Business Updates and First Quarter 2020 Financial Results
May 7, 2020
Forward-looking statements and Disclaimer

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended including, but not limited to, statements concerning: the impact of the SARS-CoV-2 pandemic on the Company’s clinical trials and operations, including mRNA-1653; the status, timing and results of the Phase 1 trial of mRNA-1273 being conducted by the NIH; the timing of and proposed design for the planned Phase 2 study of mRNA-1273; the timing and proposed protocol for the planned Phase 3 study of mRNA-1273; the next steps, including the timing thereof, and ultimate commercial plan for mRNA-1273; the ability to scale dosing capacity for mRNA-1273, including pursuant to the strategic collaboration with Lonza; the size of the potential market opportunity for mRNA-1273; the timing and approval of a biologics license application for mRNA-1273 and our other development candidates; the timing and results of the Phase 2 dose confirmation study of mRNA-1647; the timing and estimated costs of the planned pivotal Phase 3 study of mRNA-1647 in women of childbearing age; the status, timing and results of the Phase 1 study of mRNA-1172 being conducted by MERCK; the timing and success of the Company’s autoimmune therapeutic development candidates; the timing and success of the Company’s other development candidates; the continuing success of the extended collaboration with Vertex; the size of the potential commercial market for novel vaccines produced by Moderna or others; the probability of success of the Company’s vaccines individually and as a portfolio; the Company’s expected net cash used in operating activities and for purchases of property and equipment in 2020; the Company’s expectation regarding a general matching of expenses and reimbursements in 2020; the Company’s expected cash runway based on its current cash and investments; and the ability of the Company to accelerate the research and development timeline for any individual product or the platform as a whole. In some cases, forward-looking statements can be identified by terminology such as “will,” “may,” “should,” “expects,” “intends,” “plans,” “aims,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this presentation are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond Moderna’s control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties, and other factors include, among others: whether the interim or final Phase 1 results for mRNA-1893 will be predictive of any future clinical studies for this or other development candidates with the same LNP formulation; the acceptance of the IND submitted by the NIH for the Phase 2 study of mRNA-1273; the Company’s ability to hire and retain key employees; preclinical and clinical development is lengthy and uncertain, especially for a new class of medicines such as mRNA, and therefore our preclinical programs or development candidates may be delayed, terminated, or may never advance to or in the clinic; no mRNA drug has been approved in this new potential class of medicines, and may never be approved; mRNA drug development has substantial clinical development and regulatory risks due to the novel and unprecedented nature of this new class of medicines; the fact that the rapid response technology in use by Moderna is still being developed and implemented; the fact that the safety and efficacy of mRNA-1273 has not yet been established; despite having ongoing interactions with the FDA or other regulatory agencies, the FDA or such other regulatory agencies may not agree with our regulatory approval strategies, components of our filings, such as clinical trial designs, conduct and methodologies, or the sufficiency of data submitted; the impact of the COVID-19 pandemic on the operation of the Company’s clinical trials, preclinical work, and overall operations, including delays and inability to progress with certain clinical trials; potential adverse impacts due to the global COVID-19 pandemic such as delays in regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy; and those risks and uncertainties described under the heading “Risk Factors” in Moderna’s most recent Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (SEC) and in subsequent filings made by Moderna with the SEC, which are available on the SEC’s website at www.sec.gov. 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This presentation also contains estimates, projections and other statistical data made by independent parties and by Moderna relating to market size and growth and other data about Moderna’s industry. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of Moderna’s future performance and the future performance of the markets in which the Company operates are necessarily subject to a high degree of uncertainty and risk.
mRNA as a potential new class of medicines

1. Large product opportunity
2. Higher probability of technical success
3. Accelerated research and development timelines
4. Greater capital efficiency over time vs. recombinant technology
Risk management is essential to building a new class of medicines

