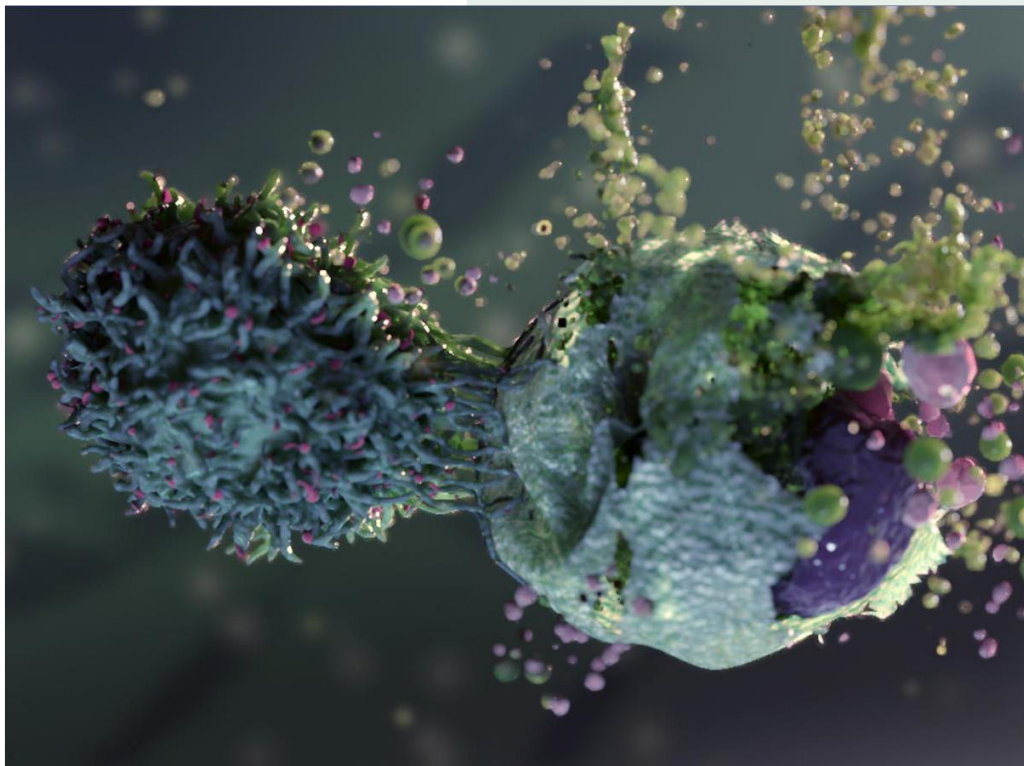


2021

Second quarter report

Ultimovacs ASA



Second Quarter 2021

Ultimovacs' universal cancer vaccine UV1 is progressing in one Phase I trial and four Phase II trials. The Company has shared new and promising early safety and efficacy data of UV1 in advanced melanoma with scientists, clinicians, potential partners and investors. Ultimovacs' second technology platform approach, based on the Tetanus-Epitope Targeting (TET)-platform, has passed its first test in human trials.

Operational

- Data from cohort 1 in the Phase I clinical trial of UV1 combined with pembrolizumab were presented in June at the American Society of Clinical Oncology (ASCO) 2021 Annual Meeting. The primary endpoint of safety and tolerability was achieved with strong initial signs of clinical response.
- Results from the 10 patients in cohort 2 of the same trial released on 12 August also showed strong safety and efficacy data after one year (60% objective response, 30% complete response, 90% overall survival and median progression-free survival not reached), reinforcing the cohort 1 data presented at ASCO.
- INITIUM trial: 68 patients enrolled to date compared to 40 patients in the previous quarterly report.
- NIPU trial: 38 patients enrolled to date compared to 29 patients in the previous quarterly report.
- FOCUS trial: The first patient was enrolled on 4 August 2021.
- DOVACC trial: Regulatory approval is in place and the first patient is expected to be enrolled during Q3 2021.
- TENDU trial: Enrollment of the first cohort of three patients treated with a 40 µg dose was completed. In June 2021, having found no safety concerns in the first cohort, the Drug Safety Monitoring Board allowed the dose to be increased to 400 µg for the next patient in cohort 2.
- COVID-19: The effect of the pandemic on the biotech industry and the general ability to conduct clinical trials is still uncertain and dependent on the speed of return to a more normal situation. The Company continues to monitor the situation and to implement activities to minimize the impact on patient recruitment.

Financial

- Total operating expenses amounted to **MNOK 39.2** in Q2-21, and **MNOK 70.4** YTD.
- Cash flow from operations was **MNOK -29.8** in Q2-21, and **MNOK -59.2** YTD. Total cash and cash equivalents were reduced by MNOK **29.7** during Q2-21 and amounted to **MNOK 381.8** as per 30 June 2021.

Key financials

NOK (000) Unaudited	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Total revenues	-	-	-	-	-
Total operating expenses	39 171	36 183	70 386	67 442	124 146
Operating profit (loss)	(39 171)	(36 183)	(70 386)	(67 442)	(124 146)
Profit (loss) for the period	(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Diluted and undiluted earnings / (loss) per share (NOK)	(1.1)	(1.2)	(2.2)	(2.3)	(4.0)
Net increase / (decrease) in cash and cash equivalents	(29 657)	115 247	(57 871)	83 768	42 058
Cash and cash equivalents at end of period	381 799	483 159	381 799	483 159	440 925
	NOK/EUR - 10.17				
Cash and cash equivalents at end of period - EUR (000)	37 542				

CEO's Statement

Strengthening Momentum of UV1

In the second quarter of 2021, Ultimovacs further strengthened the clinical validation of our lead vaccine candidate, UV1, broadened the Phase II development program for UV1 and progressed the new TET technology platform.

