



SECOND QUARTER 2020 REPORT

Ultimovacs ASA

Second Quarter 2020

Operational

- The first patient in the INITIUM trial was enrolled in June, and a total of three patients have been enrolled as per reporting date. The first site in the INITIUM trial opened for patient inclusion in May. The INITIUM trial is a randomized, comparative, multi-center Phase II trial for evaluating UV1 as a treatment for first-line patients with metastatic malignant melanoma.
- Similarly, the first patient in the NIPU trial was enrolled in June, and four patients are enrolled as per reporting date. The NIPU trial is a randomized, comparative, multi-center Phase II trial in which UV1 is investigated as a second-line treatment in mesothelioma.
- In the US based Phase I trial in malignant melanoma, patient enrollment is now completed with all 10 patients in cohort 2 (dose finding GM-CSF) included. No unexpected safety issues have been observed to date.
- The Covid-19 situation has so far had limited impact regarding site openings and patient inclusion. The longer-term effect of the pandemic on the biotech industry and the general ability to conduct clinical trials is still uncertain.
- In May 2020, Ultimovacs announced a collaboration with a non-specified big pharma company and a leading European oncology clinical trial group to evaluate UV1 in a third Phase II clinical trial. More information is expected to be disclosed during the third quarter of 2020.
- A private placement of new shares to fund the above-mentioned clinical trial was successfully completed in May 2020, raising gross proceeds of MNOK 160.
- Carlos de Sousa was appointed the new CEO of Ultimovacs ASA effective 1 June 2020.

Financial

- Total operating expenses amounted to MNOK 36.2 in Q2-20.
- Cash flow from operations was MNOK -33.2 in Q2-20. With the proceeds from the private placement in May 2020, total cash and cash equivalents increased by MNOK 115.2 during Q2-20 and amounted to MNOK 483.2 as per 30 June 2020.

Key financials

NOK (000) Unaudited	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Total revenues	-	-	-	-	-
Total operating expenses	36 183	4 096	67 442	(19 066)	66 217
Operating profit (loss)	(36 183)	(4 096)	(67 442)	(19 066)	(66 217)
Profit (loss) for the period	(34 909)	(3 844)	(65 245)	(18 568)	(61 166)
Diluted and undiluted earnings / (loss) per share (NOK)	(1.2)	(0.2)	(2.3)	(1.0)	(2.7)
Net increase / (decrease) in cash and cash equivalents	115 247	346 740	83 768	330 630	284 332
Cash and cash equivalents at end of period	483 159	446 041	483 159	446 041	399 607

CEO's corner

Joining Ultimovacs at a dynamic stage of development

During the first two quarters of 2020, Ultimovacs reached key clinical development milestones, strengthened its financial runway and continued to validate the potential of its unique cancer vaccine technology.

When I joined the Company as CEO in June of this year, it had already completed three Phase I clinical trials from which the results confirmed the safety and tolerability of UV1 in patients with solid tumors. Building on the successful outcome of those initial trials, Ultimovacs has seamlessly entered into mid-stage clinical development.



During the second quarter of 2020, we completed an oversubscribed private placement which fully finances the current UV1 clinical development program. We also launched two Phase II studies testing UV1 in combination with well-known cancer therapies in patients with a range of solid tumors. Moving into the third quarter of 2020, we announced the completion of patient enrollment for our ongoing Phase I clinical trial evaluating UV1 in combination with pembrolizumab as first line treatment in patients with metastatic malignant melanoma. With a third Phase II study supported through a collaboration with an international clinical trial group and big pharma company and set to start in the next months, Ultimovacs is at a dynamic stage of development and has established several key value inflection points in the near term that will give further insight into the therapeutic potential of UV1.

Conducting three Phase II studies in parallel

The ongoing coronavirus pandemic impeded our ability to initiate patient enrollment in the INITIUM and NIPU trials. Therefore, we were proud to announce that the first patients in both trials were enrolled on June 15th and that a third Phase II clinical trial is expected to start around year-end. Our focus will be on recruiting patients in the INITIUM trial in a timely manner and supporting the investigators in the other two trials. In total, the three Phase II studies will enroll over 400 patients. This is a major achievement for a relatively small biotechnology company and was made possible by the considerable interest and attention in our technology and approach from the medical and scientific community. As a result, we have had the opportunity to make partnerships with well-known clinical trial investigators and hospitals supported by big pharma companies. This enables the evaluation of our UV1 vaccine on a global level and allows us to ramp up clinical trial site activation as well as patient enrollment. Ultimovacs' broad collaborations have already resulted in multiple sites actively screening and enrolling patients, despite the current challenging environment. I am impressed with the capabilities of the Ultimovacs team, their dedication and commitment to excellence in clinical development execution.

Strong financial position

Another critical aspect of conducting multiple international clinical trials is guaranteeing access to appropriate and sufficient funding. The INITIUM trial is an Ultimovacs-sponsored trial requiring significant capital. In addition, Ultimovacs will need to supply the UV1 vaccine for all three Phase II studies. In parallel, we have an active preclinical research program evaluating the potential of the

TET-technology ('UV2'). The significant increase in the clinical development activities resulted in the decision for the private placement which was completed during the second quarter. The private placement was highly successful and significantly oversubscribed. Our strong cash position provides us with the strength to execute on this major clinical development program and our broader strategic initiatives for the next three years. At that time, we expect to have announced data on Ultimovacs' current clinical development program and, assuming positive results, to have built significant value for our shareholders.

Looking towards the second half of 2020

As a company, Ultimovacs not only has a promising cancer therapy approach, but a team with strong scientific and industry experience that is committed to building global awareness for its vaccine technology. Moving into the second half of the year, the Company will communicate results from the ongoing Phase I clinical trial in malignant melanoma and continue to put the right structures in place to support the advancement of its large clinical development program. This includes showcasing the company on a global scale by attending industry conferences, connecting with a broader range of potential investors and partners as well as raising our profile with both local and international media. We will also seek opportunities to validate the UV1 technology through peer-reviewed scientific publications and presentations at international medical and scientific conferences. I look forward to further raising the visibility of the Company, establishing it as a provider of innovative cancer treatments and above all, bringing a safe, new therapeutic option to patients with difficult-to-treat types of cancer.

Carlos de Sousa, Chief Executive Officer

Key Operational Highlights Q2 2020

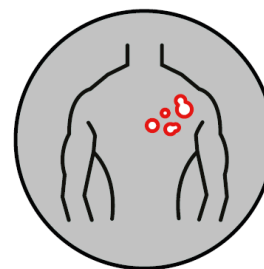
Clinical trial update

- *Implications of the Covid-19 situation*

In mid-March 2020, the Covid-19 related lockdown strongly influenced clinical trial activities at hospitals in all relevant territories. In order to control the spread of the virus, hospitals temporarily halted clinical trial activities. This also impacted preparations for new trials. After a few weeks of lock-down, regular trial activities were gradually resumed in most countries. So far, the Covid-19 situation has had limited impact on the site openings and patient inclusion in Ultimovacs' new phase II trials. Ultimovacs is actively working with its clinical trial partners to ensure activation of sites and patient enrollment remaining as close to the initial plans as possible. The longer-term effect of the pandemic on the biotech industry and the general ability to conduct clinical trials is still uncertain.