- Personalized cancer vaccines
- OX40L/IL-23/IL-36γ (triplet)
- VEGF-A (no LNP)
- PD-L1
- Chikungunya antibody
- CMV vaccine
- H10/H7 influenza vaccine
- Zika vaccine
- KRAS cancer vaccine
- M MA
- MMA
- PA

Modality
- Prophylactic vaccines
- Cancer vaccines
- Intratumoral immuno-oncology
- Localized regenerative therapeutics
- Systemic secreted & cell surface therapeutics
- Systemic intracellular therapeutics
2019 was an inflection year in Moderna’s history

Our modality strategy

- CMV vaccine
- Zika vaccine
- H10/H7 influenza vaccine
- Personalized cancer vaccine
- KRAS cancer vaccine
- OX40L
- OX40L/IL-6,IL-36γ (triplet)
- VEGF-A (no LNP)
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- Chikungunya antibody

Biology-risk

- CMV vaccine
- Zika vaccine
- H10/H7 influenza vaccine
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Modality

- Prophylactic vaccines
- Cancer vaccines
- Intratumoral immuno-oncology
- Localized regenerative therapeutics
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- Systemic intracellular therapeutics

Technology risk

- CMV vaccine
- Zika vaccine
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- Personalized cancer vaccine
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- OX40L
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- VEGF-A (no LNP)
- PD-L1
- Chikungunya antibody
2019 was an inflection year in Moderna’s history

Our modality strategy

- **Core**
  - CMV vaccine
  - Zika vaccine
  - H10/H7 influenza vaccine
  - Chikungunya antibody
  - Prophylactic vaccines
  - Systemic secreted & cell surface therapeutics

- **Exploratory**
  - Personalized cancer vaccine
  - OX40L/IL-23/IL-36 (triplet)
  - VEGF-A (no LNP)
  - KRAS cancer vaccine
  - OX40L

Technology risk:
- Cancer vaccines
- Intratumoral immuno-oncology
- Localized regenerative therapeutics
- Systemic intracellular therapeutics

Biology risk:
- M
d- M A
- PA
Expanding core modalities with additional development candidates

Core

- CMV vaccine
- Chikungunya antibody

Systemic secreted & cell surface therapeutics

Prophylactic vaccines

Exploratory

- Personalized cancer vaccine
- OX40L/IL-23/IL-36γ (triplet)
- VEGF-A (no LNP)
- KRAS cancer vaccine
- OX40L

Technology risk

- Cancer vaccines
- Intratumoral immuno-oncology
- Localized regenerative therapeutics
- Systemic intracellular therapeutics

Biology risk

MMA

PA
Progression towards a new class of medicines

Strategic plan presented in February 2020

Impact

First-in-human (Dec. 2015)
Scientific foundation

Explore mRNA technology across six different modalities
Clinical data

Build Core modalities
First Core Modality (4Q19)

Investigate current and create new Exploratory modalities
Accelerated pipeline

Scale for commercial
First BLA(s)

3-4 years
Commercial growth

Stage of development

Develop mRNA science, delivery technology and manufacturing

moderna
Major acceleration of Moderna’s development

*SARS-CoV-2 vaccine (mRNA-1273)*

- **Phase 2** – FDA clearance to proceed with Phase 2 study on Wednesday, May 6th
- **Phase 3** – Finalizing protocol for Phase 3 study, expected to begin in early summer 2020
- **Potential biologic license application (BLA) approval** for mRNA-1273 in 2021
Progression towards a new class of medicines

Scientific foundation
First-in-human (Dec. 2015)

Impact

Develop mRNA science, delivery technology and manufacturing

Explore mRNA technology across six different modalities

Clinical data

Accelerated pipeline

May 2020
Build Core modalities
Investigate current and create new Exploratory modalities

Commercial growth

Scale for commercial

First Core Modality (4Q19)
First BLA(s)

Stage of development
New leadership additions

Patrick Bergstedt  
SVP, Commercial Vaccines  
Joining from Merck & Co.  
Previously Head of Global Marketing & Commercial Operations: Vaccines