Advancing clinical validation of UV1

We released some of our Phase I clinical data for UV1 in advanced malignant melanoma at the American Society of Clinical Oncology annual meeting (ASCO) in June 2021. That data indicated that a higher proportion of patients' tumors became smaller when treated with the combination of UV1 and the checkpoint inhibitor, pembrolizumab, than in earlier trials of pembrolizumab alone. Similarly, a substantially higher proportion of patients survived for at least a year. The data also shows that the UV1/pembrolizumab combination is well tolerated, supporting the use of UV1 in combination treatments.



The ASCO data sparked significant interest not only from clinicians but also among the investment and partnering community. In August we announced that the one-year data from the second cohort of patients shows the same high level of responses and survival rates seen previously. This confirms UV1's potential to improve the performance of checkpoint inhibitor antibodies, a class of drugs that are already widely used and highly effective in treating many types of solid cancer.

Doubling the size of our Phase II pipeline

UV1 is now being investigated in four Phase II trials covering over 500 patients in total, in combination with various checkpoint inhibitors. All four trials are randomized, with a proportion of the patients given the standard therapy and the remainder given standard therapy plus UV1. The stringent trial format gives a precise basis for assessing the effectiveness and safety of UV1 in multiple indications and different combinations.

Across the clinical trial program patient engagement is increasing, notably in Ultimovacs-sponsored INITIUM trial in advanced melanoma where patient recruitment accelerated markedly. We established more clinical trial sites in both INITIUM and NIPU during the second quarter and the start of two additional UV1 combination Phase II trials – FOCUS and DOVACC – will add further momentum. FOCUS enrolled its first patient in August 2021 and we expect enrollment in DOVACC to begin in Q3 2021, now that the regulatory approval is in place.

Building awareness and understanding of UV1

As the clinical picture for UV1 emerges, we continue to share our understanding of how UV1 works in tandem with other immunotherapies to combat cancer. In addition to our presentation at ASCO, we shared details of the INITIUM study design at the American Association for Cancer Research (AACR) Annual Meeting in April, and in June we published the design of the NIPU trial in the peer-reviewed *Journal of Translational Medicine*. Earlier in the quarter, we also published a scholarly review in *Frontiers in Immunology* that examines the relevance of the telomerase enzyme as a cancer vaccine antigen target and analyzes the underlying limitations of current standard treatments.

Broadening our technology platform with TET

As Ultimovacs advances to the next stage of development, we are broadening our pipeline with a second technology platform, the Tetanus-Epitope-Targeting (TET) platform, progressing through a dose-escalating Phase I study (TENDU) in prostate cancer patients. The TET platform allows the inclusion of a broad range of peptides and antigens, giving us the ability to design vaccine candidates that can target different cancer indications at different stages for specific populations.

Looking ahead

Our priority remains focused on bringing novel and improved treatment options to cancer patients. In the second half of 2021, we will continue to advance recruitment across all four Phase II trials of UV1. In Q4 we will update data from our Phase I combination trial with pembrolizumab for metastatic malignant melanoma. By the end of 2021, we expect to release interim safety and immune activation data from the TENDU trial, opening the way for a range of new vaccine solutions based on the TET technology.

Ultimovacs is gaining momentum on many fronts and our scientific standing and clinical achievements are gaining traction. We will continue to communicate our progress to investors and potential collaborators as we build our leadership in cancer vaccines and immune oncology.

Carlos de Sousa, Chief Executive Officer

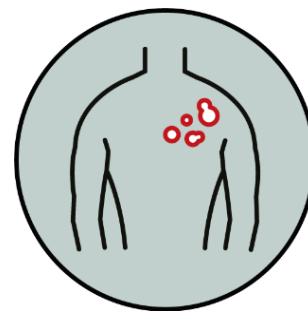
Key Operational Highlights Q2 2021

Clinical trial update (as per reporting date, unless otherwise specified)

The INITIUM trial

The first INITIUM patient was treated at the Oslo University Hospital (OUS) in June 2020. A total of 68 patients have been enrolled, compared to 40 patients in the previous quarterly report.

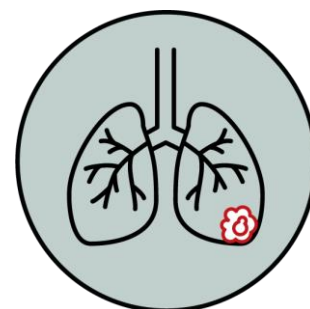
INITIUM is an Ultimovacs-sponsored randomized Phase II trial for first-line treatment of patients with metastatic malignant melanoma. Patients will be administered UV1 in combination with ipilimumab (CTLA-4 checkpoint inhibitor) and nivolumab (PD-1 checkpoint inhibitor). A total of 38 sites/hospitals are participating in this trial being run in the US and Europe, including Norway. In total, 154 patients will be enrolled, half receiving nivolumab and ipilimumab and the other half receiving nivolumab, ipilimumab and UV1. Planned readout of the primary endpoint of progression-free survival is H2-2022. Dr. Karl Lewis, University of Colorado Hospital, has been appointed as International Coordinating Investigator of the INITIUM trial.



The NIPU trial

The first patient in the NIPU trial was treated at the Oslo University Hospital (OUS) in June 2020 and a total of 38 patients have been enrolled compared to 29 patients in the previous quarterly report. The study is being conducted in five countries (Norway, Sweden, Denmark, Spain and Australia).

