Q3 Clinical and Financial Update

November 11, 2021

NASDAQ: AVIR
Forward-Looking Statements

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our clinical results and other future conditions. All statements other than statements of historical facts contained in this presentation are forward-looking statements, including statements by the Company regarding future results of operations and financial position, including our anticipated cash runway; business strategy; current and prospective product candidates; anticipated milestone events; potential benefits of our product candidates and market opportunity; planned clinical trials, including, without limitation, anticipated initiation, enrollment, regulatory submission and data readout timelines; preclinical activities; product approvals; manufacturing availability; degree of market acceptance of approved products; research and development costs; current and prospective collaborations, including our collaboration with Roche and potential milestones thereunder; and prospects and opportunities for investors. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “targets,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions.

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Market data and industry information used throughout this presentation are based on management’s knowledge of the industry and the good faith estimates of management. We also relied, to the extent available, upon management’s review of independent industry surveys and publications and other publicly available information prepared by a number of third-party sources. All of the market data and industry information used in this presentation involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Although we believe that these sources are reliable, we cannot guarantee the accuracy or completeness of this information, and we have not independently verified this information. While we believe the estimated market position, market opportunity and market size information included in this presentation are generally reliable, such information, which is derived in part from management’s estimates and beliefs, is inherently uncertain and imprecise. No representations or warranties are made by the Company or any of its affiliates as to the accuracy of any such statements or projections. Projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described above. These and other factors could cause results to differ materially from those expressed in our estimates and beliefs and in the estimates prepared by independent parties.
AT-527 Addresses Key Challenges of COVID-19: Oral Pill with MOA Designed to Inhibit Viral Replication

• Oral direct-acting antivirals (DAAs) are complementary to vaccines, easy to access with a prescription
• Targets viral RNA polymerase, a highly conserved enzyme critical to viral replication
• Unique differentiated mechanism with dual targets:
  • Chain termination (RdRp) without introducing mutations in the virus
  • NiRAN inhibition
    • Potentially creating a high barrier to resistance with broad antiviral coverage to coronaviruses and different variants of SARS-CoV-2
• Non-mutagenic in mammalian cells in vitro, no effect on reproductive toxicology and non-teratogenic; no changes to the SARS-CoV-2 genome
• Minimal drug-drug interaction, AT-527 is a weak inhibitor of CYP3A & no dose adjustment expected for co-administration of drugs that are CYP3A substrates
• Global collaboration with Roche with multiple clinical trials advancing in parallel, including global Phase 3 MORNINGSKY trial
COVID-19 Continues to Evolve with New Variants and Viral Kinetics

- Almost 6,000 variants have been sequenced
- New variants associated with increased transmissibility, neutralization resistance and disease severity
- Delta Plus (AY.4.2) is a subvariant of the Delta variant
  - Mutation associated with increased risk of transmission and reinfection
  - Leading to new COVID-19 surge in Europe and other areas worldwide
AT-527

*In Vitro* Activity Against COVID-19 Variants of Concern and/or of Interest
**AT-511** (free base of AT-527) is Potent *In Vitro* Against Major SARS-CoV-2 Variants of Concern and/or of Interest, Including Delta

For USA-WA-1 (original strain), AT-511 EC\(_{90}\) = 0.53 ± 0.23 µM (n=14) (0.15-0.90 µM)

<table>
<thead>
<tr>
<th>Variant</th>
<th>Lineage</th>
<th>Strain</th>
<th>Relative Potency AT-511 EC(_{90}) [variant/USA-WA-1]*</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>A</td>
<td>hCoV-19/USA-WA1/2020 (original strain)</td>
<td>1</td>
</tr>
<tr>
<td>Alpha</td>
<td>B.1.1.7</td>
<td>hCoV-19/England/204820464/2020</td>
<td>2.8 (n=3)</td>
</tr>
<tr>
<td>Gamma</td>
<td>P.1</td>
<td>hCoV-19/Japan/TY7-503/2021</td>
<td>3.2 (n=3)</td>
</tr>
<tr>
<td>Epsilon</td>
<td>B.1.427</td>
<td>hCoV-19/USA/CA/VRLC009/2021</td>
<td>1.0 (n=2)</td>
</tr>
<tr>
<td>Delta</td>
<td>B.1.617.2</td>
<td>hCoV-19/USA/PHC658/2021</td>
<td>1.2 (n=1)**</td>
</tr>
</tbody>
</table>