Jacqueline Miller, M.D., FAAP  
SVP, Infectious Disease Development  
Joining from GlaxoSmithKline  
Previously Vice President and Head, Clinical R&D and Epidemiology

Charbel Haber, M.P.H., Ph.D.  
SVP, Regulatory Affairs  
Joining from Biogen  
Previously Vice President, Global Safety and Regulatory Sciences
Core modality: Prophylactic vaccines

- **Core**
  - CMV vaccine
  - Chikungunya antibody
  - Systemic secreted & cell surface therapeutics

- **Exploratory**
  - Personalized cancer vaccine
  - OX40L/IL-23/IL-36 (triplet)
  - VEGF-A (no LNP)
  - KRAS cancer vaccine
  - OX40L

- **Technology risk**
  - M MA
  - PA

- **Biology risk**
  - Cancer vaccines
  - Intratumoral immuno-oncology
  - Localized regenerative therapeutics
  - Systemic intracellular therapeutics

- **Prophylactic vaccines**

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Slide 12
mRNA as a potential new class of vaccines

1. Large product opportunity
2. Higher probability of technical success
3. Accelerated research and development timelines
4. Greater capital efficiency over time vs. recombinant technology
Evidence that the platform is delivering in vaccines

**Large product opportunity**
- Worldwide vaccine market was $35 billion in 2019, growing 9% a year

**Higher probability of technical success**
- Vaccines have highest overall POS to approval
- 42% from Phase 2 start to approval

**Accelerated research and development timelines**
- SARS-CoV-2 vaccine (mRNA-1273)
- Sequence to Phase 1 clinical trial in 63 days

**Greater capital efficiency over time (vs. recombinant)**
- Capex leverage across the value chain

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1. Alliance Bernstein research report: Vaccines: The Robin Hood of Therapeutics – THE PRIMER on the oldest biotech drugs in the world (Feb 2020)
Moderna’s vaccine franchise

**FDA clearance to proceed with SARS-CoV-2 Phase 2 study**

| Safety | >1,500 healthy volunteers enrolled in ten Phase 1 and one Phase 2 vaccine trials (dose levels up to 400µg); emerging safety & tolerability profile consistent with marketed adjuvanted vaccines¹ |
| Immunogenicity | We have observed neutralizing antibodies to viral antigens against all eight viruses for which we have had clinical trial readouts |

**Clinical updates**

- **SARS-CoV-2 (mRNA-1273):** NIH-led Phase 1 study has completed enrollment of 3 dose cohorts (25 µg, 100 µg and 250 µg); expanding to an additional 6 cohorts of older adults and elderly adults; FDA clearance to proceed with Phase 2 study

- **CMV (mRNA-1647):** Phase 2 dose confirmation study is fully enrolled; data readout expected 3Q20

- **Zika (mRNA-1893):** First interim analysis of Phase 1 study shows that 10 µg and 30 µg dose levels seroconverted 94% and 100% of seronegative participants, respectively; 100 µg and 250 µg dose cohorts fully enrolled

- **hMPV/PIV3 (mRNA-1653):** Phase 1b age de-escalation study enrollment suspended due to COVID-19 disruption

- **RSV (mRNA-1172/V172):** Phase 1 study led by Merck is ongoing

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¹ The most common adverse reactions in Moderna’s Phase 1 clinical trials in Prophylactic Vaccines include injection site pain, headache, myalgia, and fatigue
Accelerated research and development

**SARS-CoV-2 vaccine (mRNA-1273)**

- **January 13, 2020**: Sequence for mRNA-1273 against the novel coronavirus finalized.
- **March 16, 2020**: First participant in NIH-led Phase 1 study was dosed.
- **April 16, 2020**: Award from U.S. government agency BARDA for up to $483 million to accelerate development. **Total of 63 days from sequence selection to first human dosing**
- **April 27, 2020**: IND submitted to US FDA for Phase 2 study.
- **May 1, 2020**: Collaboration announced with Lonza Ltd to manufacture mRNA-1273 (goal of up to one billion doses per year).**
- **May 6, 2020**: FDA clearance to proceed with Phase 2 study.
- **Early summer 2020**: Planned Phase 3 start.

