
First quarter results
2019
targovax

# About Targovax

## Activating the patient's immune system to fight cancer

Targovax (OSE:TRVX) is a clinical stage biotechnology company developing immune activators to target hard-to-treat solid tumors. Immuno-oncology is currently one of the fastest growing therapeutic fields in medicine.

Targovax's lead product candidate, ONCOS-102, is a genetically modified oncolytic adenovirus, which has been engineered to selectively infect and replicate in cancer cells. It has been shown to activate the immune system to generate tumor-specific immune responses. In phase I trials, ONCOS-102 induced both local and systemic innate and adaptive immune activation, which has been associated with clinical benefit. ONCOS-102's targeted path-to-market indication is mesothelioma, where the virus is currently being tested in a randomized phase II trial. Another trial, in checkpoint inhibitor refractory advanced melanoma, is expected to produce important proof-of-concept immune activation data in heavily pre-treated patients.

Targovax is also developing a neoantigen cancer vaccine targeting tumors with oncogenic RAS–mutations, which are known to drive cancer. The TG vaccine program has shown strong RAS-specific immune activation and a signal of clinical efficacy in a 32-patient trial with TG01 in resected pancreatic cancer. A next generation product candidate, TG02 is currently being tested in a phase I trial in colorectal cancer, both as monotherapy and in combination with Keytruda (an anti-PD1 check point inhibitor).

Please visit www.targovax.com for more information.

## Upcoming events

| | |
|---|---|
| **8-9 May:** | ChinaBio Partnering Forum, Shanghai, China |
| **23 May:** | AX Exposure, clinical focused webcast |
| **1-4 June:** | ASCO, Chicago, USA |
| **3-6 June:** | BIO, Philadelphia, USA |
| **3-7 June:** | Jefferies Healthcare conference, NYC, USA |
| **11 June:** | ABGSC Oncology seminar, Oslo, Norway |

## Upcoming milestones

| | |
|---|---|
| **1H2019:** | TG01 phase I/II trial in resected pancreatic cancer<br>*– 3-year survival data* |
| **1H2019:** | ONCOS-102 phase I trial in checkpoint inhibitor refractory advanced melanoma<br>*– ORR and immune data first cohort* |
| **1H2019:** | TG02 phase I trial in colorectal cancer<br>*– Immune activation and mechanistic data (TG monotherapy cohort)* |
| **~ New Year:** | ONCOS-102 phase Ib/II trial in unresectable malignant pleural mesothelioma<br>*- Randomized data* |

## Financial Calendar 2019

| | |
|---|---|
| **22 August:** | Second quarter report and presentation |
| **7 November:** | Third quarter report and presentation |

# First quarter highlights

- The first patient was treated in the dose expansion cohort of the ONCOS-102 trial in checkpoint inhibitor refractory advanced melanoma
- Finalized first development stage for new viruses, filed patents on three viruses
- The Parker Institute for Cancer Immunotherapy, Cancer Research Institute and Targovax signed a collaboration agreement to run a clinical trial with the TG vaccine in advanced pancreatic cancer in combination with other immunotherapies
- The European Patent Office granted a European patent which protects Targovax's TG01/02 mutant-RAS specific peptides and mutant RAS specific T-cells, for the treatment of cancer in combination with chemotherapies. This extends TG01/02 IP protection to 2034
- The US Patent and Trademark Office issued a Notice of Allowance in the US on a patent covering the TG mutant-RAS neoantigen vaccine platform. The allowed patent protects the composition of matter of Targovax's mutant-RAS specific neoantigen peptides and vaccines TG02 and TG03
- Targovax granted Zelluna Immunotherapy an FTO license to intellectual property relating to mutant RAS T-cell receptor technology
- Targovax successfully completed a Private Placement (PP), raising gross proceeds of NOK 74m

## Post-period highlights

- In May, Targovax announced the completion of enrollment of ONCOS-102 trial in mesothelioma. Randomized data expected around New Year

## Key Figures

| *Amounts in NOK thousands* | 1Q 2019 | 1Q 2018 | FY 2018 |
|---|---|---|---|
| Total operating revenues | 6 | 6 | 27 |
| Total operating expenses | -39 631 | -33 518 | -146 127 |
| Operating profit/loss | -39 626 | -33 512 | -146 100 |
| Net financial items | -1 473 | -1 285 | -1 249 |
| Income tax | 82 | 83 | 334 |
| Net profit/loss | -41 017 | -34 714 | -147 015 |
| Basic and diluted EPS (NOK/share) | -0.77 | -0.66 | -2.79 |
| Net change in cash | -46 269 | -32 384 | -110 384 |
| Cash and cash equivalents start of period | 151 189 | 261 573 | 261 573 |
| Cash and cash equivalents end of period | 104 919 | 229 188 | 151 189 |
| *Net proceeds PP received April 2019* | *66 888* | | |
| *Cash and cash equivalents and PP proceeds* | *171 807* | | |

**Øystein Soug, CEO**

"Throughout the first quarter of 2019 we have seen strong recruitment in several of our clinical trials. The first patient in the second cohort in the melanoma trial was dosed. The mesothelioma and peritoneal trials recruited very well. Based on recent RAS vaccine data, we entered into a research collaboration agreement with the Parker Institute for Cancer Immunotherapy and CRI. Within this collaboration, the intention is to conduct a clinical trial in combination with other anti-cancer treatments. This collaboration may be important, not only by testing TG vaccination in a new patient population – it also enables us to work with some of the world's leading experts in immunotherapy and pancreatic cancer. This may open up many new opportunities for the TG program in the future."

## Clinical development program overview

| Platform | Product candidate | Preclinical | Phase I | Phase II | Phase III | Next expected event |
|---|---|---|---|---|---|---|
| **ONCOS** oncolytic adenovirus | ONCOS-102 | **Mesothelioma** Comb. w/ pemetrexed/cisplatin | | | | **Around New Year** Randomized data |
| | | **Melanoma** Comb. w/Keytruda | | | | **1H 2019** ORR and immune data first cohort |
| | | **Peritoneal metastasis**[1] Collab: Ludwig, CRI & AZ Comb. w/Imfinzi | | | | *Update by collaborator, expected 2019* |
| | | **Prostate** Collab: Sotio Comb. w/Dcvac | | | | *Update by collaborator, expected 2019* |
| | Next-gen ONCOS | **3 viruses** undisclosed | | | | **2H 2019** First pre-clinical data |
| **TG** neoantigen cancer vaccine | TG01 | **Pancreatic cancer** Comb. w/gemcitabine | | | | **1H 2019** 3-year survival data |
| | TG02 | **Colorectal cancer** Proof-of-mechanism Comb. w/Keytruda | | | | **1H 2019** Immune activation and mechanistic data (mono) |
| | TG02 | **CPI synergy** TG + PD-1 | | | | **2H 2019** First pre-clinical data |

[1] Patients with advanced peritoneal disease, who have failed prior standard chemotherapy and have histologically confirmed platinum-resistant or refractory epithelial ovarian or colorectal cancer

Ongoing collaborator sponsored trials

CPI – Checkpoint inhibitor

## ONCOS-102 clinical development programs

### Mesothelioma

- Randomized phase II open label trial
- 31 1st line and 2nd line patients with unresectable malignant pleural mesothelioma
- Intra-tumoral ONCOS-102 in combination with standard of care, pemetrexed / cisplatin
- End-points: safety of the combination treatment, immune activation and overall response rates (ORR) at 6 months
- The trial is being conducted at four sites in Spain and France
- The enrollment has completed
- Most recent read-out: 6-patient safety lead-in cohort reported in April 2018
  - First safety review passed with no concerns
  - 50% disease control rate (DCR)
  - 100% innate immune activation
  - Tumor T-cell infiltration in 3/4 patients with available biopsy material
  - *De novo* tumor-specific T-cells

### Melanoma

- Open-label, single arm phase I trial
- Up to 21 patients (two dose cohorts) with advanced CPI refractory melanoma
- Intra-tumoral ONCOS-102 in combination with Keytruda (pembrolizumab)
- End-points: safety of the combination treatment, immune activation, overall response rates (ORR) at 6 months and survival rates
- The trial is being conducted at three US sites: Memorial Sloan Kettering (NY), Fox Chase Cancer Center (PA), and University of Maryland (MA)
- Most recent read-out: First 6 patients reported in October 2018
  - First safety review passed with no concerns
  - 1 patient with complete response (CR)
  - Innate immune activation in all 6 patients
  - Increased tumor T-cell infiltration in 3/4 evaluable patients