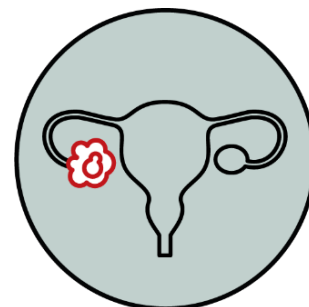
NIPU is a randomized, multi-center Phase II trial in which the universal cancer vaccine, UV1, will be evaluated in combination with the checkpoint inhibitors ipilimumab and nivolumab as second-line treatment in mesothelioma. Oslo University Hospital is the sponsor of the NIPU study. Bristol-Myers Squibb and Ultimovacs have entered into agreements with OUS to support the preparations and execution of the trial. NIPU will include 118 patients; half will be treated with the combination of UV1, ipilimumab and nivolumab and half will receive nivolumab and ipilimumab only.



The objective of the study is to achieve 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 PFS readout is planned for H2-2022.

The DOVACC trial

DOVACC (**D**urvalumab **O**laparib **VACC**ine) is a multi-center, multinational, randomized Phase II clinical collaboration trial with the Nordic Society of Gynaecological Oncology – Clinical Trial Unit (NSGO-CTU), the European Network of Gynaecological Oncological Trial Groups (ENGOT), AstraZeneca and Ultimovacs. The trial is sponsored by the NSGO, the leading gynecological oncology research society in the Nordic and Baltic regions. Ultimovacs will provide the UV1 vaccine and AstraZeneca will provide durvalumab and olaparib for the study.



The trial is designed to evaluate UV1 in combination with AstraZeneca's durvalumab, a PD-L1 checkpoint inhibitor and its PARP inhibitor, olaparib, the maintenance therapy for BRCA-mutated, advanced ovarian cancer. The trial will be conducted at more than 40 hospitals in as many as 10 European countries. Regulatory approval is in place and the first patient is expected to be enrolled during Q3 2021. Top line data on the primary endpoint is expected in 2023.

The second-line maintenance study will enroll patients with high-grade BRCA-negative ovarian cancer after partial or complete response following the second round of chemotherapy. The study is enrolling a total of 184 patients divided (randomized) into three treatment groups: 46 patients will receive olaparib; another 46 will receive olaparib and durvalumab; 92 patients will receive Ultimovacs' UV1 vaccine in combination with both AstraZeneca drugs. The primary endpoint is to compare the preliminary efficacy of maintenance treatment (progression-free survival) with olaparib to that of the triple combination treatment arm (olaparib plus durvalumab and UV1).

The FOCUS trial

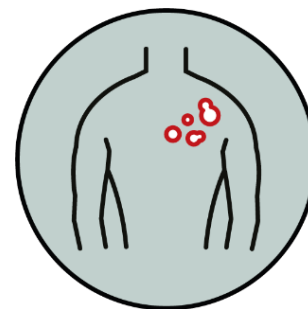
The first patient in the FOCUS trial was treated in August 2021. The FOCUS trial (**F**irst-line metastatic **O**r recurrent HNSCC/**C**heckpoint inhibitor **UV1** Study) is an investigator-sponsored, randomized Phase II clinical trial. It will recruit patients with recurrent or metastatic PD-L1 positive head and neck squamous cell carcinoma at 10 sites across Germany. FOCUS is led by principal investigator Prof. Mascha Binder, Medical Director and Head of the Immunological Tumor Group at University Medicine Halle, Germany, a renowned oncology clinician and researcher specializing in the analysis of immuno-oncology treatments and their interaction with tumor tissues.



The trial will evaluate the addition of UV1 to a standard of care treatment with PD-1 checkpoint inhibitor pembrolizumab as compared to pembrolizumab monotherapy. A total of 75 patients indicated for treatment with pembrolizumab will be enrolled in FOCUS, randomized 2-to-1 so that 50 patients will receive UV1 and pembrolizumab and 25 patients will receive pembrolizumab alone. The primary endpoint of the study is the progression-free survival rate at 6 months. Top line data on the primary endpoint is expected in 2023.

Ongoing Phase I trial in malignant melanoma

This US-based Phase I clinical trial is evaluating the Company's lead candidate, UV1, in combination with the PD-1 checkpoint inhibitor, pembrolizumab, as a first-line treatment in patients with metastatic malignant melanoma. 20 patients (first cohort) were enrolled by September 2019. Ten additional patients (second cohort) were enrolled by August 2020 to investigate an increased dosage of the adjuvant GM-CSF.



On 19 May 2021, Ultimovacs announced clinical data from the Company's Phase I trial evaluating its universal cancer vaccine, UV1, in combination with the checkpoint inhibitor pembrolizumab in patients with metastatic malignant melanoma as a poster presentation at the American Society of Clinical Oncology (ASCO) 2021 Annual Meeting. The data showed a 60% overall response rate (6 complete responses and 6 partial responses from a 20-patient cohort) with a 30% complete response. The median progression-free survival for the UV1/pembrolizumab combination in the study was 18.9 months and the overall survival was 80%, with the median overall survival yet to be reached after 21-months of follow-up.

In August 2021, the Company announced 12-month data from the second cohort. Tumor shrinkage was evident in six of the 10 patients, a 60% objective response rate. In three of the patients, the tumors were reduced to undetectable levels, a 30% complete response rate. The overall survival (OS) rate after one year was 90%. Median progression-free survival (mPFS) was not reached, a positive outcome indicating that the disease had either improved or was stable in at least half of the participating patients in both parts of the study.

Recently, the response for one patient in cohort 1 was reclassified from partial response to stable disease. The combined results for the 30 patients in cohort 1 and cohort 2 are:

- Overall survival (OS) at 12 months: 87%
- Objective response rate (ORR): 57%
- Complete response rate (CR): 30%
- Median progression-free survival (mPFS) at 12 months is not reached

UV1 has demonstrated a good safety profile. No unexpected safety issues related to UV1 have been observed in this trial.

