Safe Harbor and Forward-Looking Statements

This presentation contains forward-looking statements including, but not limited to, statements related to Gritstone bio, Inc.’s (“Gritstone”, “we” or “our”) preclinical and clinical product candidates, including GRANITE, SLATE, CORAL, and HIV programs. All statements other than statements of historical facts contained in this presentation, including statements regarding the timing of immunogenicity and clinical data for GRANITE, SLATE, and CORAL, the timing for Gilead’s initiation of a Phase 1 in HIV, collaborations surrounding our infectious disease programs, future results of operations and financial position, business strategy, prospective products, availability of funding, clinical trial results, product approvals and regulatory pathways, timing and likelihood of success, plans and objectives of management for future operations, future results of current and anticipated products, and our ability to create value are forward-looking statements. Forward-looking statements generally contain words such as "believes," "expects," "may," "will," "should," "seeks," "approximately," "intends," "plans," "estimates," "anticipates," and other expressions that are predictions of or indicate future events and trends and that do not relate to historical matters. Because forward-looking statements are inherently subject to risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the company in general, see Gritstone’s periodic filings with the Securities and Exchange Commission (the “SEC”), including its Quarterly Report filed on November 3, 2021, and any current and periodic reports filed thereafter.
Welcome and Overview of Gritstone bio
Andrew Allen, MD, PhD, President and CEO, Gritstone bio, Inc

CORAL-BOOST: Phase 1 study evaluating CORAL samRNA vaccine as a boost following Vaxzevria COVID-19 vaccination
Karin Jooss, PhD, Executive Vice President and Head of R&D at Gritstone bio, Inc

Closing Remarks
Andrew Allen, MD, PhD, President and CEO, Gritstone bio, Inc

Q&A
Welcome and Overview
Gritstone: Taking Immunotherapy to the Next Level

Leveraging proprietary target identification & vaccine platform technologies

1. Proprietary Synergistic Technologies + In-House Manufacturing Capabilities
   - EDGE™ AI Antigen Discovery Platform
   - Vaccine Delivery Platforms: Viral & Self-amplifying mRNA

2. Differentiated and Expansive Pipeline
   - Oncology
   - Infectious Diseases

3. Premier Government and Industry Partnerships
   - CORAL (COVID-19)
   - SLATE (off-the-shelf neoantigen)
   - GRANITE (individualized neoantigen)

4. Multiple Near-Term Catalysts

~$216.4M
Cash Position* as of Sept 30, 2021

*cash, cash equivalents, marketable securities, and restricted cash
samRNA: A Second-Generation mRNA Platform with Unique Attributes

Differentiated vector that drives robust antibody and CD8+ T cell responses

- Extended duration and magnitude of antigen expression
- Strong & potentially durable induction of neutralizing antibody & T cell immunity (CD4+ and CD8+)
- Dose sparing potential: Equivalent neutralizing antibody (nAb) induction at up to ~1/10 dose of approved mRNA vaccines
- Potential for refrigerator stable product

- First to put samRNA into humans*
- Ongoing vector innovations to increase immunogenicity/efficacy, tolerability, and manufacturability
- Extensive clinical and regulatory experience
- INDs (or equivalent) and trials for 7 products in oncology and SARS-CoV-2 across four continents

*first to introduce samRNA + LNP into clinical trials
CORAL’s Approach Broadens Immune Response to Address Key Unmet Needs in Infectious Disease Applications

Chimeric immunogen design optimizes vaccine for both antibody and T cell production

**Surface Antigen**
- SARS-CoV-2 Spike
- B cells (nAbs)

**T Cell Epitopes**
- TCE from Viral Genes
- CD8+ T cells

**Neutralizing antibodies against Spike**

**Cytolytic CD8+ T cell immunity against TCE**

*TCE = T cell epitopes*
Process: Designing Vaccines that Drive Both B and T Cell Immune Responses

Careful design of the immunogen, the antigenic payload, to optimize the nature of the immune response