1. Assuming the currently expected dose of 50 µg
**SARS-CoV-2 vaccine (mRNA-1273)**

**Phase 1 trial (run by the National Institutes of Health)**

**Key objective:** To assess the safety, reactogenicity and immunogenicity of mRNA-1273

**Study design:** Phase 1, open-label dose ranging clinical trial in males and non-pregnant females, 18 to 55 years of age

- Forty-five subjects were enrolled into one of three cohorts (25, 100 and 250 µg)
- Subjects will receive an intramuscular (IM) injection (0.5 milliliter [mL]) of mRNA-1273 on Days 1 and 29 in the deltoid muscle and will be followed through 12 months post second vaccination (Day 394)

**Primary endpoint:**
- Safety and reactogenicity of a 2-dose vaccination schedule of mRNA-1273, given 28 days apart, across 3 dosages in healthy adults

**Secondary endpoint:**
- Evaluate the immunogenicity as measured by IgG ELISA to the SARS-CoV-2 S protein following a 2-dose vaccination schedule of mRNA-1273 at Day 57

**Trial progress/details:**
- NIH-led Phase 1 study of mRNA-1273 has completed enrollment of 3 dose cohorts (25 µg, 100 µg and 250 µg); expanding to an additional 6 cohorts of older adults and elderly adults
Late stage development for SARS-CoV-2 vaccine (mRNA-1273)

- Expected to begin in 2Q20
- Study will evaluate the safety, reactogenicity and immunogenicity of two vaccinations of mRNA-1273 given 28 days apart
- Subject to receive placebo, 50 µg or a 250 µg dose at both vaccinations
- 600 healthy participants; two cohorts of adults ages 18-55 years (n=300) and older adults ages 55 years and above (n=300)

Finalizing protocol for Phase 3 study; expected to begin in early summer of 2020
Moderna and Lonza collaboration

Goal to enable manufacturing of up to one billion doses per year

Plan to establish manufacturing suites at Lonza’s facilities in the U.S. (New Hampshire) and Switzerland

Technology transfer expected to begin in June 2020

First batches of mRNA-1273 expected to be manufactured at Lonza NH in July 2020

1. Assuming the currently expected dose of 50 µg
Late stage development for CMV vaccine (mRNA-1647)

- 3 dose levels; randomized, observer-blind, placebo-controlled, multicenter
- 252 seronegative & seropositive adults
- Utilizes intended Phase 3 formulation; same lipid nanoparticle (LNP) used in Phase 1
- Phase 2 study fully enrolled; interim data readout expected 3Q20
- Despite COVID-19 disruptions, >70% of participants have received their second vaccination per original protocol; protocol amendment has been submitted to expand window (2-4 months) for remaining participants to receive second vaccination; third vaccination to be administered 6 months after the first vaccination as originally planned

**Phase 2 dose confirmation study**

**Planned pivotal Phase 3 trial**

- **Primary endpoint:** prevention of primary CMV infection in a population that includes women of childbearing age (WOCBA)
- Intended to begin in 2021 in USA and Europe
- Expect **<8,000 participants**
- Type C CMC meeting in 1Q20; received constructive feedback
- Preparation and product manufacturing underway
- Phase 3 trial in WOCBA: costs currently estimated at $200-250 million

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1. Current estimates based on benchmarks; final trial design and costs remain to be determined
Zika vaccine (mRNA-1893) Phase 1 interim analysis
10 and 30 µg dose levels interim analysis summary

- **Safety:** Both 10 and 30 µg dose levels were generally well tolerated
  - No grade 3 adverse reactions (ARs) were reported
  - No serious adverse events (SAEs) related to mRNA-1893 were reported at either dose levels

