Nemvaleukin Alfa: ARTISTRY-1 and ARTISTRY-2 Clinical Study Update

2021 American Society of Clinical Oncology (ASCO) Annual Meeting Updates

Investor Presentation
June 4, 2021
Forward-Looking Statements

Certain statements set forth in this presentation constitute “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 potential therapeutic benefit and safety profile of nemvaleukin alfa (“nemvaleukin”) when used as monotherapy or in combination and its broad potential applicability across a range of tumor types; potential for dosing optionality with subcutaneous administration of nemvaleukin; and clinical development plans for nemvaleukin, including details of and timelines for the ARTISTRY clinical development program and the ION-01 study. The company cautions that forward-looking statements are inherently uncertain. Although the company believes that such statements are based on reasonable assumptions within the bounds of its knowledge of its business and operations, the forward-looking statements are neither promises nor guarantees and they are necessarily subject to a high degree of uncertainty and risk. Actual performance and results may differ materially from those expressed or implied in the forward-looking statements due to various risks, assumptions and uncertainties. These risks, assumptions and uncertainties include, among others: whether nemvaleukin, as a monotherapy or in combination, could be shown to be unsafe or ineffective; whether preclinical results and data from ongoing clinical studies for nemvaleukin will be predictive of future or final results from such studies, results of future clinical studies or real-world results; whether future clinical trials or future stages of ongoing clinical trials for nemvaleukin will be initiated or completed on time or at all, and whether the results of such activities will be positive; whether the FDA will agree with the company’s regulatory approval strategies for nemvaleukin; changes in the cost, scope and duration of, and clinical trial operations for, development activities for nemvaleukin, including changes relating to the impact of the COVID-19 pandemic; and those risks, assumptions and uncertainties described under the heading “Risk Factors” in the company’s Annual Report on Form 10-K for the year ended Dec. 31, 2020 and in subsequent filings made by the company with the U.S. Securities and Exchange Commission (“SEC”), which are available on the SEC’s website at www.sec.gov and on the company’s website at www.alkermes.com in the “Investors—SEC filings” section. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Except as required by law, the company disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this presentation.
Today’s Participants

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Nemvaleukin Alfa (Nemvaleukin)
Clinical Trials Overview
Nemvaleukin Alfa: Unique Cytokine Designed to Harness Validated IL-2 Pathway Biology

- **Design derives from natural biology**, utilizing native IL-2 and IL-2Rα sequences to confer differentiated properties
  - Inherently active, stable fusion protein: Does not require metabolic or proteolytic conversion; does not degrade to native IL-2
- Demonstrated **durable and deepening responses** in high unmet need populations with **monotherapy** and in **combination with pembrolizumab** in a range of tumors
- **Differentiated and rapidly advancing clinical development program** in high unmet need, difficult-to-treat populations, including patients with checkpoint inhibitor (CPI)-unapproved tumor types and in post-CPI settings

*Includes one response from ARTISTRY-2, which has recently opened expansion cohorts for enrollment at the recommended phase 2 dose.
NSCLC: Non-Small Cell Lung Cancer; SCLC: Small Cell Lung Cancer; RCC: Renal cell carcinoma; GEJ: Esophagogastric junction

**Monotherapy and Combination Responses***

- **HEAD & NECK**
  - **MELANOMA**
    - Mucosal
    - Cutaneous
  - **BLOOD**
    - Hodgkin's lymphoma
  - **LUNG**
    - NSCLC
    - SCLC
  - **GYNECOLOGIC / GENITO-URINARY**
    - RCC
    - Bladder
    - Ovarian
    - Cervical
    - Breast
  - **GASTROINTESTINAL**
    - Gastric / GEJ
    - Esophageal SCC
    - Pancreatic
    - Colorectal
Nemvaleukin Alfa Development Program Progress

Rapid progress in clinical development program enrollment

- 221 patients recruited across the program over the last 12 months
- ARTISTRY-1: Completed enrollment in Part B monotherapy and Part C combination cohorts
- ARTISTRY-2: Completed dose escalation stage, identified RP2D and initiated efficacy expansion stage

Mucosal melanoma

- Nemvaleukin granted Orphan Drug Designation by U.S. Food and Drug Administration for mucosal melanoma
- Initiated ARTISTRY-6 phase 2 monotherapy study of nemvaleukin in mucosal and cutaneous melanoma

Platinum-resistant ovarian cancer

- Entered clinical trial collaboration and supply agreement with MSD (a tradename of Merck & Co., Inc. Kenilworth, NJ, USA) for planned phase 3 study
- Finalizing plans for phase 3 study to evaluate IV nemvaleukin in combination with KEYTRUDA® (pembrolizumab); Study planned to initiate in H2 2021

RP2D: Recommended Phase 2 Dose
# Overview of Nemvaleukin Clinical Development Program