**Pathogen Gene Selection**
Both surface antigens (for nAbs) and other viral genes (for T cell epitopes)

**Epitope Identification**
AI platform (EDGE™) identifies and prioritizes conserved T cell epitopes

**Immunogen Design**
Prioritized targets captured efficiently in vectors

Optimal immunogens added to vectors
CORAL: A New Approach to COVID-19

Spike + T cell epitopes in samRNA vector offers potential for potent and durable immunity across current and future variants

1st Generation Approaches

Spike-dedicated – solutions target spike only: Protection dependent on one highly-mutable surface antigen

Highly dependent on neutralizing antibodies – nAb effectiveness wanes over time and frequently provides reduced protection against new variants

Dose is comparably high

CORAL

Spike + T cell epitopes from other viral genes – allows prioritization of conserved protein sequences

Drives robust and broad immune response against spike and conserved viral epitopes: Reduce impact of Spike mutations

samRNA offers dose sparing opportunity
## CORAL Clinical Development Strategy Designed to Answer Key Questions Concerning Dose, Regimen and Patient Population

Optimized construct and dose to be identified to enable pivotal trial initiation

<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Vaccine</th>
<th>Location</th>
<th>Construct</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORAL - BOOST</td>
<td>Healthy volunteers ≥60 years previously vaccinated</td>
<td>samRNA samRNA/samRNA</td>
<td>UK &amp; US</td>
<td>$S_{WT}$-TCE5</td>
<td>120</td>
</tr>
<tr>
<td>CORAL - IMMUNO-COMPROMISED</td>
<td>B-cell deficient (hematologic malignancies, MS), previously vaccinated</td>
<td>ChAd/samRNA ChAd/ChAd</td>
<td>UK</td>
<td>$S_{WT}$-TCE5</td>
<td>20-30</td>
</tr>
<tr>
<td>CORAL - CEPI</td>
<td>Healthy volunteers (naïve or convalescent; including PLWH)</td>
<td>samRNA samRNA/samRNA</td>
<td>S. Africa</td>
<td>$S_{beta}$-TCE9 $S_{beta}$-N-TCE11 $S_{omicron}$-N-TCE11</td>
<td>320</td>
</tr>
<tr>
<td>CORAL - NIH</td>
<td>Healthy volunteers previously vaccinated</td>
<td>samRNA ChAd samRNA/samRNA</td>
<td>U.S.</td>
<td>$S_{WT}$ $S_{WT}$-TCE5</td>
<td>150</td>
</tr>
</tbody>
</table>

$S_{WT}$ – Wild Type variant Spike; $S_{beta}$ – Beta variant Spike (B.1.351); $S_{omicron}$ – Omicron variant Spike (B.1.1.529); TCE – T-cell epitopes; N – Nucleocapsid; PLWH – People Living with HIV; ChAd – Chimpanzee adenovirus
CORAL-BOOST Results
Coral-Boost: samRNA as Boost Following Approved COVID-19 Vaccination

Single dose of samRNA CORAL vaccine containing T cell epitopes and WT Strain Spike antigen

<table>
<thead>
<tr>
<th>CORAL-BOOST</th>
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<tbody>
<tr>
<td><strong>Vaccine Candidate</strong></td>
<td>CORAL samRNA-S&lt;sub&gt;WT&lt;/sub&gt;-TCE5 (GRT-R910)</td>
</tr>
</tbody>
</table>
| **Population** | Healthy volunteers ≥60 years  
Previously vaccinated with 2 doses of ChAdOx1 ≥ 4 months prior |
| **Timing** | • Vaccination initiated in September 2021  
• Cohort 1 (10 µg) fully enrolled; n = 10  
• Cohort 2 (30 µg) currently enrolling; n =10 |
| **Sites** | University of Manchester (UK) - Prof Andy Ustianowski (PI) |

**Immunogenicity Endpoints**

- **Neutralizing Antibodies and IgG Titers**: Pseudovirus neutralizing antibody and IgG titers assessed against multiple Spike variants
- **CD8+ T Cell Priming vs Novel T Cell Epitopes**: In vitro stimulated ELISpot assay using overlapping peptide pools derived from TCE5-included target gene regions (ORF3a, N, M)
- **T Cell Boosting vs Spike Epitopes**: Ex vivo ELISpot assay using overlapping peptide pools derived from Spike
## Cohort 1: Subject Demographics