- **In the flavivirus-seronegative group:**
  - Seroconversion rates after the second vaccination reached 94.4% in the 10 µg dose level and 100% in the 30 µg dose level, based on the PRNT$_{50}$ (MN data were consistent)
  - A single vaccination of the 30 µg dose level was sufficient to seroconvert baseline flavivirus seronegative participants (however there was a clear benefit of a two-dose series given 28 days apart)

- **In the flavivirus-seropositive group:**
  - The percentage of participants achieving a 4-fold boost in pre-existing PRNT$_{50}$ titers after the second vaccination reached 50% in the 10 µg dose level and 75% in the 30 µg dose level, based on the PRNT$_{50}$ (MN data were consistent)
Exploratory modalities are a critical part of our strategy to maximize applications of our mRNA medicines.
## Anticipated clinical next steps and catalysts

<table>
<thead>
<tr>
<th>Core modalities</th>
<th>Exploratory modalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prophylactic vaccines</td>
<td>Antibody against Chikungunya virus – Further development of 0.6 mg/kg dose</td>
</tr>
<tr>
<td>SARS-CoV-2 – Phase 1 safety and immunogenicity data readout for first 3 cohorts, Phase 2 start</td>
<td>Relaxin – IND filing (AstraZeneca)</td>
</tr>
<tr>
<td>CMV – Phase 2 immunogenicity data at 3-month IA, Phase 3 start</td>
<td>IL-2 – IND filing</td>
</tr>
<tr>
<td>hMPV/PIV3 – Phase 1b seropositive age de-escalation study resumption</td>
<td>PD-L1 – IND filing</td>
</tr>
<tr>
<td>RSV – Phase 1 safety and immunogenicity data readout</td>
<td></td>
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<tr>
<td>Zika – Phase 1 (100 and 250 ug) safety and immunogenicity data readout</td>
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<tr>
<td>Pediatric RSV – IND filing</td>
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<td>EBV – IND filing</td>
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</table>

<table>
<thead>
<tr>
<th>Systemic secreted &amp; cell surface therapeutics</th>
<th>Cancer vaccines</th>
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</thead>
<tbody>
<tr>
<td>PCV – Phase 2 clinical data readout</td>
<td></td>
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<tr>
<td>KRAS – Phase 1 clinical data readout</td>
<td></td>
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<tr>
<td>OX40L – Initiation of dosing of Phase 2 combination cohort</td>
<td></td>
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<tr>
<td>OX40L/IL-23/IL-36γ (Triplet) – Completion of dose escalation monotherapy and combination cohorts</td>
<td></td>
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<tr>
<td>IL-12 – Phase 1 data readout</td>
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<table>
<thead>
<tr>
<th>Intratumoral immuno-oncology</th>
<th>Localized regenerative therapeutics</th>
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</thead>
<tbody>
<tr>
<td>OX40L – Initiation of dosing of Phase 2 combination cohort</td>
<td>VEGF – Phase 2a data readout</td>
</tr>
<tr>
<td>OX40L/IL-23/IL-36γ (Triplet) – Completion of dose escalation monotherapy and combination cohorts</td>
<td></td>
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<tr>
<td>IL-12 – Phase 1 data readout</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Systemic intracellular therapeutics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MMA – Phase 1/2 study start</td>
<td></td>
</tr>
<tr>
<td>PA – Phase 1/2 study start</td>
<td></td>
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<tr>
<td>PKU – IND filing</td>
<td></td>
</tr>
<tr>
<td>GSD1a – IND filing</td>
<td></td>
</tr>
</tbody>
</table>
**Vertex Agreement**

**Extended collaboration to August 2021**

**Goal:** Aimed at discovery and development of potential mRNA medicines for the treatment of cystic fibrosis, or CF, by enabling cells in the lungs of people with CF to produce functional CFTR proteins

- **July 2016**: Entered into a Strategic Collaboration and License Agreement with Vertex

- **July 2019**: Vertex elected to extend the initial research period by 6 months

- **March 2020**: Based on promising preclinical data generation to date, Vertex elected to extend the research period to August 2021