### Peritoneal disease

- Collaboration with US-based Cancer Research Institute (CRI) and Ludwig Cancer Research (Ludwig, trial sponsor)
- Non-randomized, open-label, multi-center phase I/II trial
- Up to 78 patients who have failed prior standard chemotherapy and have histologically confirmed platinum-resistant or refractory epithelial ovarian or colorectal cancer
- Intraperitoneally administered ONCOS-102 in combination with Imfinzi (durvalumab, anti-PD-L1 antibody), in advanced peritoneal disease
- End-points: safety, biologic and anti-tumor activity of the combination
- The trial is being conducted at five sites in US
- Most recent read-out: First 4 patients reported in July 2018
  - First safety review passed with no concerns

### Prostate Cancer

- Collaboration with the Czech biotech company Sotio, which is sponsoring the trial
- Open label, single-arm phase I/II trial
- Up to 15 patients with advanced metastatic castration-resistant prostate cancer
- Intra-tumoral ONCOS-102 in combination with Sotio's dendritic cell therapy DCVAC/PCa
- End-points: safety and tolerability of the combination
- The trial is being conducted at one site in the Czech Republic
- First patient was dosed in July 2018

## TG neoantigen vaccine clinical development programs

### Pancreatic Cancer (TG01)

- Phase I/II trial
- 32 patients recruited: two cohorts of 19 and 13 patients respectively, with resected adenocarcinoma of the pancreas
- Intradermal TG01 in combination with gemcitabine (standard of care at time of the trial start)
- End-points: clinical benefit of the combination
- The trial was conducted in the UK and Norway
- Full data read-out:
  - Median overall survival: 33.4 vs. 27.6 months in ESPAC4 trial for gemcitabine alone (from time of surgery)
    - First cohort: 33.1 months
    - Second cohort: median not yet reached
  - Median disease-free survival: 16.1 vs. 13.1 months in ESPAC4 trial for gemcitabine alone (from time of surgery)
    - First cohort 13.9 months
    - Second cohort 19.5 months

### Colorectal Cancer (TG02)

- Open label, non-randomized, phase Ib exploratory trial
- 6 + up to 6 patients (two independent parts) with local primary and recurrent colorectal cancer scheduled to have surgery
- Intradermal TG02, first as monotherapy and then in combination with Keytruda (pembrolizumab), an anti-PD1 checkpoint inhibitor (CPI)
- End-points: to determine safety and immune activation
- The trial is being conducted at five sites in Australia and New Zealand
- Most recent read-out, early exploratory clinical results indicate that:
  - TG02 induced immune activation in patients, including evidence of activated tumor-infiltrating T-cells
  - Increased PD-1 expression was observed in both circulating and tumor-infiltrating T-cells

# Clinical development programs

## ONCOS-102 in mesothelioma

Mesothelioma is the path-to-market indication for ONCOS-102. Data from six patients in the safety lead-in cohort of the ongoing randomized 31 patient phase I/II trial were reported in 2018. Interim analysis of these first six patients show 3/6 (50%) disease control rate (DCR) with stable disease (SD) in two patients and partial response (PR) in one patient. In addition, early immune activation was assessed for a subset of the patients. Systemic release of several pro-inflammatory cytokines was observed (6/6 patients analyzed), demonstrating that the treatment triggers an innate immune response. Also, there was an increase in the relative level of tumor infiltrating cytotoxic CD8+ T-cells (3/4 patients with pre- and post-treatment biopsies analyzed), indicating an activation of the adaptive immune system in the lesions as well as suggesting that the treatment triggers changes in the tumor microenvironment. These data indicate that the treatment of ONCOS-102 in combination with chemotherapy induces relevant immune activation in patients. The enrollment of patients has now completed and data red-outs are expected around New Year.

## ONCOS-102 in checkpoint inhibitor refractory melanoma

In September 2018, Targovax announced promising interim clinical response results from the open-label ONCOS-102 phase I trial in advanced melanoma patients who have become refractory to prior checkpoint inhibitor treatment and are then treated with ONCOS-102 in combination with Keytruda. This followed an earlier announcement of results from the trial that indicated ONCOS-102 had elicited immune activation in patients consistent with the proposed mechanism of action. The results from the first six patients were presented by Dr. Shoushtari, a medical oncologist at Memorial Sloan Kettering Cancer Center and the principal investigator of the trial, at a Key Opinion Leader event hosted by Targovax in New York City on 11 October 2018.

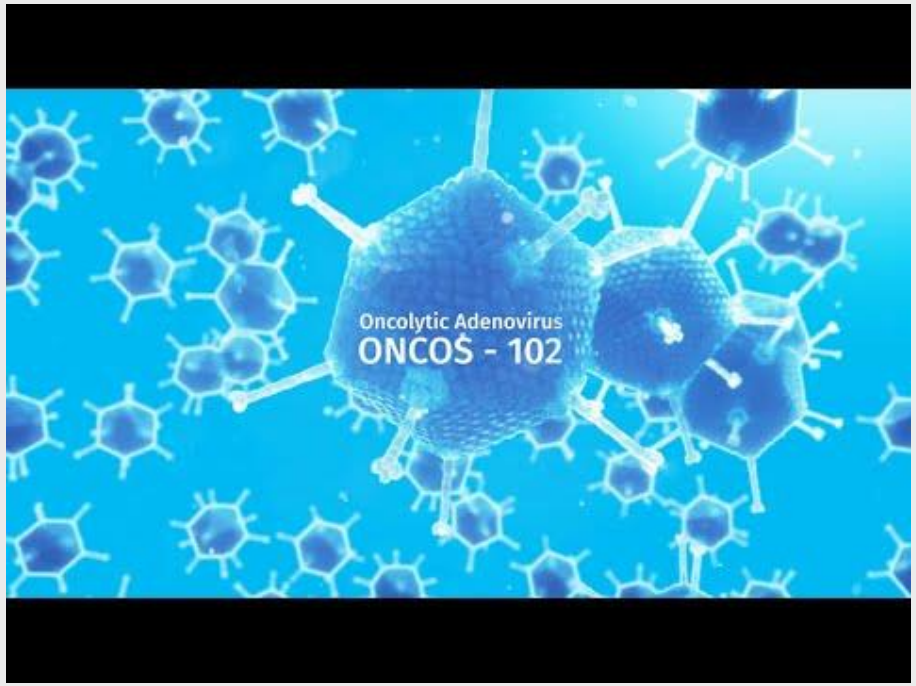
The interim clinical response data showed that one out of the first six patients had a complete response. Importantly, despite prior treatment with the checkpoint inhibitors Yervoy and Keytruda, this patient's disease had progressed before being recruited into the Targovax trial. Examination of samples from this patient confirmed a strong innate immune response, followed by a large increase in tumor infiltrating T-cells (TILs). Most importantly, these TILs displayed an increase in T-cells towards known tumor antigen MAGE-A1. These observations confirm that the combination of ONCOS-102 and Keytruda can induce immune responses in treatment refractory patients, with an associated clinical benefit.

In addition, further analysis of 4 of the 6 patients showed that:

- It was possible to induce a strong innate immune response in 3 of these 4 previously CPI refractory patients (one being the complete responder)
- Substantial T-cell penetration was seen in 2 of these 4 previously CPI refractory patients compared to baseline (one being the complete responder)
- In 1 of the 2 patients displaying substantially increased TILs, it was possible to identify TILs in a non-injected lesion, confirming that the immune activation initiated at the injection site was able to cause TIL activity in a distal lesion.

These observations are consistent with the projected mechanism of action of the ONCOS-102/Keytruda combination treatment. These results suggested that patients might benefit from more injections of Targovax's oncolytic virus. Therefore, a second dose cohort of twelve additional patients who will receive twelve, rather than three ONCOS-102 injections, has been initiated. This also means that the first dosing cohort of the trial has been closed, with a total of nine patients enrolled.

To learn more about ONCOS-102's mechanism of action, watch our latest video which is available either by clicking on the image to the right or via our website.



## TG01 in pancreatic cancer

In May 2018, Targovax reported encouraging median overall survival (mOS) of 33.4 months for the full 32 patients included in the phase I/II trial TG01, in combination with gemcitabine in resected adenocarcinoma of the pancreas. Within the study, the first cohort consisted of 19 patients, receiving TG01 injections, before, during and after adjuvant chemotherapy treatment, whilst the second cohort of 13 patients received TG01 injections before and after adjuvant chemotherapy. It is notable that the second cohort had not yet reached mOS. Earlier, Targovax has reported data form the first patient cohort showing 2-year survival rate of 68% (13/19 patients) and mOS of 33.1 months, as well as 2-year survival rate of 77% (10/13 patients) in the second patient cohort.

The expanded data set for the trial, reported in October 2018, showed improved median disease-free survival (DFS) compared to historical controls of gemcitabine monotherapy. The median DFS for all 32 patients was 16.1 months. The first cohort had a median DFS of 13.9 months and the second cohort with an optimized dosing regimen had a median DFS of 19.5 months.