**Preliminary data**

*Differences for all variants were within *in vitro* assay-to-assay variability (5-fold or less)*
AT-527

Clinical Development Update

Additional Analysis from Phase 2 MOONSONG Trial and Phase 3 MORNINGSKY Update
## COVID-19: Multiple Clinical Trials Active & Reporting Results in 2021 & 2022

<table>
<thead>
<tr>
<th>TRIAL</th>
<th>DESCRIPTION</th>
<th>TIMING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong> Healthy Volunteers</td>
<td>PK safety study, clinical pharmacology, standard drug-drug interaction trials &amp; dosing up to 1,100 mg BID</td>
<td>Ongoing studies</td>
</tr>
<tr>
<td><strong>Phase 2</strong> Hospitalized Patients with Moderate COVID-19</td>
<td>Safety, tolerability, and virology</td>
<td>Ongoing; 2Q 2021 reported positive interim virology results 1H 2022 anticipated results for 1,100 mg BID</td>
</tr>
<tr>
<td><strong>Phase 2 MOONSONG</strong> Outpatient Trial Moderate Patients +/- Risk Factors</td>
<td>Antiviral activity of AT-527 compared with placebo in outpatients Safety, PK, PK/PD</td>
<td>Completing analysis with no additional cohorts planned</td>
</tr>
<tr>
<td><strong>Phase 3 MORNINGSKY</strong> Outpatient Global Trial*</td>
<td>Protocol modifications: patient population, primary endpoint and dose</td>
<td>2H 2022 data anticipated</td>
</tr>
<tr>
<td><strong>Phase 3 Follow-on MEADOWSPRING</strong> Long-Term Follow-on Study*</td>
<td>Evaluate AT-527’s impact on long COVID in patients previously enrolled in MORNINGSKY</td>
<td>Ongoing 2Q 2021 initiated</td>
</tr>
<tr>
<td><strong>Supplemental Phase 3 MARJORAM</strong> Prophylaxis Study*</td>
<td>Evaluate efficacy of AT-527 for preventing infection following SARS-CoV-2 exposure</td>
<td>1H 2022 anticipated initiation</td>
</tr>
</tbody>
</table>

*Country-by-country specific details to be finalized following consultation with applicable regulatory authorities.
Two methods to evaluate drug antiviral activity by measuring viral load
- RT-PCR measures all viral RNA pieces, regardless of whether it is from intact, replicating virus, or from non-viable or fragments of virus
- Recently optimized infectivity assay for SARS-CoV-2 quantifies viable replicating virus

Infectious virus is a relevant biological marker since it quantifies ongoing viral infectivity

Infection and transmission are due to the presence of live virus
**Infectious Virus Assay: Quantitative Highly Sensitive SARS-CoV-2 Live Virus Assay**

- **Virus titration**
- **SARS-CoV-2 immunostaining at 6 days post-inoculation**

Each well was inoculated with 0.1 mL NP swab sample.

Wells that contain SARS-CoV-2 immunostaining positive cells are indicated with an *.

<table>
<thead>
<tr>
<th>Log₁₀ sample dilution</th>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Sample 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No virus control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Quantifies infectious virus (vs. RT-qPCR which may detect small RNA fragments)**
- **Quantitative, highly sensitive (LLOQ = 1 log₁₀ TCID₅₀/mL, LOD = 0.75 log₁₀ TCID₅₀/mL)**
- **71% baseline positivity rate for all patients in MOONSONG Cohort A and B**

LLOQ = Lower Limit of Quantification, LOD = Limit of Detection, TCID₅₀ = 50% Tissue Culture Infectious Dose

Images courtesy of Dr. Carel van Baalen, Viroclinics/DDL
Phase 2 MOONSONG Exploratory Analyses of Infectious Virus

Rapid and Potent Reduction in Infectious Virus Observed in Cohort B Patients (High & Low Risk, Majority Seropositive)