- *The INITIUM trial*

Despite the temporary halt in clinical trial activities at several hospitals caused by Covid-19 pandemic, the first INITIUM patient was dosed at the Oslo University Hospital in June 2020. As per reporting date, three patients have been enrolled. In total, approximately 40 sites are planned to be opened for this trial.

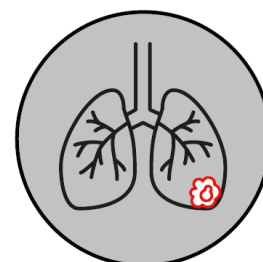


The INITIUM trial is a Ultimovacs-sponsored randomized Phase II trial for first-line treatment of patients with metastatic malignant melanoma. Patients will be administered UV1 in combination with ipilimumab (CTLA-4 checkpoint inhibitor) and nivolumab (PD-1 checkpoint inhibitor). The trial will be run in the US and Europe (including Norway). In total, 154 patients will be enrolled, 77 patients will receive nivolumab and ipilimumab and the other 77 patients will receive nivolumab, ipilimumab and UV1. Planned readout of the primary endpoint of progression-free survival is H2-2022.

Malignant melanoma is a type of skin cancer that develops when melanocytes (the cells that give the skin its tan or brown color) start to grow out of control. Malignant melanoma is less common than other types of skin cancers, but is more dangerous because it is much more likely to spread to other parts of the body if not diagnosed and treated at an early stage. Malignant melanoma can develop anywhere on the skin, but it is more likely to start on the trunk (chest and back) in men and on the legs in women. The neck and face are other common sites.

- *The NIPU trial*

A total of seven sites are planned to be opened for the NIPU trial. The first patient was dosed at the Oslo University Hospital (OUS) in June 2020 and a total of four patients have been enrolled as of this reporting date.



The NIPU trial is a randomized, multi-center Phase II trial in which the universal cancer vaccine, UV1, will be evaluated in combination with

the checkpoint inhibitors ipilimumab and nivolumab as second-line treatment in mesothelioma. Oslo University Hospital is the sponsor of the NIPU study. Bristol-Myers Squibb and Ultimovacs have entered into agreements with OUS to support the preparations and execution of the trial. A total of 118 patients will be included in the NIPU study. Half of the patients will be treated with the combination of UV1, with ipilimumab (CTLA-4 checkpoint inhibitor) and nivolumab (PD-1 checkpoint inhibitor), whereas the other half will receive nivolumab and ipilimumab only. The study is planned to be conducted at six hospitals in five countries (Norway, Sweden, Denmark, Spain and Australia). The study sites are planned to be Oslo University Hospital in Norway, Karolinska University Hospital and Skåne University Hospital Lund in Sweden, Copenhagen University Hospital and Aalborg University Hospital in Denmark, Vall d'Hebron Institute of Oncology in Barcelona, Spain and University of Western Australia in Perth, Australia.

The objective of the study is to induce a clinically meaningful progression-free survival (PFS) benefit in patients with malignant pleural mesothelioma (MPM) after progression on first-line standard platinum doublet chemotherapy. The primary endpoint of the trial is progression-free survival (PFS) and the PFS read-out is planned for H2-2022. This date is subject to change as the impact of the Covid-19 pandemic is still uncertain.

MPM is a rare malignant tumor originating from the cells lining the mesothelial surface in the lungs. MPM is the most common type of mesothelioma and is a disease with a high unmet medical need with a median overall survival of approximately 1 year. It is a fatal form of thoracic cancer that is diagnosed in more than 30,000 people per year. This type of cancer also results in the death of over 25,000 people per year. Most patients are treated with palliative chemotherapy. Patients with disease progression after first-line therapy have few therapeutic options. Asbestos exposure is heavily linked to the development of the disease. It may take 10 - 50 years for symptoms of mesothelioma to manifest after initial asbestos exposure. Even though the use of asbestos to a large extent is banned today, new incidences of mesothelioma will continue to be a medical challenge for decades.

- *Phase II clinical trial – non-disclosed indication*

In May 2020, Ultimovacs announced the collaboration with a leading big pharma company and a European oncology clinical trial group to evaluate the Company's universal cancer vaccine, UV1, in an additional randomized, multi-center Phase II clinical trial.

This third Phase II clinical trial will evaluate UV1 in a new cancer indication in combination with indication-specific standard of care cancer therapies different from those to be tested in the other Phase II clinical trials, INITIUM (malignant melanoma, 154 patients) and NIPU (mesothelioma, 118 patients). In the collaboration, Ultimovacs will supply UV1 and the big pharma company will supply its proprietary cancer treatment to the clinical trial group which will sponsor the trial. Subject to final agreement between Ultimovacs, the sponsor and the big pharma partner, which is expected to be signed in Q3 2020, the first patient is expected to be enrolled in the study around year end 2020/2021 with the read-out of primary endpoints anticipated during 2023.

The new clinical trial will be financed with funds from the private placement that was completed in May 2020. Please refer to the Financial Review section for more details.

- *Ongoing Phase I trial in malignant melanoma*

In this study, UV1 is given in combination with a PD-1 checkpoint inhibitor and all 20 of the initially planned patients have been successfully included (cohort 1 – safety pembrolizumab/UV1).

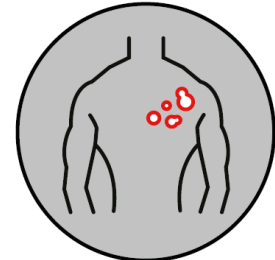
In September 2020, all patients in cohort 1 will have 1-year observation time. Safety and efficacy data from this cohort will be presented at an international medical conference.

A group of 10 patients (cohort 2 – dose finding GM-CSF) was included in order to investigate an increased dosage of the adjuvant GM-CSF. All of these ten patients in cohort 2 have been enrolled. Thus, the enrollment in this trial is now completed.

During Q3 2021, all patients in cohort 1 will have 2-years observation time and all patients in cohort 2 will have 1-year observation time.

To date, no unexpected safety issues related to UV1 have been observed in this trial.

For Ultimovacs, this trial gives supporting data for future filing applications. The progress of this trial does not dictate timelines for the randomized Phase II trials.



- *Follow-up trials*

The three completed Phase I trials have been reviewed by the U.S. Food and Drug Administration (FDA) and were the basis for the opening of an IND (Investigational New Drug) supporting the start of clinical research activity in the US in malignant melanoma. Ultimovacs sees the outcome of these trials as a strong basis for the further development of UV1.

In the prostate cancer trial, median Overall Survival (mOS) has been reached at 61.8 months, which is positive relative to historical data.