Targovax is encouraged to see an excellent safety profile of TG01 in resected pancreas, over 90% immune activation and signal of efficacy compared to historical control.

Following these results, Targovax has had incoming interest from collaborative cancer networks to participate in further trials, each of which is likely to be a combination trial. The Group is pursuing these opportunities actively. Additionally, following the encouraging TG01 results, Targovax is currently planning to conduct a further proof-of-concept trial in combination with PD-1/L1 blockade in a suitable patient population. In addition, pre-clinical studies are being run to characterize the mechanism of action and the postulated synergy in combination with CPIs.

## TG02 in colorectal cancer

TG02 is the second-generation pipeline candidate from the TG mutRAS (mutated RAS) neoantigen vaccine platform, which is currently being tested in colorectal cancer with assessment of safety and immune markers.

Early exploratory clinical results indicate that TG02 induces immune responses in patients including evidence of activated tumor-infiltrating T-cells. In addition, PD-1 expression was observed in both circulating and tumor-infiltrating T-cells. This further strengthens the rationale for combining TG02 with a PD-1 checkpoint inhibitor. Based on these initial safety and immune activation findings, the Group and investigators have decided to move the trial into the second cohort in which TG02 will be combined with the checkpoint inhibitor Keytruda.

## Clinical trials with collaboration partners

Through our ongoing collaborations with Cancer Research Institute, Ludwig Cancer Research and Astra Zeneca in peritoneal disease, and Sotio in prostate cancer, Targovax leverages its own clinical development expertise with access to leading external networks. In these collaboration trials, Targovax has retained all commercial rights to its products.

In March 2019, Targovax announced that it has entered into an agreement with The Parker Institute for Cancer Immunotherapy (PICI) and the Cancer Research Institute (CRI) for a research collaboration with Targovax's TG mutant RAS vaccine (TG). Under the agreement, PICI, CRI and Targovax plan to set up one or more clinical trials with TG, in combination with other immuno-oncology treatments and chemotherapy, in pancreatic cancer. PICI will be the sponsor and responsible for running the clinical trials and Targovax will be responsible for TG supply. Targovax may also contribute by partial cost sharing of the trial(s). The design of the first clinical trial is currently under discussion, and the aim is to start treating patients within 12 months.

Furthermore, in March, Targovax announced that it has granted a freedom-to-operate (FTO) license to Zelluna Immunotherapy for the development of mutant RAS T-cell receptor (mutRAS TCRs) therapies. Through the development of the TG neoantigen vaccine program, Targovax has established a significant patent portfolio and know-how in therapies targeting mutant RAS cancers. In addition to covering the TG vaccine program, these patents and know-how are also highly relevant in T-cell therapy. Under the license agreement, Zelluna has been granted a global, non-exclusive license to relevant Targovax patents and know-how, for which Targovax will be compensated financially. The potential deal value amounts to NOK 100 million in milestones and annual fees, in addition to royalties on sales and sub-licensing revenues.

## Preclinical development

Targovax has conducted *in vivo* studies of ONCOS-102 in mesothelioma and melanoma mouse models to validate the scientific rationale for the clinical combination strategies in these indications. Data were published in leading, peer reviewed publications, the Journal of Medical Virology and Cancer Gene Therapy.

In an immunodeficient mesothelioma mouse model, it was shown that ONCOS-102 acts synergistically to reduce tumor volume with the chemotherapy combination of pemetrexed and cisplatin (Pem/Cis), which is the current standard of care in malignant pleural mesothelioma. We have also demonstrated that ONCOS-102 induced CD8+ T-cells specific to the tumor associated antigen (TAA) mesothelin, which is typically overexpressed in mesothelioma, as well as many other forms of cancer (Kuryk et al, 2018, JMV).

- Pem/Cis alone did not reduce tumor volume
- ONCOS-102 alone reduced tumor volume by 56%
- ONCOS-102 + Pem/Cis reduced tumor volume by 75% relative to Pem/Cis alone and by 33% relative to ONCOS-102 alone
- ONCOS-102 induced a mesothelin specific T-cell response (ELISPOT analysis)

The efficacy of the combination of ONCOS-102 and PD-1 checkpoint inhibition (Keytruda, two different doses) has been assessed in a humanized melanoma mouse model, which showed a synergistic anti-tumor effect of ONCOS-102 and PD-1 blockade:

- Keytruda alone at both doses did not reduce tumor volume
- ONCOS-102 reduced tumor volume by 51%
- ONCOS-102 + Keytruda reduced volume by 61% (lower dose) and 69 % (higher dose)

These *in vivo* data demonstrate the efficacy of ONCOS-102 as a single agent, as well as the potential to act synergistically with both chemotherapy and checkpoint blockade, and thus underpin the scientific rationale for the ongoing mesothelioma and melanoma clinical trials.

### Next generation ONCOS viruses

The ONCOS platform is based on a versatile double-stranded DNA adenovirus serotype 5 backbone. The core construct includes two genetic modifications to enhance cancer specificity:

1. A 24bp deletion in the E1A region to ensure selective replication in actively dividing cells
2. Replacement of the serotype 5 to a serotype 3 fiber knob; this leads the virus to primarily infect via the DSG2 and CD46 receptors, which are typically upregulated on cancer cells

In addition, the ONCOS backbone can carry transgenes that can be delivered to tumors by local expression in infected host cells. The transgene inserted into Targovax lead clinical product ONCOS-102 is GM-CSF, which stimulates tumor antigen processing by antigen presenting cells (APCs). In the second generation ONCOS viruses, Targovax has been able to increase the DNA payload capacity of the backbone to include two transgenes. Three new ONCOS viruses with double transgenes have been cloned and are now being pre-clinically validated. Patent applications for the first novel construct were filed in April 2019. The transgenes of these new ONCOS viruses were selected based on particular target modes of action:

ONCOS-211
- Mode of action: Counteract an immune-suppressive tumor microenvironment
- Possible Target indications: Tumors with highly immune suppressive microenvironments rendering available immunotherapies ineffective (such as pancreatic or prostate cancer)

ONCOS-212
- Mode of action: Inhibition of tumor growth, metastases and vascularization
- Possible Target indications: Tumors that are particularly tissue invasive (such as colorectal or bladder cancer)

ONCOS-214
- Mode of action: Enhanced cell killing properties
- Possible Target indications: Tumors with particularly rapid growth rates or of larger size requiring more powerful oncolytic potency (such as breast cancer or small-cell lung cancer)

Our aim during the remainder of 2019 is to develop preclinical data and later select one or more candidates to subsequently bring forward into clinical testing in patients.

## IPR / Market protection

Targovax owns a broad patent portfolio which is designed to protect its pipeline and includes different families of patents and patent applications covering product candidates in development, and relevant combination therapies. This patent portfolio also covers potential future product candidates. The Company continuously works to strengthen its patent portfolio.

The Company has attained Orphan Drug Designation (ODD) in the EU and US for the use of ONCOS-102 in mesothelioma, ovarian cancer, and soft tissue sarcoma, ensuring up to 10 years of market protection from the date of market approval in any of these indications. The use of TG01 in pancreatic cancer has been granted ODD in the EU and US ensuring up to 10 years of market protection from the date of market approval for this indication.

In November 2016, Targovax was granted a European patent for ONCOS-102, following the award of a similar US patent in June 2016. These patents expire in 2029.

In September 2017, Targovax was granted a US patent for its mutRAS neoantigen platform that protects the therapeutic cancer vaccine candidates TG01 and TG02 for the treatment of cancer in combination with anti-metabolite chemotherapy. This patent expires in 2035.

US and European patents were granted in October 2017 and June 2018 respectively that protect Targovax's mutRAS specific neoantigen vaccine candidate TG02 as a composition of matter to stimulate the immune system of cancer patients with RAS-mutated tumors. These patents expire in 2034 and 2033, respectively.

In January 2019, Targovax announced that the European Patent Office has granted a European Patent which protects Targovax's mutant-RAS specific neoantigen peptides, mutant RAS specific T-cells and vaccines TG01 and TG02, for the treatment of cancer in combination with chemotherapies. This extends IP protection of TG01 and TG02 into 2034.

In March 2019, Targovax announced that the Company had been granted Notice of Allowance for the US on patent covering the TG mutant-RAS neoantigen vaccine platform.

# Experienced team

Targovax has an experienced senior management team with a strong range of backgrounds from successful biotech and global pharmaceutical companies, as well as extensive experience from management consulting.

## Management team

As per 8 May 2019

| Name | Position |
|---|---|
| Øystein Soug | CEO |
| Magnus Jäderberg | CMO |
| Torbjørn Furuseth | CFO |
| Erik Digman Wiklund | CBO |
| Anne-Kirsti Aksnes | VP Clinical |
| Berit Iversen | VP CMC |

## Board of Directors

As per 8 May 2019

The Board of Directors consists of seasoned professionals with a broad range of complementary competencies:

From left: Catherine A. Wheeler, Johan Christenson, Robert Burns, Patrick Vink, Bente-Lill Romøren, Per Samuelsson, Diane Mellett and Eva-Lotta Allan.