Infectious Virus Titer Over Time Cohort B Overall Population

Infectious Virus Titer Change from Baseline* Cohort B Overall Population

**Baseline adjusted (ANCOVA) considering differences in baseline virus titer between active/placebo.**

AT-527
1,100 mg
BID

Day 3
-0.5 log\(_{10}\) reduction vs. placebo
Phase 2 MOONSONG Exploratory Analyses of Infectious Virus: High-Risk Patients

Potent and Rapid Antiviral Activity **Suggesting Dose Response** between Cohort A and B

Infectious Virus Titer Change from Baseline*

**Cohort A (550 mg BID) High Risk Subgroup**

- AT-527 Cohort A (550 mg BID): $-0.3 \log_{10}$ vs. placebo

**Cohort B (1,100 mg BID) High Risk Subgroup**

- AT-527 Cohort B (1,100 mg BID): $-0.9 \log_{10}$ vs. placebo

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*Baseline adjusted (ANCOVA) considering differences in baseline virus titer between active/placebo. **Exploratory subgroup analysis.
Additional data from Phase 2 MOONSONG support **rapid and potent antiviral effect of AT-527** as measured by an infectious virus assay (detects live virus capable of replication)

- **Rapid and potent reduction in viral load of \(-0.5 \log_{10}\)** observed in overall patient population (high and low risk, with *majority seropositive*) in Cohort B (1,100 mg BID) versus placebo at Day 3
- **Rapid and potent reduction in viral load of \(-0.9 \log_{10}\)** observed in high-risk patient subgroup* in Cohort B (1,100 mg BID) versus placebo at Day 3 with dose response suggested between Cohort A and Cohort B

- These results **support the findings observed** in the Phase 2 high risk hospitalized patient population

*All exploratory subgroup analysis*
Amendment to Global Phase 3 MORNINGSKY Trial Protocol: Plan to Accelerate Completion by Leveraging Existing Global Infrastructure Plus Footprint Expansion

Inclusion Criteria: High-risk, unvaccinated patients eligible for management in an outpatient setting

Randomization

1:1

AT-527 1,100 mg BID (n~800)
Placebo BID (n~800)
Double-blind oral administration: 5 days

2H / 22
Anticipated Results

Amendment to Phase 3 MORNINGSKY Trial Protocol:
- Refine population: unvaccinated patients with risk factors for COVID-19 progression
- Update primary endpoint: hospitalization or death
- Increase dosage: 1,100 mg BID
- Increase sample size (n): ~1,600 with 1:1 randomization
- Interim analysis at 50% enrollment

Action Plan:
- Continue to expand in countries/regions with limited access/uptake of vaccines
  - Rapid expansion to ~300 clinical sites
- Submit amended MORNINGSKY trial protocol to health authorities outside US; feedback to be obtained from US FDA
- Patients have option to roll over to Phase 3 MEADOWSPRING follow-on study to evaluate AT-527 impact on long-COVID
Clinical Proof-of-Concept Program for Dengue Fever
**Phase 1 and Phase 2 Clinical Studies for the Treatment of Dengue Fever**

*Phase 1: SAD and Two MAD Cohorts Completed; Third & Last MAD Cohort Initiated*

**New Info**

**Phase 1**

**Inclusion Criteria:** healthy volunteers, sequential dose-escalation

**Country:** Australia

**Objectives:** Safety and PK (with embedded food effect)
- Initiated March 2021
- Part 1: Single ascending dose cohort completed
- Part 2: Multiple dose QD/BID/TID ongoing

**Randomization**
- AT-752 Dose SAD
- AT-752 Dose MAD
- Placebo

- Double-blind oral administration: up to 7 days

**1Q / 21 Initiated**

**Phase 2**

**Inclusion Criteria:** adults with fever (≥38°C) within 48 hour with probable dengue infection and positive result on NS1 antigen test or RT-PCR assay

**Location:** Asia, South America

**Objectives:** Antiviral activity, safety, PK

**Primary endpoint:** Change in DENV viral load from baseline

**Randomization**
- AT-752 Dose A
- AT-752 Dose B
- AT-752 Dose C
- Placebo

- Double-blind oral administration: 5 days

**1H / 22 Initiation**
Financial Summary and Closing Remarks
**Consolidated Statement of Operations and Comprehensive Income**  
(in thousands, except share and per share data)  
(Unaudited)

