First Quarter 2022
Financial Results and Business Update
May 10, 2022

NASDAQ: AVIR
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Program Update for COVID-19

-- New Data: MORNINGSKY Clinical Results
-- New Data: Final Analysis from Phase 2 Hospitalized Study
-- New Data: Omicron Variant Results
Bemnifosbuvir (AT-527) Global Phase 3 MORNINGSKY Trial: Outpatient Setting, Mild to Moderate COVID-19 Patients With or Without Risk Factors

**Inclusion Criteria:** Patients eligible for management in an outpatient setting, ≤ 5 days of symptoms, N=≈1400 planned

**Objectives:**
- **Primary**
- Time to alleviation or improvement of COVID-19 symptoms
- **Secondary**
- Hospitalization
- Death
- Virological endpoints

**Status:**
- Study enrolled 216 patients and closed out early with 207 efficacy evaluable patients
New Data: MORNINGSKY Key Characteristics & Topline Clinical Results

- Study was closed out with 207 evaluable patients for efficacy
- Global and broad patient population studied
  - Approximately 50% high risk / 50% standard risk
  - 28% vaccinated
  - 56% seropositive at baseline
- Primary endpoint of time to alleviation/improvement of symptoms was not achieved
- **71% reduction of hospitalization** (bemnifosbuvir vs. placebo) and no deaths
  - Hospitalization and death was a secondary endpoint and is the highly favored endpoint by regulatory agencies, including FDA
- Bemnifosbuvir was generally safe and well tolerated at 550 mg BID
  - No drug related SAEs
  - AEs leading to treatment discontinuation were 3% for bemnifosbuvir vs. 7% for placebo
  - No GI-related events leading to treatment discontinuation
New Data: MORNINGSKY Clinical Results: Hospitalization and Death (Secondary Endpoint)

- Risk of hospitalization was **71% lower** for bemnifosbuvir vs. placebo
- No deaths were observed in study

*Included patients who were randomized, received study drug and tested positive for SARS-CoV-2

<table>
<thead>
<tr>
<th></th>
<th>Placebo</th>
<th>Bemnifosbuvir 550 mg BID</th>
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</thead>
<tbody>
<tr>
<td>N=137</td>
<td>N=70</td>
<td></td>
</tr>
<tr>
<td>% of patients with event</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All efficacy evaluable*</td>
<td>2.9%</td>
<td>10%</td>
</tr>
<tr>
<td>Standard risk</td>
<td>1.4%</td>
<td>5.4%</td>
</tr>
<tr>
<td>High risk factors</td>
<td>4.7%</td>
<td>15.2%</td>
</tr>
</tbody>
</table>

71% reduction in hospitalization

P=0.047 (unadjusted, exploratory)
Bemnifosbuvir Global Phase 2 Trial:
Hospitalized Patients with Risk Factors and Moderate COVID-19

Inclusion Criteria: adult patients (≥ 18 years old) with risk factors (obesity, diabetes, hypertension, asthma), **symptoms for ≤ 5 days** (hospitalized or confined)

Countries: Global Study

Objectives:

Primary:
- Reduction in progressive respiratory insufficiency

Secondary:
- Mortality
- Virological endpoints
- Safety and tolerability

Status:

- **Study closed out early due to evolving COVID-19 management of patients**

- **Final analysis on 83 patients**
  - **Part A:** 41 patients in 550 mg BID arm; 40 patients in placebo arm
  - **Part B:** 0 patients in 1100 mg BID arm; 2 patients in placebo arm
New Data: Final Analysis from Phase 2 Hospitalized Study in High-Risk Patients

Potential Clinical Benefits with Bemnifosbuvir Treatment (550 mg BID)

• Low rates of progression to respiratory insufficiency (primary endpoint)
  • 7.5% with bemnifosbuvir treatment vs. 10% on placebo
    • Respiratory events associated with progression were less severe in the bemnifosbuvir treated patients as compared to those receiving placebo

• 0 deaths with bemnifosbuvir treatment vs 3 on placebo (secondary endpoint)

• Final virology results remained consistent with previously reported interim virology data (secondary endpoint)

• Bemnifosbuvir was generally safe and well tolerated with no drug related serious adverse events and no adverse events leading to treatment discontinuation
New Data: AT-511 (free base of Bemnifosbuvir) Remains Fully Active Against Omicron Variant (BA.1)