# Financial review

In March 2019, Targovax announced that a Private Placement had been successfully completed, raising gross proceeds of approximately NOK 74 million (USD 9 million), net proceeds of approximately NOK 67 million (USD 8 million), through the allocation of 10,521,973 new shares (the “New Shares”) at a subscription price of NOK 7.0 per share. The Private Placement took place through an accelerated book building process after close of market on 21 March 2019 and the proceeds from the Private Placement were received in April 2019. The Private Placement attracted strong interest from existing shareholders and new institutional investors, both in Norway and the US.

## Results first quarter 2019

In the first quarter 2019 and 2018 Targovax had no core business revenue.

Operating expenses amounted to NOK 40m (NOK 34m) in the first quarter. The operating expenses are reported net of governmental grants which amounted to NOK 1m in the period (NOK 1m). The net loss amounted to NOK 41m in the first quarter 2019 (NOK 35m).

## Financial position and cash flow

Cash and cash equivalents were NOK 105m at the end of the first quarter 2019 compared to NOK 151m at the end of 2018 and NOK 229m at the end of first quarter 2018.

Net cash flow from operating activities during the first quarter 2019 was negative by NOK 45m compared to negative NOK 32m in the first quarter 2018 and NOK 25m in fourth quarter 2018.

By the end of the period, total outstanding interest-bearing debt amounted to EUR 6m, all to Business Finland. The Finnish trade promotion organization and the Finnish Funding Agency for Technology and Innovation (TEKES) united as Business Finland in 2018.

# Share information

In July 2016, Targovax shares were listed on the Oslo Axess exchange under the ticker TRVX. In March 2017 Targovax moved its share listing from Oslo Axess to Oslo Børs, the main board at the Oslo Stock Exchange. By 22 April 2019, there were 63,138,421 shares outstanding, distributed between 4,392 shareholders. The 20 largest shareholders-controlled 48.8% of the shares.

During Q1 2019, Targovax shares traded in the NOK 6.75 – 11.04 range. During the quarter, some 32.8 million shares were traded, with an aggregate trading value of NOK 257million.

The closing price on 31 March 2019 was NOK 6.75 per share, corresponding to a market value of NOK 426 million.

## The estimated share ownership situation on 22 April 2019:

| | Estimated | |
|---|---|---|
| Shareholder | Shares million | Ownership |
| HealthCap | 12,4 | 19,6 % |
| RadForsk | 4,4 | 7,0 % |
| Nordea | 4,2 | 6,7 % |
| KLP | 1,5 | 2,4 % |
| Thorendahl Invest | 1,4 | 2,1 % |
| Danske Bank (nom.) | 0,8 | 1,3 % |
| Prieta | 0,7 | 1,1 % |
| Citibank (nom.) | 0,7 | 1,1 % |
| Timmuno | 0,7 | 1,1 % |
| Sundt AS | 0,7 | 1,0 % |
| **10 largest shareholders** | **27.5** | **43.5 %** |
| Other shareholders (4 382)) | 35.6 | 56.5% |
| **Total shareholders** | **63.1** | **100.0 %** |

## Subsequent events

In May, Targovax announced the completion of enrollment of ONCOS-102 trial in mesothelioma. Randomized data are expected around New Year.

## Risks and uncertainties

The Company's business is exposed to a number of general operational and financial risks which have been explained in Targovax's annual report 2018 as well as in the recent prospectus, both available at www.targovax.com.

## Outlook

There is much excitement in the industry for the potential of oncolytic viruses and with our ONCOS platform we have the opportunity to become a key player in this market. We keep in frequent contact with a number of pharmaceutical and biotech companies regarding, inter alia, collaborations on trials and supply of combination products. We have four ongoing clinical trials for our ONCOS-102 program, which delivered encouraging data during the year and we expect several meaningful data read-outs over the next 12-18 months.

With the Parker Institute for Cancer Immunotherapy and Cancer Research Institute agreement, we are executing our strategy of taking the TG mutant RAS vaccine program forward through partnerships with external networks. In this collaboration, we will be working with the world's leading network of immunotherapy experts and participate in a highly innovative trial in a combination format in metastatic pancreatic cancer running at some of the world leading hospitals in the US. We believe this puts TG on the map as a promising new therapy for mutant RAS cancers, and may open up a range of new opportunities for the program going forward.

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Oslo, 8 May 2019

**The Board of Directors of Targovax ASA**

**Patrick Vink**
Chairperson of the Board

**Per Samuelsson**
Board Member

**Bente-Lill Romøren**
Board Member

**Catherine A. Wheeler**
Board Member

**Johan Christenson**
Board Member

**Robert Burns**
Board Member

**Eva-Lotta Allan**
Board Member

**Diane Mellett**
Board Member

**Øystein Soug**
CEO

# First quarter results 2019

# Condensed consolidated statement of profit and loss

| *Amounts in NOK thousands except per share data* | *Note* | Unaudited 1Q 2019 | Unaudited 1Q 2018 | FY 2018 |
|---|---|---|---|---|
| Other revenues | | 6 | 6 | 27 |
| **Total revenue** | | **6** | **6** | **27** |
| | | | | |
| External R&D expenses | *3,4* | -19 412 | -11 213 | -64 006 |
| Payroll and related expenses | *5,11* | -13 618 | -15 667 | -56 433 |
| Other operating expenses | *3,4* | -6 601 | -6 638 | -25 688 |
| **Total operating expenses** | | **-39 631** | **-33 518** | **-146 127** |
| | | | | |
| **Operating profit/ loss (-)** | | **-39 626** | **-33 512** | **-146 100** |
| | | | | |
| Finance income | | 484 | 552 | 3 068 |
| Finance expense | | -1 957 | -1 837 | -4 317 |
| **Net finance income/ expense (-)** | | **-1 473** | **-1 285** | **-1 249** |
| | | | | |
| **Loss before income tax** | | **-41 099** | **-34 797** | **-147 349** |
| | | | | |
| Income tax income/ expense (-) | | 82 | 83 | 334 |
| **Loss for the period** | | **-41 017** | **-34 714** | **-147 015** |
| | | | | |
| **Earnings/ loss (-) per share** | | | | |
| Basic and dilutive earnings/loss (-) per share | *10* | -0.77 | -0.66 | -2.79 |

# Consolidated statement of other comprehensive income/ loss (-), net of income tax

| *Amounts in NOK thousands except per share data* | Unaudited 1Q 2019 | Unaudited 1Q 2018 | FY 2018 |
|---|---|---|---|
| Income/ loss (-) for the period | -41 017 | -34 714 | -147 015 |
| Items that may be reclassified to profit or loss: | | | |
| Exchange differences arising from the translation of foreign operations | -7 050 | -5 665 | 2 620 |
| **Total comprehensive income/ loss (-) for the period** | **-48 067** | **-40 379** | **-144 395** |

# Condensed consolidated statement of financial position

| *Amounts in NOK thousands* | *Note* | Unaudited 31.03.2019 | Unaudited 31.03.2018 | 31.12.2018 |
|---|---|---|---|---|
| **ASSETS** | | | | |
| Intangible assets | *6* | 359 468 | 358 873 | 370 240 |
| Property, plant, and equipment | | 795 | 1 075 | 889 |
| Right-of-use asset | | 5 944 | - | - |
| **Total non-current assets** | | **366 208** | **359 948** | **371 128** |
| Receivables | | 91 477 | 14 399 | 15 320 |
| Cash and cash equivalents | | 104 919 | 229 188 | 151 189 |
| **Total current assets** | | **196 396** | **243 587** | **166 509** |
| **TOTAL ASSETS** | | **562 604** | **603 535** | **537 637** |

| *Amounts in NOK* | *Note* | Unaudited 31.03.2019 | Unaudited 31.03.2018 | 31.12.2018 |
|---|---|---|---|---|
| **EQUITY AND LIABILITIES** | | | | |
| **Shareholders' equity** | | | | |
| Share capital | *9* | 6 314 | 5 261 | 5 262 |
| Share premium reserve | | 886 966 | 821 161 | 821 131 |
| Other reserves | | 43 952 | 33 437 | 41 239 |
| Retained earnings | | -563 477 | -410 181 | -522 481 |
| Translation differences | | 22 475 | 21 261 | 29 546 |
| **Total equity** | | **396 230** | **470 940** | **374 696** |
| **Non-current liabilities** | | | | |
| Interest-bearing liabilities | *7* | 43 289 | 48 697 | 43 933 |
| Deferred tax | | 57 876 | 58 114 | 59 632 |
| Lease liabilities | | 2 240 | - | - |
| **Total non-current liabilities** | | **103 406** | **106 811** | **103 565** |
| **Current liabilities** | | | | |
| Interest-bearing liabilities | *7* | 9 127 | - | 9 127 |
| Short-term lease liabilities | | 3 762 | - | - |
| Accounts payable and other current liabilities | | 12 525 | 4 812 | 12 372 |
| Accrued public charges | | 2 229 | 1 708 | 3 370 |
| Other short-term liabilities | | 35 325 | 19 263 | 34 508 |
| **Total current liabilities** | | **62 968** | **25 784** | **59 377** |
| **TOTAL EQUITY AND LIABILITY** | | **562 604** | **603 535** | **537 637** |