<table>
<thead>
<tr>
<th></th>
<th>Three Months Ended September 30,</th>
<th></th>
<th>Nine Months Ended September 30,</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2020</td>
<td>2021</td>
<td>2020</td>
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<tr>
<td>Collaboration revenue</td>
<td>$32,811</td>
<td>$---</td>
<td>$159,187</td>
<td>$---</td>
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<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
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<tr>
<td>Research and development</td>
<td>43,019</td>
<td>13,601</td>
<td>109,394</td>
<td>24,177</td>
</tr>
<tr>
<td>General and administrative</td>
<td>11,939</td>
<td>4,028</td>
<td>32,597</td>
<td>7,500</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>54,958</td>
<td>17,629</td>
<td>141,991</td>
<td>31,677</td>
</tr>
<tr>
<td>Income (loss) from operations</td>
<td>(22,147)</td>
<td>(17,629)</td>
<td>17,196</td>
<td>(31,677)</td>
</tr>
<tr>
<td>Interest income and other, net</td>
<td>53</td>
<td>7</td>
<td>162</td>
<td>74</td>
</tr>
<tr>
<td>Income (loss) before income taxes</td>
<td>$22,094</td>
<td>(17,622)</td>
<td>17,358</td>
<td>(31,603)</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>(6,100)</td>
<td></td>
<td>(13,300)</td>
<td></td>
</tr>
<tr>
<td>Net Income (loss) and comprehensive income (loss)</td>
<td>$28,194</td>
<td>(17,622)</td>
<td>$4,058</td>
<td>$31,603</td>
</tr>
<tr>
<td>Net Income (loss) per share attributable to common stockholders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>$0.34</td>
<td>$1.74</td>
<td>$0.05</td>
<td>$(3.13)</td>
</tr>
<tr>
<td>Diluted</td>
<td>$0.34</td>
<td>$1.74</td>
<td>$0.05</td>
<td>$(3.13)</td>
</tr>
<tr>
<td>Weighted-average shares outstanding</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>82,815,636</td>
<td>10,109,847</td>
<td>82,727,268</td>
<td>10,099,134</td>
</tr>
<tr>
<td>Diluted</td>
<td>82,815,636</td>
<td>10,109,847</td>
<td>88,462,074</td>
<td>10,099,134</td>
</tr>
</tbody>
</table>
## Financial Update

### Selected Condensed Consolidated Balance Sheet Data

(Unaudited)

<table>
<thead>
<tr>
<th></th>
<th>September 30, 2021</th>
<th>December 31, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 839,660</td>
<td>$ 850,117</td>
</tr>
<tr>
<td>Total assets</td>
<td>843,504</td>
<td>863,632</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>262,052</td>
<td>315,831</td>
</tr>
<tr>
<td>Total stockholders’ equity</td>
<td>581,452</td>
<td>547,801</td>
</tr>
</tbody>
</table>
## Proprietary Platform Generates Deep Antiviral Pipeline

<table>
<thead>
<tr>
<th>ssRNA VIRUS</th>
<th>THERAPEUTIC INDICATION</th>
<th>DISCOVERY</th>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronaviridae</td>
<td>COVID-19</td>
<td>AT-527(^1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flaviviridae</td>
<td>Dengue</td>
<td>AT-752(^2)</td>
<td></td>
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<tr>
<td></td>
<td>Hepatitis C (HCV)</td>
<td>AT-787(^3) (fixed-dose combo of AT-527&amp;777)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AT-527 (NS5B inhibitor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AT-777 (NS5A inhibitor)</td>
<td></td>
<td></td>
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<tr>
<td>Paramyxoviridae</td>
<td>RSV</td>
<td>Product candidates</td>
<td></td>
<td></td>
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</tbody>
</table>

1 Ex-US development and commercialization rights (other than for certain hepatitis C virus uses) licensed to Roche.
2 Rights to develop and manufacture globally and to commercialize in the US for Dengue, among other viruses, retained. Ex-US commercialization subject to agreement with Roche.
3 AT-787 is our selected product candidate for the treatment of HCV.

**HIGHLIGHTS**

- AT-527 efficacy results 2021-2022
- Projected near-term launch of AT-527, an oral DAA for COVID-19
- Multiple value-driving milestones over the next 18-months in several therapeutic indications
- $839.7 million in cash & cash equivalents as of 9/30/21
- Cash runway through 2023