Clinical trial ⁵	Overall Survival (OS) ¹					Median OS (months)	mPFS ² (months)
	Year 1	Year 2	Year 3	Year 4	Year 5		
Prostate (n=22)	95 %	86 %	73 %	55 %	50 %	61.8	n.a. ³
NSCLC (n=18)	72 %	50 %	44 %	39 %	Q4-20	28.2	10.7 ⁴
Malignant Melanoma (n=12)	75 %	75 %	67 %	50 %	Q1-21	Will be more than 48 months	6.7

1. Note that some patients have received other treatments upon progression and this is likely to affect survival
 2. Median Progression-Free Survival
 3. PFS (Progression-Free Survival) not possible to measure in the prostate cancer trial. Instead, patients are followed on PSA measurements. As of today, 8 patients have normalized PSA levels. (For definition of PSA, please see Glossary at the end of this report)
 4. mPFS updated after database revision (previously reported as 12.3 months)
 5. Prostate: (EudraCT No. 2012-002411-26) NSCLC: (EudraCT No. 2012-001852-20) MM: (EudraCT No. 2013-005582-39)

- *The TET-platform and TENDU*

In July 2018, Ultimovacs acquired the former immunotherapy technology business of Immuned AB. The acquired business is now established as Ultimovacs AB, a fully-owned subsidiary of Ultimovacs, based in Uppsala, Sweden. The core technology that Ultimovacs acquired and is now further developing is the proprietary and patent-protected Tetanus-Epitope Targeting-platform (the ‘TET-platform’). The development of TET is based on an exclusive license agreement with the Leiden University Medical Centre. Ultimovacs considers the TET-platform technology to be a promising approach to strengthen and increase T cell responses against cancer peptides. Ultimovacs is therefore pursuing the development of new first-in-class cancer vaccine solutions based on the TET platform technology.

Vaccines are generally used together with an adjuvant to enhance the response of the immune system to the vaccine antigens. Ultimovacs and other companies operating in this field see a need for an improved adjuvant solution for vaccines. The TET-platform represents such a new adjuvant. With this technology the antigens and adjuvant are part of the same molecule. The technology is based on the immune system’s response to the tetanus bacteria following vaccination against tetanus. This is a generic vaccine technology and can be applied to any vaccine with peptides as antigens. It is not limited to cancer vaccines.

Ultimovacs is now preparing for a Phase I trial to test the TET technology in patients expected to start before the end of this year. The main objective is to assess the safety of the TET technology. In this first study, the TET technology will be applied together with prostate cancer specific antigens. This project is named TENDU.

Pending confirmation of the safety of the TET technology and further pre-clinical development, the ambition is to identify new universal cancer vaccine candidates to move into clinical development.

- *Management team*

Gunilla Ekström, Managing Director of Ultimovacs AB and member of the Ultimovacs management team, has resigned from her position and will leave Ultimovacs mid-October 2020. She has a 60% position with Ultimovacs and is leaving to pursue the further development of Gesynta Pharma AB where Gunilla is one of the founders.

Background

Ultimovacs (the 'Company') is a pharmaceutical company developing novel immunotherapies against cancer. The Company was established in 2011 and is listed on the Oslo Stock Exchange. The Company's proprietary technology is based on pre-clinical and clinical research on immunotherapies conducted at the Oslo University Hospital. Ultimovacs is located at the Oslo Cancer Cluster Innovation Park in Oslo, Norway, and is an active member of Oslo Cancer Cluster. Ultimovacs is advancing a broad clinical development program with clinical trials in Europe, Australia and the USA.

The lead product candidate is UV1, a peptide-based vaccine inducing a specific T cell response against the universal cancer antigen telomerase (hTERT), expressed at a high level in over 85% of human tumors. The vaccine's mode of action is to make the immune system produce CD4 T cells (i.e. T helper cells), recognizing cancer cells expressing telomerase (hTERT). UV1 may potentially be applied universally across cancer types, in different stages of disease and in combination with different cancer treatments. The vaccine is easy to use and requires no sophisticated infrastructure in hospitals. UV1 is manufactured as an off-the-shelf product with a long shelf life.

UV1 is being developed as a therapeutic cancer vaccine and a platform for other immuno-oncology drugs which require an ongoing T cell response for their mode of action. Longer-term, a vaccine like UV1 is attractive to investigate in early stage tumors as well as in preventing tumors from starting to grow.

UV1 treatment in three Phase I studies (metastatic prostate cancer, metastatic non-small cell lung cancer and metastatic malignant melanoma) with a total of 52 patients enrolled have been completed at the Oslo University Hospital.

The three completed trials showed clinical outcomes that Ultimovacs saw as a strong basis for the further clinical development of UV1, both with respect to safety and signals of clinical effect.

Ultimovacs is currently the sponsor of one ongoing clinical study which is run in the US. In this phase I study the safety and tolerability of treatment with the combination of pembrolizumab (PD-1 checkpoint inhibitor) and UV1 in 30 patients with metastatic malignant melanoma is being evaluated.

Ultimovacs is sponsor of a randomized Phase II trial, INITIUM, in which UV1 will be combined with nivolumab (PD-1 checkpoint inhibitor) and ipilimumab (CTLA-4 checkpoint inhibitor) in patients with metastatic malignant melanoma. Study objectives include obtaining efficacy and safety data on the combination therapy.

UV1 will also be investigated in a randomized, multi-center Phase II trial in patients with mesothelioma. The trial, NIPU, is evaluating the efficacy and safety of UV1 in combination with the checkpoint inhibitors, nivolumab and ipilimumab, as a second-line treatment in patients with mesothelioma.

In addition, UV1 will be investigated in a third randomized, multi-center Phase II trial in a non-disclosed indication.

Outlook

Ultimovacs' vaccine technology is universal in the sense that it may have an effect across most types of cancer and could be used in combination with different types of cancer treatment. The cancer vaccine is expected to generate immune responses across the general population (i.e. be independent of HLA type). The vaccine is simple to manufacture and requires no sophisticated infrastructure. If the ongoing clinical development and testing of Ultimovacs' cancer vaccine demonstrates that the vaccine gives clinical benefit to cancer patients, the potential clinical use of UV1 and related revenues could be very high.

The fully enrolled Phase I study in malignant melanoma, in which UV1 is combined with pembrolizumab, is expected to give valuable information regarding UV1's safety and GM-CSF safety and dosing. During Q3 2021, all patients in cohort 1 will have 2-years observation time and all patients in cohort 2 will have 1-year observation time. These patients will be followed for safety and efficacy.

In 2020, UV1 will expectedly be tested in three randomized phase II trials in three different cancer types. Ultimovacs is the sponsor of one of these trials. Prior to the outbreak of the Covid-19 pandemic, the INITIUM and NIPU trials had expected readout of the primary endpoint progression-free survival during the second half of 2022. The impact of the pandemic on the biotech industry and on clinical trials in general is still uncertain. The three Phase II clinical trials will enroll more than 400 patients. Two of the trials will be in close collaboration with two big pharma companies and two international networks of specialized cancer centers. The ongoing clinical trials represent a strong platform for Ultimovacs to move towards a possible registration of the universal cancer vaccine, UV1. The main study objectives are efficacy and safety data on the combination therapies.

Ultimovacs continuously has or pursues discussions to enter into collaborations with cancer institutions and pharmaceutical companies in order to document the effect and safety of UV1 in other cancer types and in combinations with different cancer treatments.

Ultimovacs is making clinical development choices based on the knowledge that UV1 is a universal vaccine in several dimensions; the vaccine can potentially play a role across most cancer types, in most patients, in different stages of cancer and in combination with other cancer treatments. Thus, with positive results from future randomized, clinical trials, the development potential is significant.

Ultimovacs also seeks to broaden its pipeline of drug/technology candidates. The R&D activities are currently focused on the development of a new first-in-class cancer vaccine solution building on Ultimovacs' base technology, the acquired TET-platform and on the development of new molecules and technologies based on biobank material from the ongoing and planned clinical studies conducted with UV1.

Pending confirmation of the safety of the TET technology through the Phase I TENDU trial and further pre-clinical development, the ambition is to apply the TET technology and identify new universal cancer vaccine candidates to move into clinical development.