During the fourth quarter of 2021, two-year follow-up data from the first cohort will be reported.

Follow-up trials

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

Completed Phase I trials in follow-up

Clinical trial ⁴	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 %	33 %	28.2	10.7
Malignant Melanoma (n=12)	75 %	75 %	67 %	50 %	50 %	Will be > 54 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. Prostate: (EudraCT No. 2012-002411-26) NSCLC: (EudraCT No. 2012-001852-20) MM: (EudraCT No. 2013-005582-39)

The TET-platform and the TENDU clinical trial

In addition to its universal vaccine, UV1, Ultimovacs is planning to develop novel vaccine products based on the patent-protected Tetanus-Epitope Targeting (TET)-platform. The TET-platform combines antigens and the vaccine adjuvant in the same molecule. This allows a beneficial safety profile and simplifies administration, offering a promising approach to strengthen and increase T cell responses against cancer-specific peptides. The platform generates new, first-in-class cancer vaccine candidates that harness pre-existing antibody responses against tetanus induced by standard tetanus vaccination. TET vaccine candidates can be tailored to many types of cancer, and to infectious diseases.

Ultimovacs has started TENDU, its first Phase I trial to test the TET technology in patients with the main objective to assess the safety of the TET technology. In **TENDU**, the TET technology incorporates prostate-cancer-specific antigens. The first patient was treated in February 2021. Enrollment of the first cohort of three patients was completed during the second quarter. In June, having found no safety concerns in the first cohort, the Drug Safety Monitoring Board allowed the dose to be increased to 400 µg for the next patient in cohort 2, who is expected to be enrolled in Q3 2021. The TENDU trial is being conducted at Oslo University Hospital, and in total 9-12 patients will be enrolled. This Phase I trial will provide valuable safety and immune activation data that will support the further development of new vaccine solutions based on the TET technology.

Publications and presentations

In April, Ultimovacs presented the INITIUM Study Design as a Trial-in-Progress Poster at the AACR Annual Meeting 2021, held virtually from April 9 to April 14, 2021. The poster, titled "Nivolumab and ipilimumab +/- UV1 vaccine as 1st line treatment in patients with malignant melanoma (INITIUM-trial)", gives details on the INITIUM study, a randomized, open label study investigating the efficacy and safety of UV1 vaccination in combination with nivolumab and ipilimumab as first line treatment in histologically confirmed unresectable metastatic melanoma patients. *(also presented in the Q1 report)*

In May 2021, a paper was published in "Frontiers in Immunology" outlining the positive long-term Overall Survival data from the Phase I trial evaluating UV1 in combination with ipilimumab in patients with metastatic malignant melanoma. As published in the journal, in addition to the achievement of the primary endpoints of safety and tolerability, 50% of the patients were still alive at the data cut-off, supporting the combination of the Company's proprietary UV1 vaccine with ipilimumab, a CTLA-4 checkpoint inhibitor and standard-of-care treatment, in this late-stage patient population.

On 19 May 2021, Ultimovacs announced clinical data on the Company's Phase I trial evaluating UV1 in combination with the checkpoint inhibitor pembrolizumab in patients with metastatic malignant melanoma, which was presented as a poster presentation at the American Society of Clinical Oncology (ASCO) 2021 Annual Meeting, June 4-8, 2021. The abstract, titled "A Phase I Clinical Trial Investigating the Telomerase Vaccine UV1 in Combination with Pembrolizumab in Patients with Advanced Melanoma", provided an overview of the open-label, single-arm study investigating the safety and tolerability for the UV1/pembrolizumab combination.

On 5 July 2021, Ultimovacs announced the publication of a review of telomerase-based therapeutic cancer vaccines including the Company's universal cancer vaccine, UV1. The article in "Frontiers in Immunology" examines the broad relevance of telomerase as an attractive cancer target and examines opportunities for optimizing anti-telomerase vaccine performance both by selecting appropriate cancer types and by analyzing the underlying limitations of current standard treatments. The article focusses on the synergy between telomerase-based cancer vaccines and checkpoint inhibitors. In particular, it highlights areas within cancer treatment where clinical trials have shown that specific combinations of the two components are more effective than either component used alone.

Organization and board

On 15 April 2021, Ultimovacs ASA held its annual general meeting. All the matters on the agenda were approved. Following the annual general meeting, the composition of the Board of Directors and the Nomination Committee remains unchanged. *(also presented in the Q1 report)*

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 preclinical 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 U.S.

The Company's lead product candidate is UV1, a next generation peptide-based vaccine inducing a specific T cell response against the universal cancer antigen telomerase (hTERT), expressed at a high level in over 80% of human tumors. The vaccine's mode of action is to make the immune system produce CD4 T cells (i.e., T helper cells) that recognize 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 does not require 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, it would be attractive to investigate the use of a vaccine like UV1 in early-stage tumors.

Treatment with UV1 has been assessed in three Phase I studies (metastatic prostate cancer, metastatic non-small cell lung cancer and metastatic malignant melanoma) in 52 patients at the Oslo University Hospital. The observed clinical outcomes from the three completed trials served as a strong basis for the further clinical development of UV1, both with respect to safety, immune response and signals of clinical effect. In addition, Ultimovacs is the sponsor of the fully enrolled and ongoing Phase I clinical study in the U.S. evaluating the safety and tolerability of treatment with UV1 and pembrolizumab (PD-1 checkpoint inhibitor) in 30 patients with metastatic malignant melanoma.