# Condensed consolidated statement of changes in equity

| *Amounts in NOK thousands* | *Note* | Share capital | Share premium | Other reserves | Translation differences | Retained earnings (Accumulated losses) | Total equity |
|---|---|---|---|---|---|---|---|
| **Balance at 31 December 2017** | | **5 261** | **821 161** | **29 276** | **-46** | **-288 235** | **567 416** |
| Loss for the period | | - | - | - | - | -34 714 | -34 714 |
| Exchange differences arising from the translation of foreign operations | | - | - | - | -5 665 | - | -5 665 |
| Other comprehensive income/loss, net of tax | | - | - | - | - | - | - |
| **Total comprehensive income for the period** | | **-** | **-** | **-** | **-5 665** | **-34 714** | **-40 379** |
| Recognition of share-based payments & RSU's | *11* | - | - | 4 161 | - | - | 4 161 |
| **Balance at 31 March 2018** | | **5 261** | **821 161** | **33 437** | **21 261** | **-410 181** | **470 940** |
| Loss for the period | | - | - | - | - | -112 300 | -147 015 |
| Exchange differences arising from the translation of foreign operations | | - | - | - | 8 285 | - | 2 620 |
| Other comprehensive income/loss, net of tax | | - | - | - | - | - | - |
| **Total comprehensive income for the period** | | **-** | **-** | **-** | **2 620** | **-147 015** | **-144 395** |
| Share issuance, employee share options & RSU’s | *9* | 1 | -30 | - | - | - | -30 |
| Recognition of share-based payments & RSU's | *11* | - | - | 7 802 | - | - | 11 963 |
| **Balance at 31 December 2018** | | **5 262** | **821 131** | **41 239** | **29 546** | **-522 481** | **374 696** |
| Loss for the period | | - | - | - | - | -41 017 | -41 017 |
| Exchange differences arising from the translation of foreign operations | | - | - | - | -7 050 | - | -7 050 |
| Other comprehensive income/loss, net of tax | | - | - | - | - | - | - |
| **Total comprehensive income for the period** | | | | | **-7 050** | **-41 017** | **-48 067** |
| Issue of ordinary shares - Capital increase - Private Placement | *9* | 1 052 | 72 602 | - | - | - | 73 654 |
| Transaction costs - Private Placement | | - | -6 766 | - | - | - | -6 766 |
| Share issuance, employee share options & RSU’s | *9* | - | - | - | - | - | |
| Recognition of share-based payments & RSU's | *11* | - | - | 2 713 | - | - | 2 713 |
| **Balance at 31 March 2019** | | **6 314** | **886 966** | **43 952** | **22 496** | **-563 498** | **396 230** |

# Condensed consolidated statement of cash flow

| *Amounts in NOK thousands* | *Note* | Unaudited 1Q 2019 | Unaudited 1Q 2018 | FY 2018 |
|---|---|---|---|---|
| **Cash flow from operating activities** | | | | |
| Loss before income tax | | -41 099 | -34 797 | -147 349 |
| *Adjustments for:* | | | | |
| Finance income | | -484 | -552 | -3 068 |
| Finance expense | | 1 957 | 1 837 | 4 317 |
| Interest received | | 484 | 5 | 1 554 |
| Other finance expense | | -52 | -19 | -88 |
| Share option & RSU expense | *11* | 2 713 | 4 161 | 11 963 |
| Depreciation | | 1 033 | 76 | 308 |
| Proceeds from the Private Placement not received | | 73 654 | | |
| Change in receivables | | -76 156 | 222 | -700 |
| Change in other current liabilities | | -6 595 | -2 462 | 21 496 |
| **Net cash flow from/(used in) operating activities** | | **-44 545** | **-31 528** | **-111 568** |
| **Cash flow from investing activities** | | | | |
| Purchases of property, plant, and equipment (PPE) | | | | |
| **Net cash received from/(paid in) investing activities** | | **-** | **-** | **-** |
| **Cash flow from financing activities** | | | | |
| Interest paid | *7* | -222 | -220 | -607 |
| Repayment of lease liabilities | | -1 028 | | |
| Share issue expense - Private Placement | | -142 | | |
| Proceeds from exercise of options & RSU's | | | | -30 |
| **Net cash generated from financing activities** | | **-1 392** | **-220** | **-637** |
| **Net increase/(decrease) in cash and cash equivalents** | | **-45 937** | **-31 748** | **-112 204** |
| Net exchange gain/loss on cash and cash equivalents | | -332 | -637 | 1 820 |
| **Cash and cash equivalents at beginning of period** | | **151 189** | **261 573** | **261 573** |
| **Cash and cash equivalents at end of period** | | **104 919** | **229 188** | **151 189** |

# Notes

## 1. General information

Targovax ASA ("the Company") and its subsidiaries (together the Group) is a clinical stage immuno-oncology company dedicated to the development of targeted immunotherapy treatments for cancer patients.

The Group is targeting complementary approaches to cancer immunotherapy: a cancer vaccine platform developed for patients with RAS-mutated cancers and an immunotherapy platform based on engineered oncolytic viruses armed with potent immune-stimulating transgenes for patients with solid tumors. Both treatment approaches harness the patient's own immune system to fight cancer.

The Company is a limited public liability company incorporated and domiciled in Norway and listed on the Oslo Stock Exchange in Norway. The address of the registered office is Lilleakerveien 2C, 0283 Oslo, Norway.

The condensed interim financial information is unaudited. These financial statements were approved for issue by the Board of Directors on 8 May 2019.

## 2. Accounting principles

The interim condensed consolidated financial statements for the Group are prepared using the same accounting principles and calculation methods as used for the statutory, annual financial statements 2018 for Targovax ASA.

The accounting principles used have been consistently applied in all periods presented, unless otherwise stated.

Amounts are in thousand Norwegian kroner unless stated otherwise. The Groups presentation currency is NOK (Norwegian kroner). This is also the parent company's functional currency.

### 2.1 Basis of preparation

The quarterly financial statements of the Group have been prepared in accordance with IAS 34 Interim Financial Reporting, as adopted by the EU.

### 2.2 Standards and interpretations in issue but not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for 31 March 2019 reporting period and have not been early adopted by the Group. These new standards and interpretations is assessed to be of no material impact for the Group in 2019.

### 2.3 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries. As at 31 March 2019, Targovax OY, located in Helsinki, Finland, and Targovax Solutions LLC, located in Delaware, USA are 100% owned and controlled subsidiaries.

### 2.4 Going concern

As a result of the Private Placement in the first quarter 2019 and the current liquidity situation, Targovax's Directors expect that the Group has available financial resources sufficient for all planned activities in the next twelve months as of 31 March 2019. The Group therefore continues to adopt the going concern basis in preparing its consolidated financial statements.

## 3. Research and development expenses

The Group is developing new products. Uncertainties related to the regulatory approval process and results from ongoing clinical trials generally indicate that the criteria for asset recognition is not met until the time when marketing authorization is obtained from relevant regulatory authorities.

**The following research and development expenditures have been expensed:**

| | 1Q 2019 | | 1Q 2018 | | FY 2018 | |
|---|---|---|---|---|---|---|
| *Amounts in NOK thousands* | Total | of which R&D | Total | of which R&D | Total | of which R&D |
| External R&D expenses | 19 412 | 19 412 | 11 213 | 11 213 | 64 006 | 64 006 |
| Payroll and related expenses | 13 618 | 6 907 | 15 667 | 8 099 | 56 433 | 30 210 |
| Other operating expenses | 6 601 | 106 | 6 638 | 223 | 25 688 | 941 |
| **Total operating expenses** | **39 631** | **26 426** | **33 518** | **19 535** | **146 127** | **95 157** |

The model for calculation of the R&D share of Payroll and related expenses was changed during fourth quarter 2018. This results in changes in the R&D share of Payroll and related expenses for comparative periods throughout the year 2018.