Risks and uncertainties

Ultimovacs is a research and development company that is still in its early stages. The Company has not generated any revenues historically and is not expected to do so in the short term. Research and development up to approved registration is subject to considerable risk and is a capital-intensive process. The Company's candidates for cancer vaccines and technology platforms are dependent on research and development and may be delayed and/or incur higher costs than currently expected. Competing pharmaceuticals can capture market shares or reach the market faster than Ultimovacs. If competing projects have a better product profile (e.g. better efficacy and/or less side effects), the future value of Ultimovacs' product offerings may be lower than expected. The operations may also be impacted negatively by changes or decisions regarding laws and regulations. In addition, the Company is also dependent upon intellectual property rights.

The primary financial risks are foreign exchange risks and financing risks. The Company is affected by foreign exchange risk as the research and development costs for UV1 are mainly paid in USD and EUR. In addition, the Company has investment in foreign operations, whose net assets are exposed to currency translation risk. Adequate sources of funding may not be available when needed or may not be available on favorable terms. The Company's ability to obtain such additional capital or financing will depend in part upon prevailing market conditions as well as conditions of its business and its operating results, and those factors may affect its efforts to arrange additional financing on satisfactory terms. The Board of Directors works continuously to secure the business operation's need for financing.

The coronavirus pandemic has a profound impact on the global economy and no industry seems to be protected from operational and financial consequences. The final impact of the pandemic is currently difficult to assess. For a biotech company like Ultimovacs, some of the possible implications of the Covid-19 pandemic will be:

- The initiation, patient inclusion and conduct of clinical trials will be affected
- The supply chain (manufacturing and/or logistics) for the investigational products may be interrupted
- The pandemic, together with changes in the oil price, has caused significant fluctuations in currency exchange rates (NOK/EUR and NOK/USD), which will increase R&D costs

Ultimovacs' financial risk exposures are described in more detail in the Annual Report 2019. No significant changes have occurred that affect these reported risks.

Financial review

Financial results

Ultimovacs does not yet generate revenues, as the Company is in a research and development phase.

Payroll and payroll related expenses increased in Q2-20 (MNOK 13.2) compared to the same period in 2019 (MNOK -4.7) due to several factors;

- Salaries were higher in Q2-20 mainly due to two additional full time employees in this period compared to Q2-19.
- Further, a severance pay liability of MNOK 5.0 was recognised in the P&L related to the resignation of the former CEO.
- In addition, a share-based payment liability was reversed in Q2-19 with a positive effect on the P&L. Several of the company's employees had synthetic shares which were valued at MNOK 10.2 with a corresponding liability in the balance sheet. This incentive scheme was terminated and replaced by a share option program when Ultimovacs was listed on the Oslo Stock Exchange. As all synthetic shares at the time of listing were valued lower than the strike price, all synthetic shares were settled/terminated without any value. Consequently, the liability of MNOK 10.2 was reversed in June 2019.

Total personnel expenses YTD-20 was MNOK 23.2 compared to MNOK 2.8 YTD-19. The significant increase is due to the same factors as described above.

Other operating expenses primarily comprise R&D related expenses. These expenses, including IP and external R&D expenses, offset by government grants, amounted to MNOK 19.9 in Q2-20, and MNOK 4.9 in Q2-19. With the initiation of two phase II trials in Q1-20, the R&D costs have been and are expected to be at a higher level than in prior periods. Total other operating expenses YTD-20 (MNOK 43.0) were higher compared to YTD-19 (MNOK 15.4) due to higher R&D expenses.

Total loss for the Q2-20 period amounted to MNOK 34.9 (vs. MNOK 3.8 in Q2-19). Total loss YTD-20 amounted to MNOK 65.2 compared to a loss of MNOK 18.6 YTD-19.

Financial position

Total assets per 30 June 2020 were MNOK 573.2, an increase of MNOK 95.2 from 31 December 2019 primarily as a result of an increase in bank deposits from the share issue in May 2020.

In addition, "Patents" in "Non-current assets" increased by MNOK 5.0 in Q2-20. In 2015, the Group acquired all rights to the patents and technology from Inven2 AS, which is one of the Group's main shareholders. The purchase price for the patent was MNOK 4.0 and was based on a purchase option in the license agreement with Inven2 AS entered into in 2011. The purchase of these rights in 2015 implied that the Group no longer has to pay future royalties to Inven2 AS from potential commercial sales of products related to the patents/patent applications. According to the purchase agreement related to the same patents, Inven2 AS is entitled to two milestone payments of MNOK 5.0 and MNOK 6.0 at the commencement of a clinical phase IIb and phase III study (or another registration study) respectively. The first milestone payment of MNOK 5.0 was paid to Inven2 in May 2020 due to

the commencement of the INITIUM phase II trial. The milestone payment has in Q2-20 been capitalised in the balance sheet under “Patents” and will be depreciated linearly until 2030.

Total liabilities as of 30 June 2020 amounted to MNOK 35.2. Non-current liabilities were increased by MNOK 5.0 related to the severance package of the former CEO, Øyvind Kongstun Arnesen. Please refer to note 3 for more information.

Total equity equaled MNOK 538.0 as of 30 June 2020. In Q2-20, the equity increased with the gross proceeds from the share issue of MNOK 160. In this private placement, 4,113,111 new shares were issued at a price per share of NOK 38.90. Costs which can be directly attributed to the share issue have been deducted against equity, reducing share premium by MNOK 7.1 and resulting in net proceeds from the share issue of MNOK 152.9. Further, total equity has since year-end 2019 been decreased by the period’s operating loss and currency translation amounting to MNOK 61.8, and in addition been increased by the recognition of share-based payments/stock options of MNOK 2.2.

Cash flow

Total net increase in cash and cash equivalents in Q2-20 was MNOK 115.2, which includes a decrease of MNOK 33.2 related to operations and a MNOK 5.0 patent milestone payment. A share issue in May 2020 resulted in a gross cash increase of MNOK 160.0, offset by share issue costs of MNOK 7.1. Total increase in cash and cash equivalents YTD-20 was MNOK 83.8, mainly a result of the net capital increase when issuing new shares, and a reduction due to the negative cash flow from operating activities (MNOK 65.5). Total cash and cash equivalents per 30 June 2020 amounts to MNOK 483.2.

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Implications of the Covid-19 outbreak on the half-yearly financial report

The European Securities and Markets Authority (ESMA) has issued a statement on the significance of the Covid-19 outbreak on the financial reporting for the first half of 2020 for listed companies. The background for the statement is a desire to see more information about the significance of the outbreak on the financial reporting as well as more harmonized reporting.

In light of the Covid-19 situation, several factors with potential impact on the interim financial statement have been assessed. These include, among others, assessment regarding impairment of

assets and other valuation items, tax and other government benefits, change in estimates and discretionary assessments and disclosure of information on other Covid-19 related conditions.

The majority of these items are deemed not to be relevant for Ultimovacs' operations. The Covid-19 virus has caused disruption to businesses and economic activity around the globe and is expected to continue to do so. As Ultimovacs has no customers and sales income, and its main suppliers are to a little degree affected, the company is less impacted than other companies and the global economy as a whole.