*Bemnifosbuvir’s Unique Mechanism Provides Activity Across All Variants of Concern*

<table>
<thead>
<tr>
<th></th>
<th>AT-511 EC$_{90}$ (µM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#1</td>
</tr>
<tr>
<td>Original (USA-WA1)</td>
<td>0.23</td>
</tr>
<tr>
<td>Omicron (V3405)</td>
<td>0.25</td>
</tr>
<tr>
<td>Ratio (Omicron/USA-WA1)</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Readout: VYR (virus yield assay)
Cells: EpiAirway (3D mucociliary tissue model consisting of normal, human-derived tracheal/bronchial epithelial cells)
Next Steps for Bemnifosbuvir COVID-19 Clinical Development Program

• Phase 3 MORNINGSKY study (closed out early) results have potential to accelerate COVID-19 program
  • A study with 207 evaluable patients is in the range of a Phase 2 study
    • An additional Phase 2 monotherapy outpatient study is no longer planned

• Phase 2 hospitalized study final analysis are consistent with the results in MORNINGSKY trial

• Bemnifosbuvir 550 mg BID is efficacious, generally safe, well tolerated with a favorable GI tolerability profile

• Pursuing regulatory interactions to review data package and the next steps in the clinical development program
Program Update: Phase 2 Clinical Development for Dengue
Initiated: AT-752 Phase 2 Global Proof-of-Concept Treatment for Dengue Study

Initial Results Expected Late 2022

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

**Location:** Endemic Countries

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

**Primary endpoint:** Change in dengue virus viral load from baseline

- Randomized, double-blind, placebo-controlled trial in adult patients with dengue fever
- **Objectives:** antiviral activity, safety, and PK
  - Primary endpoint: Change in dengue virus viral load from baseline
  - Exploratory: viremia, NS1 levels, fever
- **Population:** adults with fever (≥38°C) within 48 h with probable dengue infection and positive result on NS1 antigen test or RT-PCR assay
**Initiated: AT-752 Human Challenge Infection Model**

*Results Expected Q4 2022*

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**Population:**
Healthy subjects, 18-55 years

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**Location:** US

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**Design:**
- Day 1: 12 subjects randomized 3:1 administered oral AT-752 or matching placebo
- Day 2: Challenged with 0.5 mL DENV-1-LVHC (6.5 x 10^3 PFU/mL)

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**Endpoints:**
- Mean quantitative viral load (peak, duration and AUC) by qRT-PCR until 28 days post virus inoculation
- Time to positive viral load by qRT-PCR
Hepatitis C Program Update: Potential Best-in-Class Pan-Genotypic Regimen
HCV Development for Bemnifosbuvir + Ruzasvir Update

Potential Best-in-Class Pan-genotypic Regimen

• Currently manufacturing ruzasvir clinical trial supplies for Phase 2

• Evaluating clinical trial designs for the Phase 2 combination trial, which is expected to be initiated late 2022

• Phase 2 combination program expected to evaluate convenient and short treatment duration

✓ Bemnifosbuvir is the most potent nucleotide inhibitor to-date being developed for HCV
✓ Ruzasvir is a highly potent Phase 2-ready drug candidate
✓ Potential for best-in-class pan-genotypic fixed-dose combination

Bemnifosbuvir + Ruzasvir Competitive Profile

Convenient and Short duration

Potential for first RBV-free therapy for decompensated disease

Financial Summary
Financial Update First Quarter 2022

Condensed Consolidated Statement of Operations and Comprehensive Income (Loss)  
(in thousands, except share and per share amounts)  
(unaudited)

<table>
<thead>
<tr>
<th>Three Months Ended</th>
<th>2022</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration revenue</td>
<td>$</td>
<td>—</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development</td>
<td>29,633</td>
<td>26,571</td>
</tr>
<tr>
<td>General and administrative</td>
<td>12,542</td>
<td>8,759</td>
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<tr>
<td>Total operating expenses</td>
<td>42,175</td>
<td>35,330</td>
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<tr>
<td>Income (loss) from operations</td>
<td>(42,175)</td>
<td>30,655</td>
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<tr>
<td>Interest income and other, net</td>
<td>98</td>
<td>58</td>
</tr>
<tr>
<td>Income (loss) before income taxes</td>
<td>(42,077)</td>
<td>30,713</td>
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<tr>
<td>Income tax expense</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Net income (loss) and comprehensive income (loss)</td>
<td>$ (42,077)</td>
<td>$ 30,713</td>
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<tr>
<td>Net income (loss) per share attributable to common stockholders</td>
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<td></td>
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<tr>
<td>Basic</td>
<td>$ (0.51)</td>
<td>$ 0.37</td>
</tr>
<tr>
<td>Diluted</td>
<td>$ (0.51)</td>
<td>$ 0.34</td>
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<tr>
<td>Weighted-average common shares outstanding</td>
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<td></td>
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<tr>
<td>Basic</td>
<td>83,176,408</td>
<td>82,577,836</td>
</tr>
<tr>
<td>Diluted</td>
<td>83,176,408</td>
<td>89,099,075</td>
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Financial Update First Quarter 2022