## 4. Government grants

Government grants have been recognized in profit or loss as a reduction of the related expense with the following amounts:

| *Amounts in NOK thousands* | 1Q 2019 | 1Q 2018 | FY 2018 |
|---|---|---|---|
| External R&D expenses | 1 103 | 589 | 4 077 |
| Payroll and related expenses | 216 | 361 | 1 105 |
| Other operating expenses | 11 | 21 | 80 |
| **Total grants** | **1 331** | **971** | **5 263** |

R&D projects have been approved for SkatteFUNN through 2019 and 2020. For the first quarter 2019, the Group has recognized NOK 1.3m as cost reduction in External R&D expenses, Payroll and related expenses and Other operating expenses.

See note 8 Government grants in the Annual Report 2018 for more information about grants.

## 5. Payroll and related expenses

Total payroll and related expenses for the Group are:

| *Amounts in NOK thousands* | 1Q 2019 | 1Q 2018 | FY 2018 |
|---|---|---|---|
| Salaries and bonus | 9 002 | 10 055 | 37 547 |
| Employer's national insurance contributions | 1 117 | 1 190 | 4 723 |
| Share-based compensation [1)] | 2 714 | 4 161 | 11 963 |
| Pension expenses – defined contribution plan | 477 | 479 | 2 028 |
| Other | 524 | 142 | 1 279 |
| Governmental grants | -216 | -361 | -1 105 |
| **Total payroll and related expenses** | **13 618** | **15 667** | **56 433** |
| 1) Share-based compensation has no cash effect. | | | |
| Number of employees calculated on a full-time basis as at end of period | 24.2 | 27.7 | 25,6 |
| Number of employees as at end of period | 26 | 28 | 26 |

## 6. Intangible assets

As of 31 March 2019, the recognized intangible assets in the Group amounts to NOK 359m. This is a decrease from NOK 370m as of 31 December 2018, due to NOK/EUR foreign exchange fluctuations. The intangible assets are derived from the acquisition of Oncos Therapeutics OY, which was completed in July 2015 and related to the development of ONCOS-102.

Intangible assets are tested for impairment at least annually, or when there are indications of impairment.

The impairment test is based on an approach of discounted cash flows. The valuation is sensitive to several assumptions and uncertainties, and the result from the valuation is thus limited to ensure sufficient certainty for the recognized amount in the financial statement and should not be considered as a complete valuation of the full potential of ONCOS-102.

For more information see Note 15 Intangible assets and impairment test in the 2018 Annual Report.

## 7. Interest bearing debt

Business Finland is a publicly financed funding agency that finances research and development activities for young innovative companies in Finland. The Finnish trade promotion organization and the Finnish Funding Agency for Technology and Innovation (TEKES) united as Business Finland in 2018.

The Group has received three R&D loans, for the commercialization of ONCOS-102 from Business Finland under loan agreements dated September 2010, January 2012 and December 2013, respectively, in the total outstanding amount of EUR 6 316 600 as of 31 March 2019. EUR 917 400 of the total debt is short-term as per 31 March 2019. The Group is applying for an extension of the repayment-free period.

Amortized interests are charged to financial expenses, amounting to NOK 0.9m and NOK 0.9m during the first quarter of 2019 and 2018, NOK 3.6m during full year 2018.

No new Business Finland loans have been awarded during first quarter 2019.

See note 21 Interest-bearing debt in the Annual Report 2018 for more information about the Business Finland loans.

# 8. Fair value of financial instruments

The carrying value of receivables, cash and cash equivalents, borrowings and other short-term payables and accrued liabilities are assessed to approximate fair value.

| | 1Q 2019 | | 1Q 2018 | | FY 2018 | |
|---|---|---|---|---|---|---|
| *Amounts in NOK thousands* | Carrying amounts | Fair value | Carrying amounts | Fair value | Carrying amounts | Fair value |
| Right-of-use assets | 5 944 | 5 944 | - | - | - | - |
| Receivables | 91 477 | 91 477 | 14 399 | 14 399 | 15 320 | 15 320 |
| Cash and cash equivalents | 104 919 | 104 919 | 229 188 | 229 188 | 151 189 | 151 189 |
| **Total financial assets** | **202 340** | **202 340** | **243 587** | **243 587** | **166 509** | **166 509** |
| Interest-bearing borrowings | 52 416 | 52 416 | 48 697 | 48 697 | 53 059 | 53 059 |
| Lease liabilities | 6 002 | 6 002 | - | - | - | - |
| Accounts payable and other current liabilities | 12 525 | 12 525 | 4 812 | 4 812 | 12 372 | 12 372 |
| Accrued public charges | 2 229 | 2 229 | 1 708 | 1 708 | 3 370 | 3 370 |
| Other short-term liabilities | 35 325 | 35 325 | 19 263 | 19 263 | 34 508 | 34 508 |
| **Total financial liabilities** | **108 497** | **108 497** | **74 481** | **74 481** | **103 309** | **103 309** |

**The tables below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:**

- **Level 1:** Quoted prices (unadjusted) in active markets for identical assets or liabilities
- **Level 2:** Inputs other than quoted prices including Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices)
- **Level 3:** Inputs in asset or liability that are not based on observable market data (that is, unobservable inputs)

**As at 31 March 2019:**

| *Amounts in NOK thousands* | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Interest-bearing borrowings | - | - | 52 416 | 52 416 |
| **Total financial instruments at fair value** | **-** | **-** | **52 416** | **52 416** |

**As at 31 March 2018:**

| *Amounts in NOK thousands* | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Interest-bearing borrowings | - | - | 48 697 | 48 697 |
| **Total financial instruments at fair value** | **-** | **-** | **48 697** | **48 697** |

**As at 31 December 2018:**

| *Amounts in NOK thousands* | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Interest-bearing borrowings | - | - | 53 059 | 53 059 |
| **Total financial instruments at fair value** | **-** | **-** | **53 059** | **53 059** |

# 9. Share capital and number of shares

In March 2019, Targovax announced that a Private Placement had been successfully completed, raising gross proceeds of approximately NOK 74 million (USD 9 million) through the allocation of 10,521,973 new shares (the “New Shares”) at a subscription price of NOK 7.0 per share. The Private Placement took place through an accelerated book building process after close of market on 21 March 2019. The Private Placement attracted strong interest from existing shareholders and new institutional investors, both in Norway and the US. The transaction was approved by the General Assembly on 30 April 2019. Proceeds from the Private Placement were received by Targovax after end of 1Q 2019.

Share capital as at 31 March 2019 is 6 313 842.1 (31 December 2018: 5 261 644.8) comprising 63 138 421 ordinary shares at nominal value NOK 0.10 (31 December 2018: 52 616 448 at NOK 0.10). All shares carry equal voting rights.

**The movement in the number of shares during the period was as follows:**

| *Amounts in NOK thousands* | 1Q 2019 | 1Q 2018 | FY 2018 |
|---|---|---|---|
| Ordinary shares at beginning of period | 52 616 448 | 52 609 867 | 52 609 867 |
| Share issuance - Private Placement | 10 521 973 | - | - |
| Share issuance, employee share options and RSUs | - | - | 6 581 |
| **Ordinary shares at end of period** | **63 138 421** | **52 609 867** | **52 616 448** |

**The 20 largest shareholders are as follows at 31 March 2019:**

| Shareholder | # shares | % |
|---|---|---|
| HealthCap | 12 405 584 | 19.6 % |
| Radiumhospitalets Forskningsstiftelse | 4 427 255 | 7.0 % |
| VPF Nordea Kapital | 1 538 448 | 2.4 % |
| Nordnet Bank AB | 1 441 749 | 2.3 % |
| VPF Nordea Avkastning | 1 344 274 | 2.1 % |
| Nordnet Livsforsikring AS | 1 270 799 | 2.0 % |
| Thorendahl Invest AS | 1 200 000 | 1.9 % |
| Merrill Lynch, Pierce, Fenner & Smith Incorporated | 1 078 750 | 1.7 % |
| Citibank N.A. | 1 043 678 | 1.7 % |
| Verdipapirfondet KLP AksjeNorge | 846 275 | 1.3 % |
| Danske Bank AS | 841 741 | 1.3 % |
| Prieta AS | 720 000 | 1.1 % |
| Verdipapirfondet Nordea Norge Plus | 686 203 | 1.1 % |
| Nordea 1 SICAV | 670 000 | 1.1 % |
| Timmuno AS | 661 580 | 1.0 % |
| Sundt AS | 650 000 | 1.0 % |
| Kommunal Landspensjonskasse | 645 464 | 1.0 % |
| MP Pensjon PK | 564 286 | 0.9 % |
| Nomura International Plc | 513 365 | 0.8 % |
| Merrill Lynch Professional Clearing Corporation | 498 397 | 0.8 % |
| **20 largest shareholders** | **33 047 848** | **52.3 %** |
| Other shareholders (4 469) | 30 090 573 | 47.7 % |
| **Total shareholders** | **63 138 421** | **100.0 %** |

## Shareholdings Key Management

The following table provides the total number of shares owned by the key management of the Group and member of the Board of Directors, including close associates, as of 31 March 2019:

| Name | Position | No. of shares outstanding at 31 March 2019 |
|---|---|---|
| **Key management:** | | |
| Øystein Soug[1)] | Chief Executive Officer | 190 000 |
| Berit Iversen | VP, CMC | 20 087 |
| Magnus Jäderberg | Chief Medical Officer | 20 000 |
| Anne-Kirsti Aksnes | VP, Clinical Development | 12 000 |
| **Total no. of shares owned by key management of the Group** | | **242 087** |
| **Board of directors:** | | |
| Robert Burns | Board member | 64 928 |
| **Total no. of shares owned by the Board of Directors of the Group** | | **64 928** |

1) The shares are held through Abakus Invest AS.