<table>
<thead>
<tr>
<th>Subject ID</th>
<th>Gender</th>
<th>Age</th>
<th>Weeks post 2\textsuperscript{nd} Vaxzevria dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>M</td>
<td>63</td>
<td>30</td>
</tr>
<tr>
<td>0002</td>
<td>F</td>
<td>64</td>
<td>30</td>
</tr>
<tr>
<td>0003</td>
<td>F</td>
<td>63</td>
<td>22</td>
</tr>
<tr>
<td>0004</td>
<td>M</td>
<td>63</td>
<td>22</td>
</tr>
<tr>
<td>0005</td>
<td>M</td>
<td>69</td>
<td>25</td>
</tr>
<tr>
<td>0007</td>
<td>F</td>
<td>63</td>
<td>24</td>
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<tr>
<td>0008</td>
<td>M</td>
<td>81</td>
<td>25</td>
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<td>0009</td>
<td>F</td>
<td>75</td>
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</tr>
<tr>
<td>0014</td>
<td>M</td>
<td>75</td>
<td>27</td>
</tr>
<tr>
<td>0015</td>
<td>M</td>
<td>72</td>
<td>22</td>
</tr>
</tbody>
</table>
samRNA Boost was Shown to Have a Favorable Safety and Tolerability Profile at 10µg in Healthy Volunteers ≥60 yrs

No unexpected reactogenicity or safety events

1 AE of recurrence of asthma and 1 AE of recurrence of muscle spasm in 10 µg dose cohort

Database snapshot as of 11/29/2021
Single 10µg samRNA Boost Dose Post Vaxzevria Two Dose Series Induced Potent Neutralizing Antibody Response Against SARS-CoV-2

Neutralizing antibodies (geomean) against Wild Type Variant

*ID$_{50}$ = Median infective dose; **Geomean ID$_{50}$ titer values notated; Assays conducted using WHO international standards. Treatment day = day 1 GRTS samRNA boost dose was administered. Boxes and horizontal bars denote interquartile range (IQR) and median neutralization, respectively. Whisker endpoints are equal to the maximum and minimum values below or above the median +/- 1.5 x IQR.
Comparison Across Studies: 10µg samRNA Boost Elicited Similar, Potent nAb Response to 100µg of Moderna (mRNA-1273) after AZ Primary Series

Neutralizing antibodies (geomean) against Wild Type Variant

*ID$_{50}$ = Median infective dose; **Geomean ID$_{50}$ titer values notated – not studied head-to-head directly; CTRL: Equivalent meningococcal conjugate vaccine; Treatment day = day 1 GRTS samRNA boost dose was administered. Boxes and horizontal bars denote interquartile range (IQR) and median neutralization, respectively. Whisker endpoints are equal to the maximum and minimum values below or above the median +/- 1.5 x IQR.

Mean age: 69 yrs; n = 10

Mean age: 64-65 yrs

Adapted from Munro et al. Lancet 2021
Single 10µg samRNA Boost Dose Induced a Broad, Potent nAb Response

nAbs induced against Wild Type, Beta, and Delta variants of SARS-CoV-2

*ID_{50} = Median infective dose, **Geomean ID_{50} titer values notated – not studied head-to-head directly. Treatment day = day 1 GRTS samRNA boost dose was administered. Boxes and horizontal bars denote interquartile range (IQR) and median neutralization, respectively. Whisker endpoints are equal to the maximum and minimum values below or above the median +/- 1.5 x IQR.
Single 10µg samRNA Boost Dose Induced Broad Anti-Spike IgG Response

ELISA-based assay assessing anti-Spike IgG concentration in arbitrary units (AU) per mL

*Geomean AU/ml indicated

Treatment day = day 1 GRTS samRNA boost dose was administered. Boxes and horizontal bars denote interquartile range (IQR) and median neutralization, respectively. Whisker endpoints are equal to the maximum and minimum values below or above the median +/- 1.5 x IQR.
Single 10µg samRNA Boost was Shown to Drive Significant CD8+ T Cell Responses to Non-Spike Epitopes - Potential for Variant-Proof Immunity