The Covid-19 outbreak has, however, triggered financial and operational risks which were, in full or in part, unknown or not relevant at the end of the last annual reporting period. These have been listed in the previous section, 'Risk and Uncertainties', and include higher R&D costs due to a weaker NOK (currency), and potentially also delays in drug manufacturing, logistics, initiation of sites/hospitals and patient enrollment. These operational delays may potentially trigger increased direct costs related to the clinical trials and other operating costs during a period of potential delay. The longer-term effect of the pandemic on the biotech industry and the general ability to conduct clinical trials, and the specific potential effect on Ultimovacs, is still uncertain.

Given the inherent uncertainties, it is difficult to ascertain the exact impact of Covid-19 on the Company's operations, or to provide a quantitative estimate of this impact. Further implications will be assessed and reported on in the next reporting periods.



Responsibility Statement

We confirm, to the best of our knowledge, that the condensed interim financial statement for the six months ended 30 June 2020 has been prepared in accordance with IAS 34 – Interim Financial Reporting, and gives a true and fair view of the Group’s assets, liabilities, financial position and profit or loss as a whole. We also confirm, to the best of our knowledge, that the interim management report includes a fair review of important events that have occurred during the first six months of the financial year and their impact on the condensed set of financial statements, a description of the principal risks and uncertainties for the remaining six months of the financial year, and major related parties transactions.

The Board of Directors and CEO of Ultimovacs ASA

Oslo, 20 August 2020

Jonas Einarsson
Chairman of the Board
(Sign.)

Kari Grønås
Board member
(Sign.)

Eva S. Dugstad
Board member
(Sign.)

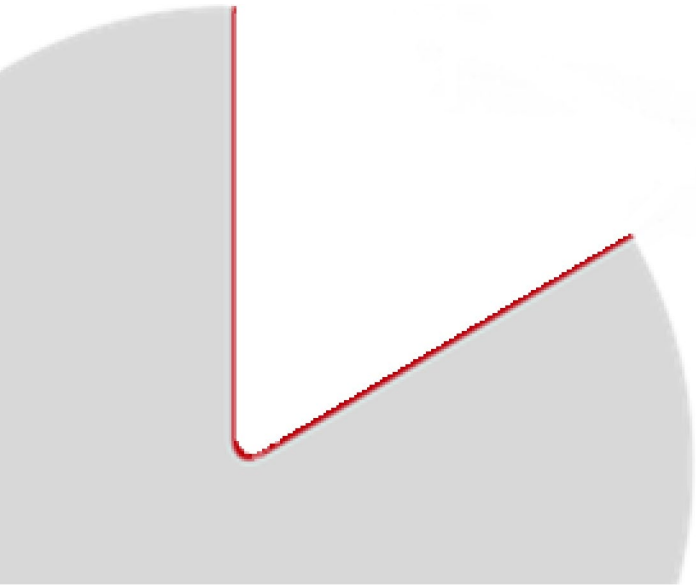
Henrik Schüssler
Board member
(Sign.)

Ketil Fjerdingen
Board member
(Sign.)

Leiv Askvig
Board member
(Sign.)

Kristin L. A. Wilhelmsen
Board member
(Sign.)

Carlos de Sousa
CEO
(Sign.)



Interim condensed consolidated statement of comprehensive income

NOK (000) Unaudited	Note	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Other operating income		-	-	-	-	-
Total revenues		-	-	-	-	-
Payroll and payroll related expenses	3, 5	13 197	(4 717)	23 212	2 821	20 160
Depreciation and amortization		633	415	1 219	813	2 063
Other operating expenses	4, 5	22 353	8 399	43 011	15 433	43 995
Total operating expenses		36 183	4 096	67 442	19 066	66 217
Operating profit (loss)		(36 183)	(4 096)	(67 442)	(19 066)	(66 217)
Financial income		1 421	346	2 940	697	5 631
Financial expenses		147	94	744	198	580
Net financial items		1 274	252	2 196	499	5 051
Profit (loss) before tax		(34 909)	(3 844)	(65 245)	(18 568)	(61 166)
Income tax		-	-	-	-	-
Profit (loss) for the period		(34 909)	(3 844)	(65 245)	(18 568)	(61 166)
Other comprehensive income (loss) - Currency translation		(940)	(646)	3 490	(2 967)	(672)
Total comprehensive income (loss) for the period		(35 848)	(4 490)	(61 755)	(21 534)	(61 838)
Diluted and undiluted earnings/(loss) pr share (NOK)	6	(1.2)	(0.2)	(2.3)	(1.0)	(2.7)

Interim condensed consolidated statement of financial position

NOK (000) Unaudited	Note	30 Jun 2020	30 Jun 2019	31 Dec 2019
ASSETS				
Goodwill		11 578	10 388	10 851
Licenses		56 203	50 428	52 675
Patents		7 670	2 978	2 844
Property, plant and equipment		524	716	536
Right to use asset	11	3 369	3 620	3 523
Total non-current assets		79 345	68 130	70 430
Receivables and prepayments	7	10 740	7 193	8 004
Bank deposits		483 159	446 041	399 607
Current assets		493 899	453 234	407 611
TOTAL ASSETS		573 245	521 364	478 041
EQUITY				
Share capital		3 197	2 786	2 786
Share premium		809 214	658 495	656 692
Total paid-in equity		812 411	661 281	659 478
Accumulated losses		(284 292)	(176 448)	(219 047)
Other equity		4 172	262	1 985
Translation differences		5 706	(79)	2 216
TOTAL EQUITY	6, 9	537 996	485 016	444 633
LIABILITIES				
Lease liability	11	1 466	3 671	2 301
Other non-current liabilities	3	4 954	-	-
Deferred tax		11 578	10 388	10 851
Non-current liabilities		17 997	14 060	13 152
Accounts payable		8 671	18 852	11 768
Lease liability	11	2 035	-	1 325
Other current liabilities		6 544	3 436	7 164
Current liabilities	8	17 251	22 288	20 257
TOTAL LIABILITIES		35 248	36 348	33 409
TOTAL EQUITY AND LIABILITIES		573 245	521 364	478 041

Interim condensed consolidated statement of cash flow

NOK (000) Unaudited	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Loss before tax	(34 909)	(3 844)	(65 245)	(18 568)	(61 166)
Non-cash adjustments					
Depreciation and amortization	633	415	1 219	813	2 063
Interest received incl. investing activities	(994)	(330)	(2 494)	(660)	(4 490)
Net foreign exchange differences	(337)	20	178	41	224
Other finance expense	57	57	119	115	258
Share option expenses	1 334	262	2 186	262	1 985
Working capital adjustments:					
Changes in prepayments and other receivables	(1 091)	(605)	(2 736)	(1 009)	(1 820)
Changes in payables and other current liabilities	2 108	(11 282)	1 237	(12 356)	(42)
Net cash flow from operating activities	(33 200)	(15 307)	(65 535)	(31 362)	(62 989)
Purchase of property, plant and equipment	(20)	(46)	(202)	(156)	(172)
Patent milestone payment	(5 000)	-	(5 000)	-	-
Interest received	994	330	2 494	660	4 490
Net cash flow used in investing activities	(4 026)	284	(2 708)	504	4 318
Proceeds from issuance of equity	160 000	370 000	160 000	370 000	370 000
Share issue cost	(7 067)	(7 946)	(7 067)	(7 946)	(25 418)
Interest paid	-	-	-	-	(258)
Payment of lease liability	(461)	(291)	(921)	(567)	(1 321)
Net cash flow from financing activities	152 472	361 763	152 012	361 487	343 002
Net change in cash and cash equivalents	115 247	346 740	83 768	330 630	284 332
Effect of change in exchange rate	227	(51)	(216)	(129)	(265)
Cash and cash equivalents at beginning of period	367 686	99 352	399 607	115 540	115 540
Cash and cash equivalents at end of period	483 159	446 041	483 159	446 041	399 607