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1. Refers to Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited
# First quarter 2020 financial results
(Uinaudited)

## Balance Sheets

<table>
<thead>
<tr>
<th></th>
<th>March 31, 2020</th>
<th>December 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, cash equivalents and investments</td>
<td>$1.72 billion</td>
<td>$1.26 billion</td>
</tr>
</tbody>
</table>

## Statements of Cash Flows

<table>
<thead>
<tr>
<th></th>
<th>3 months ended Mar. 31, 2020</th>
<th>3 months ended Mar. 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash used in operating activities</td>
<td>$106 mm</td>
<td>$144 mm</td>
</tr>
<tr>
<td>Cash used for purchases of property and equipment</td>
<td>$6 mm</td>
<td>$8 mm</td>
</tr>
<tr>
<td>Total</td>
<td>$112 mm</td>
<td>$152 mm</td>
</tr>
</tbody>
</table>

## Statements of Operations

<table>
<thead>
<tr>
<th></th>
<th>3 months ended Dec. 31, 2020</th>
<th>3 months ended Mar. 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue</td>
<td>$8 mm</td>
<td>$16 mm</td>
</tr>
<tr>
<td>Research and development expenses</td>
<td>$115 mm</td>
<td>$130 mm</td>
</tr>
<tr>
<td>General and administrative expenses</td>
<td>$24 mm</td>
<td>$27 mm</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>$139 mm</td>
<td>$158 mm</td>
</tr>
<tr>
<td>Net loss</td>
<td>$(124) mm</td>
<td>$(133) mm</td>
</tr>
</tbody>
</table>

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1. Excludes restricted cash of $12 mm at March 31, 2020 and December 31, 2019.

2. Includes $22 mm in the first quarter of 2019, of in-licensing payments to Cellscript, LLC and its affiliate, mRNA RiboTherapeutics, Inc. to sublicense certain patent rights. After the first quarter of 2019, we have no further in-licensing payment obligations under the Cellscript-MRT Agreements.
**Selected cash flow information and 2020 guidance**

**Selected Cash Flow Information**

<table>
<thead>
<tr>
<th>Statements of Cash Flows</th>
<th>3 months ended Mar. 31, 2019 (unaudited)</th>
<th>6 months ended Jun. 30, 2019 (unaudited)</th>
<th>9 months ended Sept. 30, 2019 (unaudited)</th>
<th>Year ended Dec. 31, 2019 (audited)</th>
<th>3 months ended Mar. 31, 2020 (unaudited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash used in operating activities</td>
<td>$144 mm</td>
<td>$256 mm</td>
<td>$363 mm</td>
<td>$459 mm</td>
<td>$106 mm</td>
</tr>
<tr>
<td>Cash used for purchases of property and equipment</td>
<td>$8 mm</td>
<td>$18 mm</td>
<td>$25 mm</td>
<td>$32 mm</td>
<td>$6 mm</td>
</tr>
<tr>
<td>Total</td>
<td>$152 mm</td>
<td>$274 mm</td>
<td>$388 mm</td>
<td>$491 mm</td>
<td>$112 mm</td>
</tr>
</tbody>
</table>

We expect net cash used in operating activities and for purchases of property and equipment in 2020 to be approximately $500 million
We have up to $2.4 billion to invest and create value

**Cash Position (unaudited)**

Approximately $1.72 billion of cash and investments as of March 31, 2020

**Novel Coronavirus Award**

Award from U.S. government agency BARDA for up to $483 million to accelerate development of mRNA vaccine (mRNA-1273) against novel coronavirus (entered into on April 16, 2020)

**Additional Grants (unaudited)**

Total additional funding available from grants is approximately $180 million (including amounts not committed) as of March 31, 2020

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1. Cash and investments denotes cash, cash equivalents and investments
2. Funding from Biomedical Advanced Research and Development Authority (BARDA): Zika vaccine and The Bill and Melinda Gates Foundation (BMGF): HIV. Additional funding is subject to agreement on scope of additional projects.
# Development pipeline