<table>
<thead>
<tr>
<th>Selected Condensed Consolidated Balance Sheet Data</th>
<th>March 31, 2022 (unaudited)</th>
<th>December 31, 2021</th>
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<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 705,545</td>
<td>$ 764,375</td>
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<tr>
<td>Working capital(1)</td>
<td>684,622</td>
<td>715,520</td>
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<tr>
<td>Total assets</td>
<td>717,189</td>
<td>772,892</td>
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<tr>
<td>Total liabilities</td>
<td>37,305</td>
<td>62,815</td>
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<tr>
<td>Total stockholders’ equity</td>
<td>679,884</td>
<td>710,077</td>
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(1) The Company defines working capital as current assets less current liabilities. See the Company’s condensed consolidated financial statements in its Quarterly Report on Form 10-Q for the three months ended March 31, 2022 for further detail regarding its current assets and liabilities.
Closing Remarks
COVID-19: Continued Emergence and Evolution of Variants

• **There remains a need for new oral antiviral treatments**
  • Relapse, drug-drug interactions, potential safety, efficacy and resistance concerns
• New variants continue to fuel surges of cases and can be life threatening to those at high risk
• BA.4 and BA.5 are expected to cause a major surge in the US during the fall / winter 2022-2023

## Fully Funded, Multiple Upcoming Value-Driving Milestones

<table>
<thead>
<tr>
<th>ssRNA VIRUS</th>
<th>THERAPEUTIC INDICATION</th>
<th>PRECLINICAL</th>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
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<tbody>
<tr>
<td><strong>Coronaviridae</strong></td>
<td>COVID-19¹</td>
<td></td>
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<tr>
<td></td>
<td>Bemnifosbuvir</td>
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<tr>
<td></td>
<td>(AT-527)</td>
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<tr>
<td></td>
<td>Nucleotide*</td>
<td></td>
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<tr>
<td>COVID-19</td>
<td>Bemnifosbuvir</td>
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<tr>
<td></td>
<td>Nucleotide +</td>
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<td></td>
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<tr>
<td></td>
<td>Protease inhibitor</td>
<td></td>
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<tr>
<td><strong>Flaviviridae</strong></td>
<td>Hepatitis C Virus (HCV)²</td>
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<tr>
<td></td>
<td>Bemnifosbuvir</td>
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<tr>
<td></td>
<td>Nucleotide</td>
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<tr>
<td>Hepatitis C Virus</td>
<td>Ruzasvir**</td>
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<tr>
<td>(HCV)</td>
<td>(NS5A inhibitor)</td>
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<tr>
<td>Dengue Virus</td>
<td>AT-752</td>
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<tr>
<td></td>
<td>Nucleotide</td>
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<tr>
<td><strong>Paramyxoviridae</strong></td>
<td>Respiratory Syncytial Virus (RSV)</td>
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<td></td>
<td>Product Candidates</td>
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### 2022 EXPECTED MILESTONES

- **COVID-19**
  - Advance bemnifosbuvir clinical program in 2022

- **HCV**
  - Initiate bemnifosbuvir + Ruzasvir Phase 2 combo trial: **late 2022**

- **Dengue**
  - Phase 2 proof-of-concept program: **initial data late 2022**

- Cash runway through 2025

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*Bemnifosbuvir is a double prodrug nucleotide analog. **Worldwide exclusive license for all uses from Merck. Bemnifosbuvir is the generic name for AT-527.

1. Bemnifosbuvir as monotherapy has generated Phase 2 results. In vitro combination studies are being conducted to generate data in support of clinical combination studies for COVID-19.
2. Bemnifosbuvir and Ruzasvir have generated Phase 2 results and are anticipated to be developed as a combination for HCV.
Q & A Session