Interim condensed consolidated statement of changes in equity

NOK (000) Unaudited	Share Capital	Share Premium	Accum. losses	Other equity	Transl. differenc.	Total equity
Balance at 1 Jan 2019	641	314 256	(157 881)	-	2 888	159 904
Loss for the period	-	-	(18 568)	-	-	(18 568)
Issue of ordinary shares	2 145	367 855	-	-	-	370 000
Share issue costs	-	(23 616)	-	-	-	(23 616)
Recognition of share-based payments	-	-	-	262	-	262
Translation differences	-	-	-	-	(2 967)	(2 967)
Balance at 30 Jun 2019	2 786	658 495	(176 448)	262	(79)	485 016
Balance at 1 Jan 2020	2 786	656 692	(219 047)	1 985	2 216	444 633
Loss for the period	-	-	(65 245)	-	-	(65 245)
Issue of ordinary shares	411	159 589	-	-	-	160 000
Share issue costs	-	(7 067)	-	-	-	(7 067)
Recognition of share-based payments	-	-	-	2 186	-	2 186
Translation differences	-	-	-	-	3 490	3 490
Balance at 30 Jun 2020	3 197	809 214	(284 292)	4 172	5 706	537 996

Notes

1. General information

Ultimovacs ASA (the Company or Ultimovacs) and its subsidiary (together the Group) is a pharmaceutical Group developing novel immunotherapies against cancer. The Company is a public limited liability company listed on the Oslo Stock Exchange in Norway.

Ultimovacs is headquartered at the Oslo Cancer Cluster Innovation Park in Oslo, Norway, and is an active member of Oslo Cancer Cluster.

2. Basis for preparations and accounting principles

The Group's presentation currency is NOK (Norwegian kroner).

These interim condensed financial statements have been prepared in accordance with IAS 34 Interim Financial Reporting. The accounting policies applied in the preparation of these financial statements are consistent with those followed in connection with the Company's 2019 financial statements. These condensed interim financial statements should therefore be read in conjunction with the 2019 financial statements.

The consolidated financial statements comprise the financial statements of the Ultimovacs ASA and its 100% owned subsidiary Ultimovacs AB as at the reporting date.

These interim financial statements were approved for issue by the Board of Directors on 20 August 2020.

3. Personnel expenses

Personnel expenses

NOK (000)	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Salaries and bonuses	9 945	4 372	17 615	10 382	24 545
Social security tax	1 660	768	2 627	1 654	4 076
Pension expenses	581	518	1 074	1 090	1 798
Share-based compensation	1 334	(10 207)	2 186	(10 207)	(8 222)
Other personnel expenses	159	389	191	459	437
Government grants	(482)	(558)	(480)	(558)	(2 476)
Total personnel expenses	13 197	(4 717)	23 212	2 821	20 160
Number of FTEs at end of period	19	17	19	17	17

On 1 June 2020, Øyvind Kongstun Arnesen resigned his position as CEO in Ultimovacs ASA. Upon his resignation, Arnesen will receive an 18 months severance pay, paid over the course of 18 months. Arnesen will in this period continue to receive all benefits from his employment, with the exception for pension rights, which are not applicable for the last 12 months. During the last 12-month period, any income from new employment/engagements, will be deducted from the severance pay.

An accrual of MNOK 5.0 (including social security tax of MNOK 0.6) was booked in Q2-20 comprising the above-mentioned elements relating to severance pay package. The accrual is classified as a long-term liability in the balance sheet and split into the relevant cost-items within 'Total personnel expenses'.

Please refer to note 10 for additional information regarding the share-based payments.

4. Operating expenses

The Group is in a development phase, and the majority of the Group's costs are related to R&D. These costs are expensed in the statement of comprehensive income.

Operating expenses

NOK (000)	Q2-20	Q2-19	YTD-20	YTD-19	FY19
External R&D expenses	19 680	5 072	37 367	9 386	35 528
Clinical studies	12 628	3 335	27 445	5 863	24 042
Manufacturing costs	1 964	739	3 852	1 953	5 640
Other R&D expenses	5 088	998	6 070	1 570	5 847
Rent, office and infrastructure	767	675	1 385	1 226	2 712
IP expenses	560	270	962	622	2 333
Accounting, audit, legal, consulting	663	1 634	1 558	2 554	3 658
Other operating expenses	985	1 180	2 041	2 079	5 066
Government grants	(302)	(433)	(302)	(433)	(5 302)
Total other operating expenses	22 353	8 399	43 011	15 433	43 995

5. Government grants

The following government grants have been received and recognized in the statement of profit and loss as a reduction of operating expenses and personnel costs.

Government grants

NOK (000)	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Skattefunn from The Research Council of Norway	-	-	-	-	5 277
Eurostars	784	991	782	991	2 344
Other grants	-	-	-	-	157
Total government grants	784	991	782	991	7 778

Please refer to note 3 and 4 for information on how the government grants have been attributed to (i.e. deducted from) personnel expenses and other operating expenses.

6. Earnings per share

The basic earnings per share are calculated as the ratio of the profit for the year divided by the weighted average number of ordinary shares outstanding.

Earnings per share

NOK (000)	Q2-20	Q2-19	YTD-20	YTD-19	FY19
Loss for the period	(34 909)	(3 844)	(65 245)	(18 568)	(61 166)
Average number of shares during the period ('000)	29 231	19 967	28 546	17 994	22 927
Earnings/loss per share (NOK)	(1.2)	(0.2)	(2.3)	(1.0)	(2.7)

In the annual general meeting on 21 May 2019, a split of the shares was resolved so that one share with a nominal value of NOK 1 was split into 25 shares with a nominal value of NOK 0.10. The 2019 figures in the overview above takes into account the share split in order to be comparable with the number of shares post-split.

The share options issued to employees as a part of the employee incentive program 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. Diluted and basic (undiluted) earnings per share is therefore the same.

Please see note 10 for more information regarding the option program.