Other holdings of shares in the company related to the Board of Directors:

Johan Christenson and Per Samuelsson, both Members of the Board, are partners at HealthCap

# 10. Earnings per share

| *Amounts in NOK thousand* | 1Q 2019 | 1Q 2018 | FY 2018 |
|---|---|---|---|
| Loss for the period | -41 017 | -34 714 | -147 015 |
| Average number of outstanding shares during the period | 52 967 | 52 610 | 52 612 |
| **Earnings/ loss (-) per share - basic and diluted** | **-0.77** | **-0.66** | **-2.79** |

Share options issued have a potential dilutive effect on earnings per share. No dilutive effect has been recognized as potential ordinary shares only shall be treated as dilutive if their conversion to ordinary shares would decrease earnings per share or increase loss per share from continuing operations. As the Group is currently loss-making, an increase in the average number of shares would have anti-dilutive effects.

# 11. Share-based compensation

## Share options

The Group operates an equity-settled, share-based compensation plan, under which the entity receives services from employees as consideration for equity instruments (options) in Targovax ASA.

At the Annual General Meeting in April 2018 the Board was authorized to increase the Group's share capital in connection with share incentive arrangements by up to 10% of the Share capital.

On the basis of the approval by the Annual General Meeting the Board has resolved to issue new options to employees of the Company. In first quarter of 2019 a total of 600 000 options for shares in the Company have been distributed amongst the current members of the key management and a total of 349 000 options for shares in the Company have been distributed amongst other employees. Each option, when exercised, will give the right to acquire one share in the Company. The options are granted without consideration.

Pursuant to the general vesting schedule, 25% of the options will vest 12 months after the day of grant (as long as the option holder is still employed). Thereafter, 1/36 of the remaining options will vest each month (as long as the option holder is still employed), with the first 1/36 vesting 13 months after the day of grant. The exercise price is equal to the volume weighted average trading price of the shares of the Company on Oslo Stock Exchange on the date of the grant. Options that have not been exercised will lapse 7 years after the date of grant.

The amount of expensed share options in first quarter 2019 and 2018 was NOK 2.4m and NOK 3.8m, NOK 10.6m for the full year 2018.

Fair value of the options has been calculated at grant date. The fair value of the options was calculated using the Black-Scholes model. The expected volatility for options issued in 2019 is estimated at average of 71.62%, based on the volatility of comparable listed companies. The volume weighted average interest rate applied to the share options grants in 2019 is 1.18%.

**The following table shows the changes in outstanding options in 2019 and 2018:**

| | 1Q 2019 | | FY 2018 | |
|---|---|---|---|---|
| | No. of options | Weighted avg.exercise price (NOK) | No. of options | Weighted avg.exercise price (NOK) |
| Outstanding at 1 January | 4 252 304 | 19.61 | 3 466 634 | 21.06 |
| Granted during the period | 949 000 | 7.74 | 1 429 000 | 15.95 |
| Exercised during the period | - | - | - | - |
| Forfeited during the period | - | - | -449 582 | 17.83 |
| Expired during the period | - | - | -193 748 | 22.63 |
| **Outstanding no. of options at end of period** | **5 201 304** | **17.45** | **4 252 304** | **19.61** |

**The following table shows the exercised, granted and outstanding options for shares to Key Management of the Group at 31 March 2019:**

| | | Share Options | | | |
|---|---|---|---|---|---|
| Name | Position | Granted 1Q 2019 | Outstanding 31.03.2019 | Granted FY 2018 | Outstanding 31.12.2018 |
| **Key management:** | | | | | |
| Øystein Soug | Chief Executive Officer | 150 000 | 1 160 000 | 220 000 | 1 010 000 |
| Magnus Jäderberg | Chief Medical Officer | 80 000 | 840 000 | 100 000 | 760 000 |
| Anne Kirsti Aksnes | VP, Clinical Development | 70 000 | 423 000 | 70 000 | 353 000 |
| Erik Digman Wiklund | Chief Business Officer | 130 000 | 430 000 | 150 000 | 300 000 |
| Torbjørn Furuseth | Chief Financial Officer | 100 000 | 300 000 | 200 000 | 200 000 |
| Berit Iversen | VP, CMC | 70 000 | 265 000 | 60 000 | 195 000 |
| **Total option for shares to key management of the Group** | | **600 000** | **3 418 000** | **800 000** | **2 818 000** |
| **Board of directors:** | | | | | |
| Robert Burns | Board member | - | 21 235 | - | 21 235 |
| **Total option for shares to the Board of Directors of the Group** | | **-** | **21 235** | **-** | **21 235** |

From 1 April 2019 to 8 May 2019 no new options for shares have been granted to Key Management.

## Restricted Stock Units

The Board of directors may choose to receive their remuneration, or parts thereof, in the form of restricted stock units (RSUs). If the Board members choose to receive the Board remuneration in RSUs they must choose to either (i) receive 100% of the compensation in RSUs, (ii) receive 1/3 of the compensation in cash and 2/3 in RSUs, or (iii) receive 2/3 of the compensation in cash and 1/3 in RSUs.

The number of RSUs to be granted to the members of the Board of Directors is calculated as the NOK amount of the RSU opted portion of total compensation to the Board member, divided by the market price of the Targovax ASA share. The market price is calculated as the volume weighted average share price the 10 trading days prior to the grant date. The RSUs will be non-transferrable and each RSU will give the right and obligation to acquire shares in Targovax ASA (at nominal value) subject to satisfaction of the applicable vesting conditions. When the RSUs have vested, the participant must during the following three-year period select when to take delivery of the shares.

The total compensation to each member of the Board of Directors for the period between the AGM 2018-2019 have been set out in the minutes from the Annual General Meeting 11 April 2018. The Annual General Meeting 11 April 2018 decided to remunerate the Board of Directors for the period between the AGM 2018 to the AGM 2019 with a combination of cash and Restricted Stock Units (RSUs), hence at the 11 April 2018, additional 87,598 RSU's were granted to the Board of Directors.

The expensed RSUs in first quarter 2019 and 2018 was NOK 0.3m and NOK 0.3m, and 1,4m during full year 2018. A total of 200 428 RSUs was outstanding at 31 March 2019.

The following table shows the exercised, granted and outstanding RSUs to Board of Directors of the Group at 31 March 2019:

| | | RSU's | |
|---|---|---|---|
| Name | Position | Outstanding 31.12.2018 | Outstanding 31.03.2019 |
| **Board of Directors**: | | | |
| Eva-Lotta Allan | Board member | 51 368 | 51 368 |
| Diane Mellett | Board member | 50 198 | 50 198 |
| Patrick Vink | Chairperson of the Board | 44 286 | 44 286 |
| Robert Burns | Board member | 28 199 | 28 199 |
| Bente-Lill Romøren | Board member | 20 328 | 20 328 |
| Catherine A. Wheeler | Board member | 6 049 | 6 049 |
| **Total Restricted Stock Units to Board of Directors of the Group** | | **200 428** | **200 428** |

From 1 April 2019 to 8 May 2019 170 367 RSUs have been granted to Board of Directors, see Note 13 Subsequent events.

# 12. Implementation of IFRS 16 “Leases”

IFRS 16 was issued in January 2016. It will result in almost all leases being recognized on the balance sheet by lessees, as the distinction between operating and finance leases is removed. Under the new standard, an asset (the right to use the leased item) and a financial liability to pay rentals are recognized. The only exceptions are short-term (less than 12 months) and low-value leases.

The Group has applied the standard from its mandatory adoption date of 1 January 2019. The Group has applied the simplified transition approach and will not restate comparative amounts for the year prior to first adoption. Right-of-use assets will be measured at the amount of the lease liability on adoption.

The Group has non-cancellable operating lease commitments of NOK 7.8 million at 1 January 2019. Of these commitments, NOK 0.10 million relate to short-term leases and NOK 0.2 million relate to low value leases which will both be recognized on a straight-line basis as expense in profit or loss.

