 2010 has already got off to a flying start with the signing of a new collaboration agreement with the Hamner Institute in North Carolina.

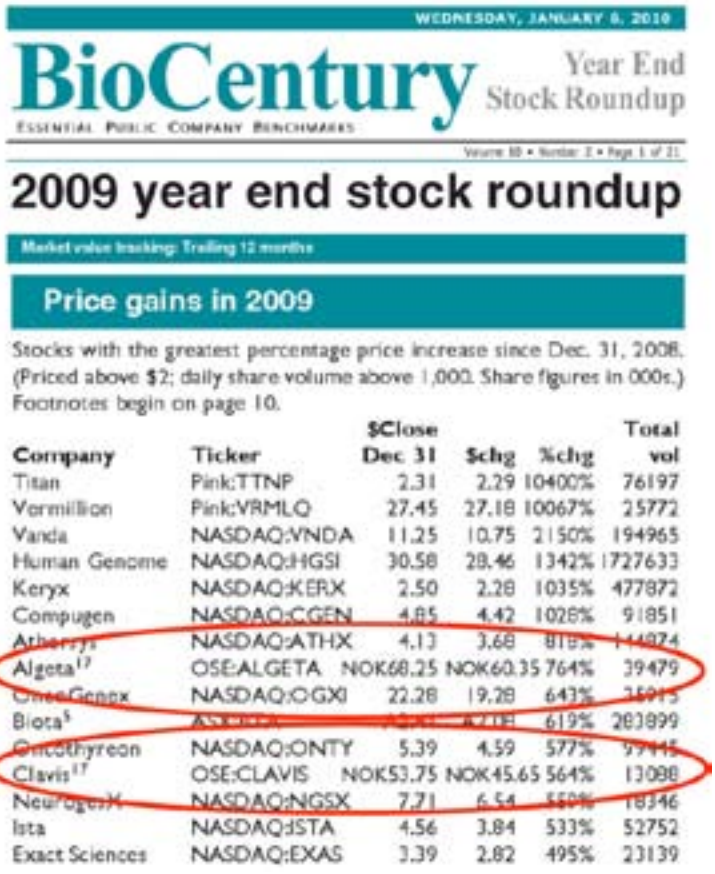
With 14 new and active members, promising clinical trials, important partnership deals and broad media-exposure, members continued their excellent work committed to improving the lives of cancer patients by accelerating the development of new cancer diagnostics and treatments.

BEST NORWEGIAN BIOTECH AGREEMENT

Norwegian cancer research is of high international quality and standard, but commercialisation of this research into new cancer treatments and diagnostics has not always been as successful. However, in September Oslo Cancer Cluster member company Algeta ASA, showed the immense potential of the Norwegian biotech industry by signing a deal with Bayer that Norwegian analysts have named "the best ever deal in Norwegian biotech". Estimated to be worth $800 million, the deal secures further development of Algeta's lead compound Alpharadin for the treatment of bone metastases and disseminated tumor types.

STOCK WINNERS AND PROMISING NEWS

Biocentury reported that Clavis and Algeta were two of the best performing biotech stocks of the year.



WEDNESDAY, JANUARY 4, 2010

BioCentury Year End Stock Roundup

ESSENTIAL PUBLIC COMPANY BENCHMARKS

2009 year end stock roundup

Market value tracking: Trailing 12 months

Price gains in 2009

Stocks with the greatest percentage price increase since Dec. 31, 2008. (Priced above $2; daily share volume above 1,000. Share figures in 000s.) Footnotes begin on page 10.

Company	Ticker	$Close Dec 31	$chg	%chg	Total vol
Titan	Pink:TTNP	2.31	2.29	10400%	76197
Vermillion	Pink:VRML0	27.45	27.18	10067%	25772
Vanda	NASDAQ:VNDA	11.25	10.75	2150%	194965
Human Genome	NASDAQ:HGSI	30.58	28.46	1342%	1727633
Keryx	NASDAQ:KERX	2.50	2.28	1035%	477872
Compugen	NASDAQ:CGEN	4.85	4.42	1026%	91851
Athersys	NASDAQ:ATHX	4.13	3.68	818%	114874
Algeta[17]	OSE:ALGETA	NOK68.25	NOK60.35	764%	39479
OncoGenex	NASDAQ:OGXI	22.28	19.28	643%	35915
Biota[5]	[illegible]	[illegible]	[illegible]	619%	283899
Oncothyreon	NASDAQ:ONTY	5.39	4.59	577%	99445
Clavis[17]	OSE:CLAVIS	NOK53.75	NOK45.65	564%	13098
NeurogesX	NASDAQ:NGSX	7.71	6.54	559%	18346
Ista	NASDAQ:ISTA	4.56	3.84	533%	52752
Exact Sciences	NASDAQ:EXAS	3.39	2.82	495%	23139

Photo: Oslo Cancer Cluster

OCC Chairman Jónas Einarsson speaking at the inaugural ECCP in Toulouse, France.

The agreement made Algeta the year's winner on the Oslo Stock Exchange with an 781% increase in stock value, closely followed by another Oslo Cancer Cluster member Clavis Pharma ASA with 565%. Clavis Pharma's increase was due to a partnership agreement with the American company Clovis Oncology worth up to $380 million. The agreement secures the further development of a drug candidate against pancreatic cancer.

And if that wasn't enough, Oslo Cancer Cluster member DiaGenic ASA was selected as "Most Innovative Company" by The Norwegian Research Council and 1000 business leaders for their development of a blood based breast cancer test. Two other companies, Lytix Biopharma AS and PCI Biotech®, also both entered Phase I clinical trials for their lead products for treating cancer.