7. Current assets

Receivables and prepayments

NOK (000)	30 Jun 2020	30 Jun 2019	31 Dec 2019
Government grants	5 277	4 946	5 797
Prepayments	1 937	692	435
Other receivables	3 526	1 555	1 772
Total receivables and prepayments	10 740	7 193	8 004

8. Current liabilities

Current liabilities

NOK (000)	30 Jun 2020	30 Jun 2019	31 Dec 2019
Accounts payable	8 671	18 852	11 768
Public duties payable	2 127	1 377	2 495
Lease liability	2 035	-	1 325
Other current liabilities	4 417	2 059	4 669
Total current liabilities	17 251	22 288	20 257

9. Shareholder information

The share capital as at 30 June 2020 was NOK 3,197,351.1, with 31,973,511 ordinary shares, all with equal voting rights and a nominal value of NOK 0.1. Ultimovacs ASA has appr. 3,400 shareholders as of 30 June 2020 and the 20 largest shareholders as of this date are listed below:

Share register as per 30 June 2020

Shareholder	# of shares	Share-%
Gjelsten Holding AS	6 171 866	19.3 %
Canica AS	2 507 663	7.8 %
Inven2 AS	1 866 658	5.8 %
Watrium AS	1 740 575	5.4 %
Radiumhospitalets Forskningsstiftelse	1 498 913	4.7 %
Langøya Invest AS	1 342 006	4.2 %
Folketrygdfondet	1 180 000	3.7 %
Helene Sundt AS	882 132	2.8 %
CGS Holding AS	882 132	2.8 %
Sundt AS	692 150	2.2 %
Danske Invest Norge Vekst	690 000	2.2 %
Verdipapirfondet KLP AksjeNorge	685 000	2.1 %
Verdipapirfondet Nordea Avkastning	532 817	1.7 %
Brown Brothers Harriman (Lux.) SCA (Nominee)	526 370	1.6 %
Prieta AS	520 988	1.6 %
JP Morgan Chase Bank, N.A., London (Nominee)	492 813	1.5 %
SEB Prime Solutions Sissener Canopus	460 000	1.4 %
Kommunal Landspensjonskasse	442 510	1.4 %
Swedbank AB (Nominee)	382 463	1.2 %
Månebakken AS	349 000	1.1 %
20 Largest shareholders	23 846 056	74.6%
Other shareholders	8 127 455	25.4%
Total	31 973 511	100.0%

On 5 August 2019, FIL Limited ('FIL') announced that the number of shares and right to shares in Ultimovacs ASA that were attributable to FIL had crossed above the threshold of 5% in Ultimovacs ASA due to purchase of shares. FIL is a privately-owned group comprising of two divisions, Fidelity International and Eight Roads.

10. Shared-based payments

Share option program

A new share equity settled option program was introduced in June 2019 and the Board was at the 2019 General Assembly (held 23 April 2020) authorized to increase the Group's share capital in connection with the share incentive arrangement by up to NOK 55 000 (550 000 share options) until the next ordinary General Assembly in 2021.

The share option program is groupwide and includes all employees in the Group. A total of 557,500 options for shares in the Company were distributed amongst the employees in June 2019, and 846,885 options in June 2020. Following the issue of these share options, a total of 1,368,385 options are currently granted, corresponding to 4.91% of the outstanding number of shares in the Company. Each option gives the right to acquire one share in the Company and are granted without consideration.

Pursuant to the vesting schedule, with the exception of the 362,185 options granted to the new CEO, 25% of the options will vest one year after the day of grant, 25% of the options will vest two years after the day of grant and the remaining 50% will vest three years after the day of grant (vesting is dependent on the option holder still being employed in the Company).

The options granted to the new CEO, Carlos de Sousa, will vest with 33.33% one year following the grant date, 33.33% after two years, and the remaining 33.34% on the third anniversary following the grant date (vesting is dependent on the option holder still being employed in the Company).

The exercise price for all options granted in 2019 was NOK 31.25, and NOK 39.15 per share in 2020.

Options that are not exercised within 5 years from the date of grant will lapse and become void.

Total allocation of options to Management Team

Name	Position	Number of options
Carlos de Sousa	Chief Executive Officer	362 185
Hans Vassgård Eid	Chief Financial Officer	118 500
Jens Egil Torbjørn Bjørheim	Chief Medical Officer	109 000
Audun Tørnes	Chief Operating Officer	72 500
Gudrun Trøite	Director Regulatory Affairs and QA	72 500
Ingunn Hagen Westgaard	Head of Research	72 500
Øivind Foss	Head of Clinical Operations	72 500
Gunilla Ekström	Managing Director Ultimovacs AB	43 700

Assumptions, costs and social security provisions:

The Ultimovacs Employee Share Options' fair value is calculated according to the IFRS-2 regulations. As stated in IFRS-2 Appendix B §B5, the Black-Scholes-Merton Option Pricing Model ("B&S Model") may be used to estimate the fair value of employee share options, which is therefore used to estimate the fair value of the Ultimovacs Employee Share Options. The model uses the following parameters; the exercise price, the current price of the underlying shares, the life of the option, the expected volatility of the share price, the dividends expected on the shares, and the risk-free interest rate for the life of the option.

The exercise price is set out in the Ultimovacs Option Award Agreements with each employee and is stated in the Norwegian Krone. The current price of the underlying shares used in the model is the last available closing price of Ultimovacs at grant date.

The risk-free interest rate used in the B&S Model is equal to the rates of the government bond issues of the country in whose currency the exercise price is expressed, with the term equal to the expected term of the option being valued. Since the exercise price is expressed in Norwegian Krone, the "Norges Bank Statskasseveksler" and "Obligasjoner"-rate is used as input. The interest rates used for the options with term structures outside of the quoted terms of Norges Banks interest rates are calculated with the use of a linear interpolation between the two closest quoted rates.

A dividend parameter is not included in the calculations.

The B&S Model assumes that the time from grant until expiry gives the time parameter in the model. This assumption is based on the options being free from restraints and that the owner of the options holds the right to sell the option in the market at any time. As this is not the case for most employee share options, IFRS-2 Appendix B §B16-18, states that a shorter time period can be used as the expected lifetime of the options in some cases. Half a year after vesting date is therefore assumed to be the estimated end-of-lifetime of each option in the model. However, exercise patterns will be monitored, and expected option lifetime will be updated if needed for future grants.

For valuation purposes, an expected future volatility range of 58% - 69% has been applied for the different tranches of options distributed. As Ultimovacs has not been listed on a stock exchange long enough to have a sufficient share price history to calculate the shares' volatility, comparable firms' share price volatility have been used to estimate the expected volatility.

Movement of share options

	Number of share options	Weighted average strike price
Outstanding at opening balance 01.01.2020	557 500	31.25
Granted	846 885	39.15
Exercised	-	-
Forfeited	(36 000)	31.25
Outstanding at closing balance 30.06.2020	1 368 385	36.14
Vested at closing balance	130 375	31.25

Equity-settled share-based payments are measured at the fair value of the equity instruments at the grant date. For equity-settled share-based payment transactions, the liability needs to be remeasured at the end of each reporting period up to the date of settlement, with any changes in fair value recognised in the profit or loss with a corresponding adjustment to equity. This requires a reassessment of the estimates used at the end of each reporting period.

The total expense recognized for the option program in Q2-20 is MNOK 1.8, including social security accruals of MNOK 0.5.

11. IFRS 16 – rental contracts

The Group implemented IFRS 16 in 2019 with the modified retrospective approach. The most significant agreement classified as operating lease is the rental agreement for office premises in Oslo with 3 years left in the rental contract as of 1 January 2020. In addition, there are four car-leasing contracts also classified as operating leases. With the transition to IFRS 16, the Group has recognized these contracts as a right-of-use assets of MNOK 4.6, and lease liabilities of MNOK 4.6 as of 1 January 2019. The weighted average discount applied at 1 January 2019 was 6.0%. Please see the 2019 Annual report for more information.

12. Events after the balance sheet date

No events with significant accounting effect have occurred after the balance sheet date.