Post-IVS ELISPOT

Proportion of responses to TCE5 regions assessed by post-IVS ELISpot

IFN (SFU per 10^6 cells)

<table>
<thead>
<tr>
<th>Treatment day</th>
<th>Minimal TCE5 epitope pools (stacked); background subtracted</th>
<th>Post-IVS ELISPOT</th>
<th>Proportion of responses to TCE5 regions assessed by post-IVS ELISpot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>Mean 9</td>
<td>Background subtracted</td>
<td>TCE5 overlapping peptide (OLP) pools to TCE5 Nucleocapsid, Membrane and ORF3a regions assessed by post-IVS ELISpot (post-treatment timepoint)</td>
</tr>
<tr>
<td>Peak</td>
<td>Mean 515</td>
<td>36%</td>
<td>Membrane</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42%</td>
<td>ORF3a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22%</td>
<td>Nucleocapsid</td>
</tr>
</tbody>
</table>

IFNg (SFU per 10^6 cells)
As Expected, Variant Mutations Had Minimal Impact on Gritstone Vaccine T Cell Epitopes (TCE)

E=Envelope  
M=Membrane  
N=Nucleoprotein

*2 epitopes impacted in 10% of Omicron isolates; 0 epitopes impacted in other isolates  
** N-TCE11: no epitopes impacted in TCE but 6 Omicron mutations in 419 AA Nucleoprotein <1.5% of total protein

Comparison of Mutations within Variants to the Original SARS-CoV-2 Wild Type Strain

<table>
<thead>
<tr>
<th>Variant</th>
<th>Spike (1273AA)</th>
<th>Orf1ab (7096AA)</th>
<th>Orf3a (275AA)</th>
<th>E (75AA)</th>
<th>M (222AA)</th>
<th>Orf7a (121AA)</th>
<th>N (419AA)</th>
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<tbody>
<tr>
<td>Beta</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Delta</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Omicron</td>
<td>37</td>
<td>12</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Impact of Omicron Mutations on Gritstone TCE Cassettes*

<table>
<thead>
<tr>
<th>Gritstone Construct</th>
<th># of Epitopes Impacted</th>
<th>Total # of Epitopes</th>
<th>% of Epitopes Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCE5</td>
<td>3</td>
<td>146</td>
<td>2.1%</td>
</tr>
<tr>
<td>TCE9</td>
<td>2*</td>
<td>72</td>
<td>2.8%</td>
</tr>
<tr>
<td>TCE11**</td>
<td>0</td>
<td>25</td>
<td>0%</td>
</tr>
</tbody>
</table>

*analyses for the table above were executed Nov 28, 2021
Spike-Specific T Cell Responses Boosted after Single 10µg Dose of samRNA

Ex vivo ELISpot

Treatment day

Pre-boost

Peak

0
400
800
1200
IFN (SFU per 10^6 cells)

55
120

*SGeometric mean is indicated
Box and whisker plot: 90% CI and median shown

Spike overlapping peptide pools (stacked)
Initial Conclusions: 10µg samRNA Boost Safely Induced Robust Antibody & T Cell Immunity to Diverse SARS-CoV-2 Epitopes in Volunteers ≥60 years

<table>
<thead>
<tr>
<th>Safety Profile</th>
<th>Immuno-genicity</th>
</tr>
</thead>
</table>
| Mild to moderate, self-limiting AEs with no unexpected reactogenicity or safety events | **Antibody Responses:**  
• Induced potent neutralizing antibody responses against Wild Type, Beta, and Delta SARS-CoV-2 variants  
  o Cross-trial comparison suggests 10µg samRNA induction of nAb titers similar to 100µg of mRNA-1273 in same context  
• Induced broad anti-Spike IgG antibody responses to Wild Type, Beta, and Delta variants |
| **T Cell Responses:**  
• Primed and boosted CD8+ T cell responses across wide set of epitopes from N, M, ORF3a  
• Boosted pre-existing T cell responses to Spike |
CORAL-BOOST: Planned Study Expansion