For the remaining lease commitments, the Group has recognized right-of-use assets of NOK 7.0 million on 1 January 2019 and lease liabilities of NOK 7.0 million.

The Group’s operating profit/loss has increased by NOK 0.1 million and net profit after tax has decreased by NOK 0.1 million for the first quarter 2019 as a result of adopting the new rules.

Operating cash flows has increased, and financing cash flows has decreased by NOK 1.0 million as repayment of the principal portion of the lease liabilities will be classified as cash flows from financing activities.

The impact on the date of initial application is further presented below:

*Amounts in NOK thousands*

| **Reconciliation of lease commitments to lease liabilities** | **01.01.2019** |
|---|---|
| Non-cancellable operating lease commitments at 31 December 2018 | 5 994 |
| + Extension options reasonably certain to be exercised | 1 764 |
| - Practical expedient related to short-term leases | -98 |
| - Practical expedient related to low-value leases | -158 |
| - Discounting using the incremental borrowing rate | -496 |
| **Lease liabilities recognized at initial application** | **7 005** |
| The weighted average incremental borrowing rate applied: | **8**% |
| **Right-of-use assets recognized at initial application** | **7 005** |

Impact of the initial application of IFRS 16:

| *Amounts in NOK thousands* | 01.01.2019 | Effects from IFRS 16 | 31.12.2018 |
|---|---|---|---|
| **ASSETS** | | | |
| Intangible assets | 370 240 | | 370 240 |
| Property, plant, and equipment | 889 | | 889 |
| Right-of-use assets | 7 005 | 7 005 | |
| **Total non-current assets** | **378 134** | **7 005** | **371 128** |
| | | | |
| Receivables | 15 320 | | 15 320 |
| Cash and cash equivalents | 151 189 | | 151 189 |
| **Total current assets** | **166 509** | **-** | **166 509** |
| | | | |
| **TOTAL ASSETS** | **544 643** | **-** | **537 637** |

| *Amounts in NOK thousands* | 01.01.2019 | Effects from IFRS 16 | 31.12.2018 |
|---|---|---|---|
| **EQUITY AND LIABILITIES** | | | |
| **Shareholders' equity** | | | |
| Share capital | 5 262 | | 5 262 |
| Share premium reserve | 821 131 | | 821 131 |
| Other reserves | 41 239 | | 41 239 |
| Retained earnings | -522 481 | | -522 481 |
| Translation differences | 29 546 | | 29 546 |
| **Total equity** | **374 696** | **-** | **374 696** |
| | | | |
| **Non-current liabilities** | | | |
| Interest-bearing liabilities | 43 933 | | 43 933 |
| Deferred tax | 59 632 | | 59 632 |
| Lease liabilities | 7 005 | 7 005 | |
| **Total non-current liabilities** | **110 570** | **7 005** | **103 565** |
| | | | |
| **Current liabilities** | | | |
| Interest-bearing liabilities | 9 127 | | 9 127 |
| Accounts payable and other current liabilities | 12 372 | | 12 372 |
| Accrued public charges | 3 370 | | 3 370 |
| Other short-term liabilities | 34 508 | | 34 508 |
| **Total current liabilities** | **59 377** | **-** | **59 377** |
| | | | |
| **TOTAL EQUITY AND LIABILITIES** | **544 643** | **7 005** | **537 637** |

# 13. Subsequent events

## Post-period highlights

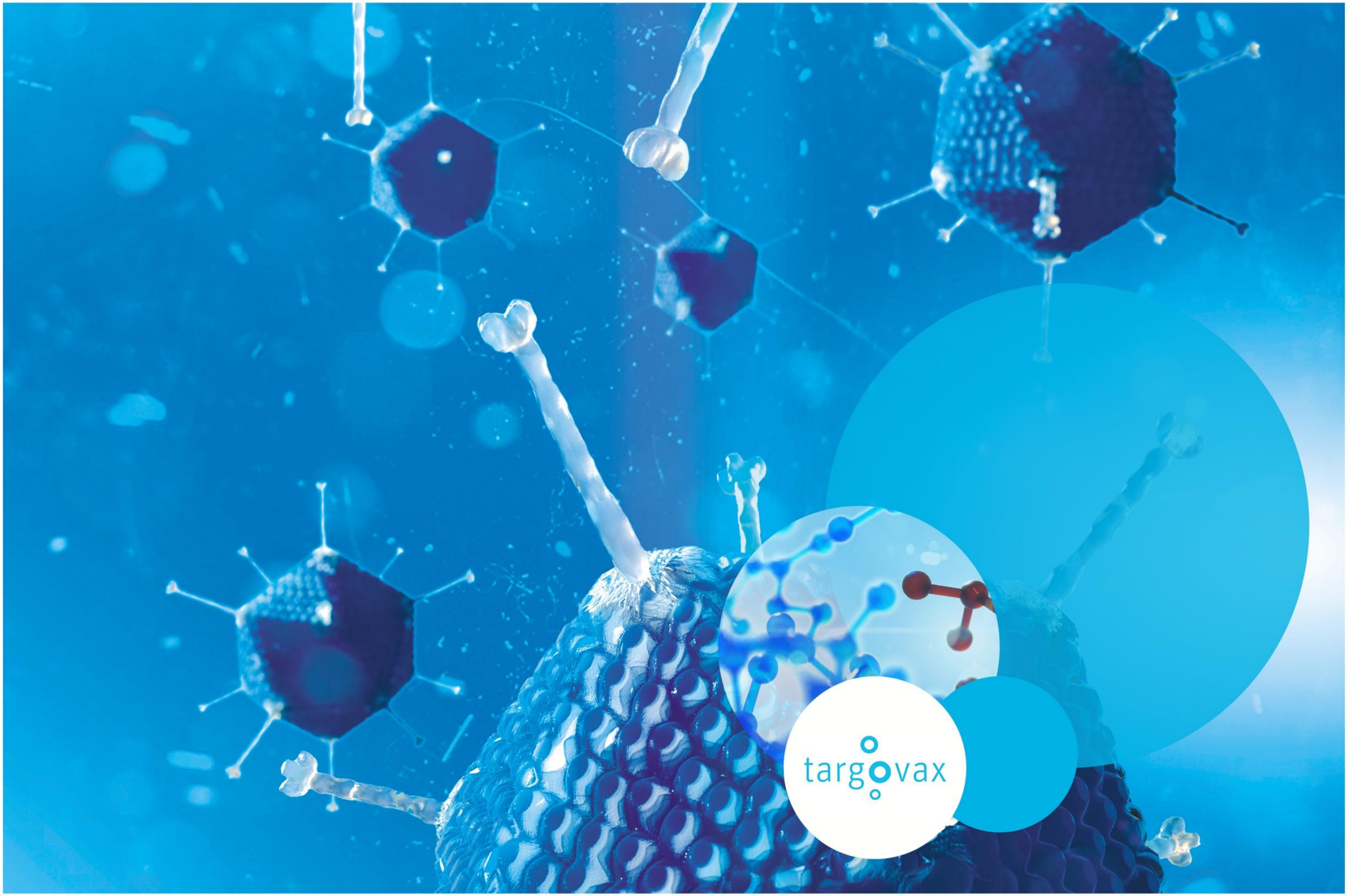
In May, Targovax announced the completion of enrollment of ONCOS-102 trial in mesothelioma. Randomized data is expected around New Year.

## Restricted Stock Units

The Annual General Meeting 30 April 2019 decided to remunerate the Board of Directors for the period between the AGM 2019 to the AGM 2020 with a combination of cash and Restricted Stock Units (RSUs), hence at the 30 April 2019, additional 170 367 RSU's were granted to the Board of Directors. A total of 370 795 RSU's were outstanding at 8 May 2019.

The following table shows the outstanding and granted RSU's to Board of Directors of the Group at 8 May 2019:

| | | RSUs | | |
|---|---|---|---|---|
| Name | Position | Outstanding 31.03.2019 | Granted 1.04.19 – 08.05 2019 | Outstanding 08.05.2019 |
| **Board of Directors**: | | | | |
| Patrick Vink | Chairperson of the Board | 44 286 | 78 873 | 123 159 |
| Robert Burns | Board member | 28 199 | 45 747 | 73 946 |
| Eva-Lotta Allan | Board member | 51 368 | 15 249 | 66 617 |
| Diane Mellett | Board member | 50 198 | 15 249 | 65 447 |
| Bente-Lill Romøren | Board member | 20 328 | 15 249 | 35 577 |
| Catherine A. Wheeler | Board member | 6 049 | - | 6 049 |
| **Total Restricted Stock Units to Board of Directors of the Group** | | **200 428** | **170 367** | **370 795** |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