**May 2020**

<table>
<thead>
<tr>
<th>Preclinical (incl. Open IND)</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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</thead>
<tbody>
<tr>
<td>Prophylactic vaccines</td>
<td>EBV</td>
<td>H7NP</td>
<td>SARS-CoV-2</td>
</tr>
<tr>
<td>Pediatric RSV (mRNA-1345)</td>
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<td>(open IND)</td>
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<td>IL-12</td>
<td>OX40L/IL-12/36</td>
<td>Phase 2 preparations OX40L</td>
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<td>Explorative modalities</td>
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<td>PKU</td>
<td>GSD1a</td>
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### Moderna in May 2020

#### Pipeline

<table>
<thead>
<tr>
<th>Program</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Preparing for Ph 3</td>
</tr>
<tr>
<td>6</td>
<td>In or preparing for Ph 2</td>
</tr>
<tr>
<td>12</td>
<td>Ph 1 trials ongoing</td>
</tr>
<tr>
<td>11</td>
<td>Positive Ph 1 readouts: 7 vaccines, PCV, OX40L, VEGF, anti-Chikungunya antibody</td>
</tr>
</tbody>
</table>

#### Programs in Development

<table>
<thead>
<tr>
<th>Program</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccines for major unmet needs</td>
<td>7</td>
</tr>
<tr>
<td>• SARS-CoV-2 – Ph 1 ongoing; FDA clearance to proceed with Ph 2</td>
<td></td>
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<tr>
<td>• CMV in Ph 2, Ph 3 preparation</td>
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<td>• hMPV/PIV3 – started Phase 1b age de-escalation study</td>
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<td>• RSV and Zika in Ph 1</td>
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<tr>
<td>• Pediatric RSV, EBV – in preclinical</td>
<td></td>
</tr>
<tr>
<td>Immuno-Oncology</td>
<td>5</td>
</tr>
<tr>
<td>• PCV in Ph 2</td>
<td></td>
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<tr>
<td>• OX40L preparing for Ph 2 cohort</td>
<td></td>
</tr>
<tr>
<td>• Triplet, IL-12, KRAS in Ph 1</td>
<td></td>
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<tr>
<td>Rare disease</td>
<td>4</td>
</tr>
<tr>
<td>• MMA, PA – Open IND</td>
<td></td>
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<tr>
<td>• PKU &amp; GSD1a in preclinical</td>
<td></td>
</tr>
<tr>
<td>Autoimmune disease</td>
<td>2</td>
</tr>
<tr>
<td>• IL-2 and PD-L1 – in preclinical</td>
<td></td>
</tr>
</tbody>
</table>

#### Foundations

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1,900</td>
<td>Healthy volunteers and patients enrolled</td>
</tr>
<tr>
<td>&gt;900</td>
<td>employees</td>
</tr>
<tr>
<td></td>
<td>A fully-integrated GMP site in Massachusetts</td>
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<td>Leading biopharma partners</td>
</tr>
<tr>
<td></td>
<td>Up to $2.4bn to invest and create value¹</td>
</tr>
</tbody>
</table>

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1. Includes $1.72 billion of cash and investments as of March 31, 2020 (unaudited), a BARDA award for up to $483 million to accelerate the development of our mRNA vaccine against novel coronavirus as of April 16, 2020 and up to $180 million in additional grant funding as of March 31, 2020 (unaudited)
Progression towards a new class of medicines

Scientific foundation
First-in-human (Dec. 2015)
Clinical data
First Core Modality (4Q19)
Accelerated pipeline
First BLA(s)
Scale for commercial

Impact

May 2020
Build Core modalities
Investigate current and create new Exploratory modalities

Develop mRNA science, delivery technology and manufacturing
Explore mRNA technology across six different modalities

Commercial growth
Our mission
To deliver on the promise of mRNA science to create a new generation of transformative medicines for patients.