Ultimovacs has an extensive development program with four phase II studies in four different indications including more than 500 patients:

- **INITIUM (154 patients):** Ultimovacs sponsored trial in malignant melanoma in which UV1 is combined with nivolumab and ipilimumab.
- **NIPU (118 patients):** trial in mesothelioma, UV1 in combination with nivolumab and ipilimumab. Oslo University Hospital is the sponsor of the NIPU study. Bristol-Myers Squibb and Ultimovacs have entered into agreements with Oslo University Hospital to support the execution of the trial.
- **DOVACC (184 patients):** trial in collaboration with the Nordic Society of Gynaecological Oncology Clinical Trial Unit, the European Network of Gynaecological Oncological Trial Groups and AstraZeneca. UV1 is tested in combination with AstraZeneca's durvalumab and olaparib (PARP inhibitor) in patients with relapsed ovarian cancer.
- **FOCUS (75 patients):** trial in collaboration with the Immunological Tumor Group at University Medicine Halle, Germany, where UV1 will be given in combination with pembrolizumab in head and neck cancer patients.

In addition, the Company will expand its pipeline using its novel TET technology platform that can generate multiple vaccine candidates designed to achieve increased T cell responses to a broad range of target antigens.

Outlook

Ultimovacs' UV1 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., independent of HLA type). The vaccine is easy to manufacture and does not require a sophisticated hospital infrastructure to be administered. 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 financial benefits could be highly attractive.

The fully enrolled Phase I study in malignant melanoma, evaluating UV1 in combination with pembrolizumab, is expected to provide valuable information regarding UV1's safety and GM-CSF safety and dosing. During Q4 2021, 2-year data for cohort 1 will be reported. 2-year data for cohort 2 will be available in Q3 2022.

As of the first half of 2021, UV1 will be investigated in four randomized Phase II trials in four different cancer types, with Ultimovacs sponsoring one of the trials. The four Phase II clinical trials will enroll more than 500 patients in total, representing a strong potential platform for Ultimovacs to move toward a possible registration of the universal cancer vaccine, UV1. The main study objectives are efficacy and safety data on the combination therapies. The INITIUM and NIPU trials have expected readouts for their primary endpoints during the second half of 2022. The DOVACC and FOCUS trials have expected readouts of the primary endpoints during 2023. The Company is actively monitoring the COVID-19 pandemic regarding patient enrollment in its Phase II clinical trials and continues to implement activities to minimize the impact.

Ultimovacs is continuously in discussions and pursuing discussions to establish strategic collaborations with cancer institutions and pharmaceutical companies supporting the documentation of the effect and safety of UV1 in other cancer types and in combination with different cancer treatments. Ultimovacs is making clinical development choices based on the knowledge that UV1 is a universal vaccine on 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. With positive results from the ongoing randomized clinical trials, the development potential is significant.

Ultimovacs also seeks to broaden its pipeline of drug candidates. The R&D activities are currently focused on the development of new first-in-class cancer vaccine solutions 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 preclinical development, the ambition is to apply the TET technology and identify new cancer vaccine program candidates to move into clinical development.

Risks and uncertainties

Ultimovacs is a research and development company. The Company has not generated revenues historically and is not expected to do so in the near 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 invested in foreign operations, the net assets of which 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 is protected from operational and financial consequences. The ultimate 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 may affect:

- The initiation, patient inclusion and conduct of clinical trials
- Disruption of the supply chain (manufacturing and/or logistics) for the investigational products
- Fluctuations in currency exchange rates, (NOK/EUR and NOK/USD), which may increase R&D costs

The effects of the pandemic on the biotech industry and the general ability to conduct clinical trials, and the specific potential effect on Ultimovacs, are 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.

Ultimovacs' financial risk exposures are described in more detail in the Annual Report 2020. 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 Q2-21 (**MNOK 14.5**) compared to the same period in FY20 (MNOK 13.2), mainly due to higher share-option costs this quarter and two additional full-time employees in this period compared to Q2-20. Total personnel expenses YTD-21 was **MNOK 26.7** compared to MNOK 23.2 in YTD-20.

Other operating expenses (**MNOK 24.0** in Q2-21 and MNOK 22.4 in Q2-20) primarily comprise R&D related expenses. These expenses, including IP and external R&D expenses, offset by government grants, amounted to **MNOK 20.6** in Q2-21, and MNOK 19.9 in Q2-20. With the initiation of two Phase II trials in FY21, the R&D costs are expected to be at a higher level than in prior periods, however total R&D expenditure may vary significantly from quarter to quarter. Total other operating expenses YTD-21 (**MNOK 42.2**) were slightly lower compared to YTD-20 (MNOK 43.0)

Net financial items amounted to **MNOK 2.7** in Q2-21, compared to MNOK 1.3 in Q2-20. As of Q1-21, financial items primarily comprise currency fluctuations from EUR at bank and the value of EUR currency future contracts swapped on a monthly basis.

Total loss for the Q2-21 period amounted to **MNOK 36.5**, compared to MNOK 34.9 in Q2-20. Total loss YTD-21 amounted to **MNOK 70.3** compared to a loss of MNOK 65.2 YTD-20.

Financial position

Total assets per 30 June 2021 were **MNOK 466.5**, a decrease of MNOK 63.2 from 31 December 2020 primarily as a result of negative operational cashflow. MNOK 0.6 in 'receivables and prepayments' are related to the fair value of EUR future contracts.

Total liabilities as of 30 June 2021 amounted to **MNOK 43.9**, of which MNOK 12.7 non-current.