Expanded study intended to explore effects of 2nd samRNA dose and assess different primary vaccine series

Original Study

Amendment 1

1. Cohort 1 (UK) at 10 μg
   n = 10
   (≥ 4 months after ChAdOx1)

   Optional second dose
   samRNA S_{WT-TCE5} at 10 μg

2. Cohort 2 (UK) at 30 μg
   n = 10
   (≥ 4 months after ChAdOx1)

   Optional second dose
   samRNA S_{WT-TCE5} at 30 μg

3. Cohort 3 (UK/US) at [X] μg*
   n = 50
   (post adenoviral vector vaccine)

   samRNA S_{WT-TCE5} at [X] μg*
   (post adenoviral vector vaccine)

4. Cohort 4 (UK/US) at [X] μg*
   n = 50
   (post mRNA vaccine)

   samRNA S_{WT-TCE5} at [X] μg*
   (post mRNA vaccine)

*Dose to be determined by immune and safety data from Cohorts 1&2
Closing Remarks
COVID-19 Remains a Global Pandemic

Omicron is now the globally dominant variant; what’s next?

*Adapted from the Financial Times Coronavirus Tracker, Jan 2, 2022
New Vaccine Approach is Desired to Achieve Durable Immunity

Existing vaccine solutions have limitations as Spike rapidly mutates and variants of concern (VoC) emerge

Vaccination Approach to VoC

**Re-boost**
- Requires repeated vaccinations
- Protection is often less complete than against reference strain
  - Protection reduces as nAb titers wane

**Variant-specific**
- Longer production cycle
- Expensive
- Production required for each variant
- Potential loss of efficacy over time

Limitations

Ideal Solution

- Protection across current and future variants
- Favorable dosing and administration
- Rapid and scalable production
- Potential pan-corona virus protection

superscript text: ¹Hansen et al. medRxiv 12/22/2021
T Cells Offer Potential Path to More Robust and Durable Immunity

**nature biotechnology**
*NEWS | 13 December 2021*

T-cell vaccines could top up immunity to COVID, as variants loom large

**THE WALL STREET JOURNAL**
*The T-Cell Covid Cavalry*
Two studies suggest this line of defense reduces Omicron’s severity.

**MEDICAL NEWS TODAY**

Beyond the spike: Are T cell COVID-19 vaccines the future?

**The Atlantic**

T Cells Might Be Our Bodies’ Best Shot Against Omicron

**BBC NEWS**

Covid-resistant people inspire new vaccine tactic

**nature**
*NEWS | 12 February 2021*

How ‘killer’ T cells could boost COVID immunity in face of new variants

### Coral-Boost Cohort 1: Single 10 µg SamRNA Boost Induced Robust T Cell Immunity and Robust Antibody Response in Subjects ≥60yrs

10µg SamRNA vaccine dose administered at least 22 weeks after prime-boost with Vaxzevria

<table>
<thead>
<tr>
<th>Gritstone Solution</th>
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<tbody>
<tr>
<td>Drive antibody and CD8+ T cell responses for more complete and durable protection</td>
</tr>
<tr>
<td>Deliver broad set of conserved viral antigens to minimize impact of Spike mutations</td>
</tr>
<tr>
<td>Antigen amplification with SamRNA is dose sparing</td>
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<table>
<thead>
<tr>
<th>CORAL – BOOST: Cohort 1 10µg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priming of de novo CD8+ T cell responses to viral proteins: Nucleoprotein (N), Membrane (M) and ORF3a</td>
</tr>
<tr>
<td>Boosting of pre-existing Spike-specific T cell responses</td>
</tr>
<tr>
<td>Potent pseudovirus nAb titers of 2,370 (wild-type Spike) at day 29, consistent with best-in-class first-generation mRNA vaccines in the same clinical context*</td>
</tr>
</tbody>
</table>

*COV-BOOST study; Munro et al. Lancet 2021
Thank You

ir@gritstone.com