Glossary

Words/terms	Description
<i>General/basic terms</i>	
UV1	UV1 is Ultimovacs' synthetic peptide vaccine
Peptides	Peptides are short or long-chains of amino acids, and amino acids are the building blocks of protein.
Adjuvant	A medical substance used to enhance the effect of another medical substance.
GM-CSF	"Granulocyte-macrophage colony-stimulating factor". Ultimovacs uses GM-CSF as adjuvant together with UV1 to strengthen the ability of UV1 to stimulate the immune system.
Immune checkpoint inhibitors	Medicines that "takes the brakes off the immune system". The immune system has brakes necessary to balance a normal immune response. The downside to these brakes is that it makes it easier for a tumor to grow because the immune system becomes less able to fight the tumor. By "blocking the brakes", the immune system becomes more potent in killing tumor cells. PD-1 / PDL-1 inhibitors (Keytruda and Opdivo) and CTLA-4 inhibitors (Yervoy – ipilimumab) are examples of Checkpoint inhibitors. There are many others in development.
Immune response	The activity of the immune system against foreign substances (antigens).
Investigational New Drug (IND)	The United States Food and Drug Administration's Investigational New Drug (IND) program is the means by which a pharmaceutical company obtains permission to start human clinical trials and to ship an experimental drug across state lines (usually to clinical investigators) before a marketing application for the drug has been approved. Similar procedures are followed in the European Union, Japan, and Canada.
CTLA-4	A protein found on T cells (a type of immune cell) that helps balancing a normal immune response. The balance is needed to avoid collateral damage of normal cells. When CTLA-4 is bound to another protein called B7, it helps keep T cells from multiplying and killing other cells, including cancer cells. Ipilimumab works by making it difficult for the CTLA-4 to bind to B7. Ipilimumab (Ipi/Yervoy) was the first checkpoint inhibitor to reach the market.
PD-1 / PD-L1	A protein found on T cells (a type of immune cell) that helps balancing a normal immune response. The balance is needed to avoid collateral damage of normal cells. When PD-1 is bound to another protein called PD-L1, it helps keep T cells from killing other cells, including cancer cells. Some anticancer drugs, called immune checkpoint inhibitors, are used to block PD-1 or PD-L1. When this checkpoint is blocked, the "brakes" on the immune system are released and the ability of T cells to kill cancer cells is increased.
Telomere	To prevent the loss of genes as chromosome ends wear down, the tips of eukaryotic chromosomes have specialized DNA "caps" called telomeres.
Telomerase	Some cells have the ability to reverse telomere shortening by expressing telomerase (hTERT), an enzyme that extends the telomeres of chromosomes. Telomerase is expressed at a high level in over 85% of human tumors. UV1 uses telomerase (hTERT) as an immune therapy target.

Tetanus	Tetanus (Norwegian: “Stivkrampe”) is a serious illness contracted through exposure to the spores of the bacterium, Clostridium tetani, which live in soil, saliva, dust, and manure. The bacteria can enter the body through a deep cuts, wounds or burns affecting the nervous system. The infection leads to painful muscle contractions, particularly of the jaw and neck muscle, and is commonly known as “lockjaw”. Tetanus vaccination protects against the disease.
<i>Checkpoint inhibitors</i>	
Yervoy (ipilimumab)	CTLA-4 checkpoint inhibitor from BMS (Bristol-Myers Squibb)
Opdivo (nivolumab)	PD-1 checkpoint inhibitor from BMS (Bristol-Myers Squibb)
Keytruda (pembrolizumab)	PD-1 checkpoint inhibitor from Merck
Tecentriq (atezolizumab)	PD-L1 checkpoint inhibitor from Roche
Bavencio (avelumab)	PD-L1 checkpoint inhibitor from Merck (Germany)/Pfizer/Eli Lilly
Imfinzi (durvalumab)	PD-L1 checkpoint inhibitor from AstraZeneca
<i>Clinical trial terms</i>	
CR	Complete response (The disappearance of all signs of cancer in response to treatment. Also called complete remission.)
PR	Partial response (A decrease in the size of a tumor, or in the extent of cancer in the body, in response to treatment. Also called partial remission.)
SD	Stable disease (Cancer that is neither decreasing nor increasing in extent or severity.)
PD	Progressive disease (Cancer that is growing, spreading, or getting worse.)
ORR	Overall response rate = CR + PR
DOR	Duration of response (The length of time that a tumor continues to respond to treatment without the cancer growing or spreading.)
OS	Overall survival (The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that patients diagnosed with the disease are still alive. In a clinical trial, measuring the overall survival is one way to see how well a new treatment works.)
PFS	Progression-free survival (The length of time during and after the treatment of a disease, such as cancer, that a patient lives with the disease but it does not get worse. In a clinical trial, measuring the progression-free survival is one way to see how well a new treatment works.)
<i>Medical terms</i>	
Intradermal	In order to initiate an immune response, a vaccine must be taken up by antigen presenting cells (dendritic cells). UV1 is administered via the intradermal route, i.e. injection in the dermis, one of the layers of the skin. This layer, underneath the epidermis, is highly vascularized and contains a large amount of immune cells, mainly dermal dendritic cells.
Biopsy	A piece of tissue, normal or pathological removed from the body for the purpose of examination.
IgE	Immunoglobulin E (IgE) are antibodies produced by the immune system. If you have an allergy, your immune system overreacts to an allergen (what you are allergic to) by producing IgE. These antibodies

	travel to cells that release chemicals, causing an allergic reaction when an allergen enters the body.
Metastasis/ Metastatic cancer	The development of malignant growths at a distance from a primary site of cancer/ Metastatic cancer is cancer that spreads from its site of origin to another part of the body.
SAE	A serious adverse event (SAE) in human drug trials is defined as any untoward medical occurrence that at any dose <ol style="list-style-type: none"> 1. results in death, 2. is life-threatening 3. requires inpatient hospitalization or causes prolongation of existing hospitalization 4. results in persistent or significant disability/incapacity, 5. is a congenital anomaly/birth defect, or 6. requires intervention to prevent permanent impairment or damage. <p>The term "life-threatening" in the definition of "serious" refers to an event in which the patient was at risk of death at the time of the event; it does not refer to an event which hypothetically might have caused death if it were more severe. Adverse events are further defined as "Any untoward medical occurrence in a patient or clinical investigation subject administered a pharmaceutical product and which does not necessarily have to have a causal relationship with this treatment."</p>
PSA	Prostate-specific antigen (PSA) is an enzyme (protein) important for reproduction. PSA is present in small quantities in the serum of men with healthy prostates, but is often elevated in the presence of prostate cancer or other prostate disorders.

Disclaimer

The information in this presentation has been prepared by Ultimovacs ASA ('Ultimovacs' or the 'Company').

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About Ultimovacs

Ultimovacs is a pharmaceutical company developing novel immunotherapies against cancer. The lead product candidate is UV1, a peptide-based vaccine inducing a specific T cell response against the universal cancer antigen telomerase. UV1 is being developed as a therapeutic cancer vaccine which may serve as a platform for use in combination with other immuno-oncology drugs which require an ongoing T cell response for their mode of action. Ultimovacs is performing a broad clinical development program with clinical trials in Europe, Australia and the USA.

Ultimovacs was established in 2011 and is a public limited liability company listed on the Oslo Stock Exchange in Norway. The company and its proprietary technology is based on pre-clinical and clinical research on immunotherapies conducted at the Oslo University Hospital.

Ultimovacs is headquartered at the Oslo Cancer Cluster Innovation Park in Oslo, Norway, and also has an office in Uppsala, Sweden. Ultimovacs is an active member of Oslo Cancer Cluster.