Total equity equaled **MNOK 422.5** as of 30 June 2021. A capital increase in March related to the exercise of stock options resulted in gross proceeds of MNOK 0.9. Further, total equity has since year-end 2020 been decreased by the period's operating loss and currency translation amounting to **MNOK 64.7**, and in addition been increased by the recognition of share-based payments/stock options of **MNOK 2.1**.

On the basis of the approval by the General Meeting on 15 April 2021, the Board of Directors resolved to issue share options, as part of the long-term incentive program, to all employees in the Company. A total of 600,000 options for shares in the Company were distributed amongst the employees. The number of options granted corresponded to 1.87% of the outstanding number of shares in the Company. Following the distribution of 600,000 new options in 2021, a total of 1,892,085 share options have been granted as per 30 June 2021, corresponding to 5.91% of the outstanding number of shares in the Company. *(also presented in the Q1 report)*

Cash flow

The total net decrease in cash and cash equivalents in Q2-21 was **MNOK 29.7**, which is primarily related to net negative cash-flow from operations amounting to **MNOK 29.8**. Total cash and cash equivalents was **MNOK 381.8** per 30 June 2021.

Key financials

NOK (000) Unaudited	Q2-21	Q2-20	YTD-21	YTD-20	FY20
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Total operating expenses	39 171	36 183	70 386	67 442	124 146
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Profit (loss) for the period	(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Diluted and undiluted earnings / (loss) per share (NOK)	(1.1)	(1.2)	(2.2)	(2.3)	(4.0)
Net increase / (decrease) in cash and cash equivalents	(29 657)	115 247	(57 871)	83 768	42 058
Cash and cash equivalents at end of period	381 799	483 159	381 799	483 159	440 925
NOK/EUR - 0.17					
Cash and cash equivalents at end of period - EUR (000)	37 542				

Responsibility Statement

We confirm, to the best of our knowledge, that the unaudited condensed interim financial statement for the six months ended 30 June 2021 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 party transactions.

The Board of Directors and CEO of Ultimovacs ASA

Oslo, 19 August 2021

Jónas Einarsson
Chairman of the Board
(Sign.)

Kari Grønås
Board member
(Sign.)

Eva S. Dugstad
Board member
(Sign.)

Henrik Schüssler
Board member
(Sign.)

Ketil Fjerdingsén
Board member
(Sign.)

Leiv Askvig
Board member
(Sign.)

Aitana Peire
Board member
(Sign.)

Haakon Stenrød
Board member
(Sign.)

Carlos de Sousa
CEO
(Sign.)

Interim condensed consolidated statement of comprehensive income

NOK (000) Unaudited	Note	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Other operating income		-	-	-	-	-
Total revenues		-	-	-	-	-
Payroll and payroll related expenses	3, 5	14 514	13 197	26 716	23 212	50 989
Depreciation and amortization		696	633	1 446	1 219	2 720
Other operating expenses	4, 5	23 961	22 353	42 224	43 011	70 438
Total operating expenses		39 171	36 183	70 386	67 442	124 146
Operating profit (loss)		(39 171)	(36 183)	(70 386)	(67 442)	(124 146)
Financial income		3 582	1 421	4 551	2 940	5 209
Financial expenses		876	147	4 427	744	1 616
Net financial items		2 706	1 274	124	2 196	3 594
Profit (loss) before tax		(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Income tax		-	-	-	-	-
Profit (loss) for the period		(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Other comprehensive income (loss) - Currency translation		418	(940)	(2 069)	3 490	4 590
Total comprehensive income (loss) for the period		(36 047)	(35 848)	(72 331)	(61 755)	(115 962)
Diluted and undiluted earnings/(loss) pr share (NOK)	6	(1.1)	(1.2)	(2.2)	(2.3)	(4.0)

Interim condensed consolidated statement of financial position

NOK (000) Unaudited	Note	30 Jun 2021	30 Jun 2020	31 Dec 2020
ASSETS				
Goodwill		11 388	11 578	11 795
Licenses		55 280	56 203	57 258
Patents		6 916	7 670	7 293
Property, plant and equipment		221	524	377
Right to use asset	11	2 737	3 369	3 630
Total non-current assets		76 541	79 345	80 354
Receivables and prepayments	7	8 155	10 740	8 438
Bank deposits		381 799	483 159	440 925
Current assets		389 954	493 899	449 363
TOTAL ASSETS		466 495	573 245	529 717
EQUITY				
Share capital		3 200	3 197	3 197
Share premium		810 140	809 214	809 214
Total paid-in equity		813 341	812 411	812 411
Accumulated losses		(409 861)	(284 292)	(339 599)
Other equity		14 330	4 172	8 762
Translation differences		4 737	5 706	6 806
TOTAL EQUITY	6, 9	422 547	537 996	488 380
LIABILITIES				
Lease liability	11	1 283	1 466	2 075
Other non-current liabilities		-	4 954	-
Deferred tax		11 388	11 578	11 795
Non-current liabilities		12 670	17 997	13 870
Accounts payable		15 321	8 671	8 611
Lease liability	11	1 606	2 035	1 707
Other current liabilities		14 351	6 544	17 149
Current liabilities	8	31 278	17 251	27 467
TOTAL LIABILITIES		43 948	35 248	41 337
TOTAL EQUITY AND LIABILITIES		466 495	573 245	529 717

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 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
Balance at 1 Jan 2021	3 197	809 214	(339 599)	8 762	6 806	488 380
Loss for the period	-	-	(70 262)	-	-	(70 262)
Issue of ordinary shares	3	927	-	-	-	930
Share issue costs	-	-	-	-	-	-
Recognition of share-based payments	-	-	-	5 568	-	5 568
Translation differences	-	-	-	-	(2 069)	(2 069)
Balance at 30 Jun 2021	3 200	810 140	(409 861)	14 330	4 737	422 547