Furthermore, Photocure ASA received a positive indication from the Food and Drug Administration (FDA) that the new drug application for their innovative diagnostic for detection of non-invasive bladder cancer may be approved. Photocure expects the pending issues to be agreed with FDA by Q2 2010.

2009 also brought good news for members MSD and Oslo University Hospital. MSD selected Oslo University Hospital as a member of their worldwide Onconet network of comprehensive cancer centres. Onconet has been established to ease collaboration between phase 1 facilities, and speed-up innovation in oncology. MSD will use Oslo University Hospital as their lead Scandinavian site for their phase 1 studies in oncology.

ECCP 2010

International partnerships are vital in order to support OCC member companies in commercialisation and in the search for investors/partners. Along with Cancer-Bio-Santè in Toulouse, Oslo Cancer Cluster organised the first European Cancer Cluster Partnering (ECCP) meeting in September 2009, in Toulouse, France. The ECCP meeting will be repeated in Oslo from 15th-17th of September 2010. For more information ***www.eccp2010.com***

Photo: Schwarz Communication

Oslo Cancer Cluster started 2010 with a groundbreaking agreement with the Hamner Institutes in North Carolina which opens the way not only to increased collaborations in the US but also China.

PRECLINICAL AND CLINICAL NETWORK IN ONCOLOGY

Oslo Cancer Cluster supports its members with access to an international preclinical and clinical network in oncology. Oslo Cancer Cluster collaborates with the leading cluster in Toulouse, France, and is broadening its network towards other European centres such as Heidelberg in Germany, Lund in Sweden and Copenhagen in Denmark. Now it will also cooperate with The Hamner Institutes in Research Triangle Park in North Carolina. After board approval, Oslo Cancer Cluster recently signed an agreement with The Hamner Institutes. The Hamner plays an active role in linking together translational research programs in oncology with the University of North-Carolina, Duke University, North Carolina State University and Wake Forest University.

The Hamner will offer OCC member companies guidance and assistance in preclinical and clinical development in the US. The Hamner is organised as an independent non-profit institution.

Recently the Hamner signed an agreement with China Medical City for international drug development. The China Medical City is a new life science park of approximately 20 square kilometres that is entirely dedicated to biotech, pharmaceutical, and medical innovation located in the Yangtze River Delta north of Shanghai, and with 150.000 employees. Members in Oslo Cancer Cluster will get access to the facilities in China Medical City through the agreement with The Hamner.

WORLD ECONOMIC FORUM

Through his selection by the World Economic Forum as one of 200 Young Global Leaders in 2009, OCC CEO Bjarte Reve has been able to market Oslo Cancer Cluster internationally to various leaders in business, media and politics. He has also and start an initiative along with the UK charity AfrOx, to push forward for better cancer treatment in Africa.

OSLO CANCER CLUSTER INNOVATION PARK MOVES FORWARD

The development of the Innovation Park next door to the Institute of Cancer Research and the Cancer Clinic is progressing, and the Innovation Park will be voted upon in Oslo City Council in September/October 2010. If successful, the Innovation Park will physically integrate Ullern high school, the Cancer Registry, clinical trials facility, biotech and biopharma companies.

Looking forward, CEO Bjarte Reve hopes for similar success in 2010 through strengthening links throughout Europe, the US and China, and hosting the second ECCP in Oslo in September. More at ***www.oslocancercluster.org***

ONE TO WATCH

REGENICS

The oceans have been good to Norway, not just for trade, fisheries and oil, but also increasingly providing a steady stream of biomarine ingredients such as Omega 3. Regenics is a young biotech company focusing on developing therapeutic wound healing products from proprietary biomarine extracts – initially salmon eggs.

The products will improve wound healing, stimulate regeneration of skin cells, regulate skin cell differentiation and stimulate collagen secretion. These effects are also sought after in cosmetic applications; through a separate project Regenics will spin-off an active extract fraction as a cosmetic product ingredient. Future areas include other skin diseases and targeted mechanisms to improve wound healing.

KEY PEOPLE: CEO Runhild Gammelsæter, CSO Mats Grande, Chairman Tore Rasmussen

PRODUCTS: Therapeutic wound healing product and cosmetic product for skin

MARKETS: Technology and ingredients for big pharma and cosmetics

CURRENT STATUS: Preclinical

INVESTORS: Life Capitol AS, Heldrup AS, Collas AS, Runhild Gammelsæter, Mats Grande and Christoffer Lund.

Regenics' research is also partly funded by government grants from Norwegian Research Council (BIA 2008-2010), Innovation Norway (SkatteFUNN and Etablererstipend) and Næringsetaten.

PUBLICATIONS & PATENTS: Collas P. and Gammelsæter R. (2007). Novel Approaches to Epigenetic Reprogramming of Somatic Cells. Cloning Stem Cells. Mar;9(1):26-32

Applications of Cells and Cellular Extracts for Rejuvenation US and PCT patent pending

Applications of Cells and Cellular Extracts for Regeneration (CIP) US and PCT patent pending

For more information: ***www.regenics.no***

Oslo Teknopol

– your key to the Oslo region

Oslo Teknopol aims to stimulate innovation and attract foreign investments and talent to Norway's capital region. We offer free assistance and information about business conditions and opportunities within life sciences and other key knowledge-based clusters in the Oslo region:

- Maritime
- Energy and environmental technology
- Information and communication technology
- Life science
- Culture

Oslo Teknopol is a non-profit regional development agency, established by the City of Oslo and Akershus County Council.

OSLO BIO

Oslo Bio is a collaborative network of stakeholders from the life science cluster. Oslo Bio aims to strengthen the cluster and contribute to long term growth through marketing, initiating and facilitating development projects, and international collaboration. Oslo Teknopol act as the secretariat for Oslo Bio.

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