Interim condensed consolidated statement of cash flow

NOK (000) Unaudited	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Loss before tax	(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Non-cash adjustments					
Depreciation and amortization	696	633	1 446	1 219	2 720
Interest received incl. investing activities	(600)	(994)	(1 450)	(2 494)	(4 545)
Net foreign exchange differences	(2 201)	(337)	1 165	178	747
Other finance expense	48	57	102	119	236
Share option expenses	3 266	1 334	5 568	2 186	6 777
Working capital adjustments:					
Changes in prepayments and other receivables	(990)	(1 091)	283	(2 736)	(433)
Changes in payables and other current liabilities	6 491	2 108	3 912	1 237	6 828
Net cash flow from operating activities	(29 755)	(33 200)	(59 236)	(65 535)	(108 223)
Purchase of property, plant and equipment	-	(20)	-	(202)	(282)
Patent milestone payment	-	(5 000)	-	(5 000)	(5 000)
Interest received	600	994	1 450	2 494	4 545
Net cash flow used in investing activities	600	(4 026)	1 450	(2 708)	(736)
Proceeds from issuance of equity	-	160 000	930	160 000	160 000
Share issue cost	-	(7 067)	-	(7 067)	(7 067)
Interest paid	-	-	-	-	-
Payment of lease liability	(503)	(461)	(1 014)	(921)	(1 916)
Net cash flow from financing activities	(503)	152 472	(85)	152 012	151 017
Net change in cash and cash equivalents	(29 657)	115 247	(57 871)	83 768	42 058
Effect of change in exchange rate	2 168	227	(1 256)	(216)	(739)
Cash and cash equivalents at beginning of period	409 288	367 686	440 925	399 607	399 607
Cash and cash equivalents at end of period	381 799	483 159	381 799	483 159	440 925

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 2020 financial statements. These condensed interim financial statements should therefore be read in conjunction with the 2020 financial statements.

The Group uses derivative financial instruments to hedge its risks associated with foreign exchange rates. Derivatives are initially and subsequently measured at fair value. Derivatives are carried as assets when the fair value is positive and as liabilities when the fair value is negative. The gain/(loss) arising from changes in fair value of currency derivatives is presented as part of "Financial income/expenses" in the consolidated statement of comprehensive income.

The Group does not have any derivatives that are used for hedge accounting.

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 19 August 2021. The figures in the statements have not been audited.

3. Personnel expenses

Personnel expenses

NOK (000)	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Salaries and bonuses	8 373	9 945	17 685	17 615	34 612
Social security tax	3 225	1 660	3 867	2 627	9 299
Pension expenses	637	581	1 277	1 074	2 020
Share-based compensation	3 266	1 334	5 568	2 186	6 777
Other personnel expenses	73	159	180	191	430
Government grants	(1 060)	(482)	(1 860)	(480)	(2 150)
Total personnel expenses	14 514	13 197	26 716	23 212	50 989
Number of FTEs at end of period	21	19	21	19	19

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)	Q2-21	Q2-20	YTD-21	YTD-20	FY20
External R&D expenses	21 397	19 680	39 050	37 367	64 660
Clinical studies	14 096	12 628	21 708	27 445	47 680
Manufacturing costs	6 020	1 964	10 560	3 852	5 710
Other R&D expenses	1 281	5 088	6 782	6 070	11 270
IP expenses	1 132	560	1 830	962	2 949
Rent, office and infrastructure	961	767	1 806	1 385	2 786
Accounting, audit, legal, consulting	1 730	663	2 531	1 558	3 978
Other operating expenses	682	985	1 148	2 041	2 802
Government grants	(1 942)	(302)	(4 142)	(302)	(6 738)
Total other operating expenses	23 961	22 353	42 224	43 011	70 438

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)	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Skattefunn from the Research Council of Norway (RCN)	-	-	-	-	4 750
Eurostars	262	784	262	782	2 015
Innovation Norway	-	-	3 000	-	-
Innovation Project grant from the RCN	2 472	-	2 472	-	1 383
Other grants	267	-	267	-	739
Total government grants	3 001	784	6 001	782	8 888

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)	Q2-21	Q2-20	YTD-21	YTD-20	FY20
Loss for the period	(36 465)	(34 909)	(70 262)	(65 245)	(120 552)
Average number of shares during the period ('000)	32 003	29 231	31 993	28 546	30 260
Earnings/loss per share (NOK)	(1.1)	(1.2)	(2.2)	(2.3)	(4.0)

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 2021	30 Jun 2020	31 Dec 2020
Government grants	4 750	5 277	6 941
Prepayments	871	1 937	748
Financial instruments	570	-	-
Other receivables	1 964	3 526	749
Total receivables and prepayments	8 155	10 740	8 438

8. Current liabilities

Current liabilities

NOK (000)	30 Jun 2021	30 Jun 2020	31 Dec 2020
Accounts payable	15 321	8 671	8 611
Public duties payable	6 923	2 127	7 253
Lease liability	1 606	2 035	1 707
Other current liabilities	7 428	4 417	9 896
Total current liabilities	31 278	17 251	27 467

9. Shareholder information

The share capital as of 30 June 2021 was NOK 3,200,326.1, with 32,003,261 ordinary shares, all with equal voting rights and a nominal value of NOK 0.1 per share. Ultimovacs ASA has approximately 4,250 shareholders as of 30 June 2021 and the 20 largest shareholders as of this date are listed below:

Share register as per 30 June 2021

Shareholder	# of shares	Share-%
Gjelsten Holding AS	6 171 866	19.3 %
Canica AS	2 535 163	7.9 %
Watrium AS	1 740 575	5.4 %
Inven2 AS	1 615 492	5.0 %
Radforsk Investeringsstiftelse	1 498 913	4.7 %
Langøya Invest AS	1 349 006	4.2 %
Folketrygdfondet	1 180 000	3.7 %
Helene Sundt AS	882 132	2.8 %
CGS Holding AS	882 132	2.8 %
Sundt AS	719 650	2.2 %
Danske Invest Norge Vekst	690 000	2.2 %
Stavanger Forvaltning AS	628 495	2.0 %
Verdipapirfondet KLP Aksjenorge	543 416	1.7 %
Verdipapirfondet Nordea Avkastning	524 817	1.6 %
Prieta AS	523 988	1.6 %
JPMorgan Chase Bank, N.A., London	439 137	1.4 %
SEB Prime Solutions Sissener Canopus	400 000	1.2 %
Sw edbank AB	339 045	1.1 %
Verdipapirfondet Nordea Kapital	283 471	0.9 %
Wiarom AS	250 000	0.8 %
20 Largest shareholders	23 197 298	72.5%
Other shareholders	8 805 963	27.5%
Total	32 003 261	100.0%

10. Share-based payments

Share option program

A share option program was introduced in June 2019 and the Board was at the 2020 General Assembly (held 15 April 2021) authorized to increase the Company's share capital in connection with the share incentive arrangement by up to NOK 320,032.60 until the next ordinary General Assembly in 2022.

The share option program is groupwide and includes all employees in the Group. After the distribution of 600,000 new options in 2021, a total of 1,892,085 share options have been granted as per 30 June 2021, corresponding to 5.91% of the outstanding number of shares in the Company.

Each option gives the right to acquire one share in the Company and is granted without consideration. Pursuant to the vesting schedule, 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. The options granted in 2020 to the 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, NOK 39.15 for the options granted in 2020 and NOK 61.99 for the options granted in 2021.

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	416 035
Hans Vassgård Eid	Chief Financial Officer	177 500
Jens Egil Torbjørn Bjørheim	Chief Medical Officer	168 000
Audun Tornes	Chief Technology Officer	107 500
Gudrun Trøite	Director Regulatory Affairs and QA	107 500
Ingunn Hagen Westgaard	Head of Research	107 500
Øivind Foss	Head of Clinical Operations	107 500
Ton Berkien	Chief Business Officer	59 000

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 42% - 76% 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.

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 recognized 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.

Movement of share options

	Number of share options	Weighted average strike
Outstanding at closing balance 31 December 2020	1 330 435	36.28
Granted	600 000	61.99
Exercised	29 750	31.25
Forfeited	8 600	39.15
Outstanding at closing balance 30 June 2021	1 892 085	44.41
Vested at closing balance	477 828	35.13

On 5 March 2021, 29,750 options, granted under Ultimovacs' option program, were exercised at a strike price of NOK 31.25 per share, and 8,600 options were forfeited in May 2021. On the basis of the approval by the General Meeting on 15 April 2021, the Board of Directors resolved to issue a total of 600,000 options distributed amongst the employees. The number of options granted corresponded to 1.87% of the outstanding number of shares in the Company.

The total IFRS cost recognized for the option program in Q2-21 is MNOK 3.3, including social security accruals of MNOK 1.8. Total expense in YTD-21 is MNOK 5.6, including 0.7 in social security accruals.

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 five 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 on 1 January 2019 was 6.0%. Please see the 2020 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
General/basic terms	
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 (e.g., pembrolizumab and nivolumab) and CTLA-4 inhibitors (e.g. ipilimumab). 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 was the first checkpoint inhibitor to reach the market.
PARP Inhibitor	PARP inhibitors are a group of pharmacological inhibitors of the enzyme poly ADP ribose polymerase. They are developed for multiple indications, including the treatment of heritable cancers. Several forms of cancer are more dependent on PARP than regular cells, making PARP an attractive target for cancer therapy.
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 80% 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 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.
Checkpoint and PARP inhibitors	
Ipilimumab	CTLA-4 checkpoint inhibitor from BMS (Bristol-Myers Squibb)
Nivolumab	PD-1 checkpoint inhibitor from BMS (Bristol-Myers Squibb)
Pembrolizumab	PD-1 checkpoint inhibitor from Merck
Durvalumab	PD-L1 checkpoint inhibitor from AstraZeneca
Olaparib	PARP inhibitor from AstraZeneca
Clinical trial terms	
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	Objective 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.)
mPFS	Median overall survival means (The length of time during and after the treatment of a disease, such as cancer, that half of the patients in a group of patients diagnosed with the disease are still alive.)
Medical terms	
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 number 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. With an allergy, the individual's immune system overreacts to an allergen (what they 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	<p>A serious adverse event (SAE) in human drug trials is defined as any untoward medical occurrence that at any dose</p> <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 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 preclinical 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.

Ultimovacs seeks to become a leader in developing immune-stimulatory vaccines to treat a broad range of cancers. Ultimovacs' lead universal cancer vaccine candidate UV1 leverages the high prevalence of the human

telomerase (hTERT) to be effective across the dynamic stages of the tumor's growth and its microenvironment. By directing the immune system to hTERT antigens that are present in over 80% of all cancers, UV1 drives CD4 helper T cells to the tumor with the goal of activating an immune system cascade to increase anti-tumor responses. Ultimovacs' strategy is to clinically demonstrate UV1's impact in many cancer types and in combination with other immunotherapies. The Company will expand its pipeline using its novel TET-platform, which is a next-generation vaccine technology that can generate multiple vaccine candidates designed to achieve increased T cell responses to a broad range of target antigens.