<table>
<thead>
<tr>
<th>Study</th>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
</table>
| **ARTISTRY-1** | Phase 1/2 | - Intravenous (IV) nemvaleukin as monotherapy and in combination with pembrolizumab  
- Monotherapy cohorts: melanoma and renal cell carcinoma  
- Combination cohorts: multiple solid tumor types (including PD-1/L1 approved and unapproved)  |
| **ARTISTRY-2** | Phase 1/2 | - Subcutaneous (SC) nemvaleukin dose escalation and dose expansion  
- Phase 2 dose expansion cohorts in combination with pembrolizumab enrolling: NSCLC, HNSCC, gastric/gastroesophageal junction adenocarcinoma, PROC |
| **ARTISTRY-3** | Phase 2 | - IV nemvaleukin as monotherapy and in combination with pembrolizumab  
- Assessment of treatment-emergent changes in TME in paired biopsies and clinical anti-tumor activity |
| **ARTISTRY-6** | Phase 2 | - Monotherapy nemvaleukin in anti-PD-1 experienced melanoma patients  
- IV administration in advanced mucosal melanoma  
- SC administration in advanced cutaneous melanoma |
| **ION-01** | Phase 2 | - IV nemvaleukin in combination with pembrolizumab in anti-PD-1 pretreated HNSCC patients  
- Assessment of TME in paired biopsies; predictive biomarker assessments; anti-tumor activity  
- Collaboration with the Fred Hutchinson Cancer Research Center |
| **ARTISTRY-7** | Phase 3 | - IV nemvaleukin in combination with pembrolizumab in patients with PROC, compared to investigator choice chemotherapy  
- Planned to begin H2 2021  
- Clinical trial and supply agreement with MSD (a tradename of Merck & Co., Inc. Kenilworth, NJ, USA) |

NSCLC: Non-small cell lung cancer; HNSCC: Head and neck squamous cell carcinoma; TME: Tumor Microenvironment; PD-1: programmed cell death protein 1; PROC: Platinum-resistant ovarian cancer
ARTISTRY-1 Data Updates
ARTISTRY-1: Study Design

Part A: IV Nemvaleukin Monotherapy Dose Escalation
Total Enrolled: 45

Identified RP2D of 6 µg/kg

Part B: IV Nemvaleukin Monotherapy Dose Expansion
Total Enrolled: 74

Advanced Melanoma Cohort

Advanced Renal Cell Carcinoma Cohort

Part C: IV Nemvaleukin + Pembrolizumab Combination Therapy
Total Enrolled: 151

Safety run in^ 6 µg/kg

3 µg/kg

6 µg/kg

PD-1/L1 approved tumor types (PD-1/L1 treatment naïve)

PD-1/L1 approved tumor types (PD-1/L1 pretreated)

Monotherapy rollover

PD-1/L1 unapproved tumor types*

Head and neck squamous cell carcinoma

Melanoma

Non-small cell lung cancer

*Includes colorectal cancer, triple-negative breast cancer, ovarian cancer, esophageal cancer, soft tissue sarcomas, and subjects with metastatic cancer

^IV nemvaleukin (1 µg/kg or 3 µg/kg) + pembrolizumab (200 mg) following combination dosing regimen

Enrollment as of May 25, 2021
ARTISTRY-1 Safety Summary

- Safety profile of IV nemvaleukin in combination with pembrolizumab generally consistent with monotherapy profile
- In combination, no evidence of additive toxicities has emerged beyond those already established for pembrolizumab alone

### Monotherapy (Part B only; n=62)
- Chills, pyrexia, nausea and hypotension were most frequently (>30%) reported treatment-emergent adverse events (TEAEs); consistent with anticipated effects of cytokine administration
  - Transient, majority Grade ≤2 in severity
- Most frequent (>10%) Grade 3-4 treatment-related adverse events (TRAEs) was neutropenia
- No deaths due to TRAEs
- Two patients discontinued due to TRAEs (Grade 3 bronchospasm and Grade 3 failure to thrive)

### Combination with Pembrolizumab (Part C only; n=128)
- Chills, pyrexia, nausea and fatigue were most frequently (>30%) reported TEAEs; consistent with anticipated effects of cytokine and/or pembrolizumab administration
  - Transient, majority Grade ≤2 in severity
- Most frequent (>10%) Grade 3-4 TRAE was neutrophil count decrease and anemia
- Discontinuations due to TRAEs included: Grade 3 fatigue, Grade 3 pneumonitis, Grade 2 infusion-related reaction (IRR), Grade 5 inanition
- One death due to TRAE (reported at ESMO 2020): Death due to inanition in a pancreatic cancer patient

Data as of March 19, 2021
ARTISTRY-1 Monotherapy Cohort: Enrollment Completed

Part B: Monotherapy Dose Expansion
Total Enrolled: 74
6 µg/kg IV nemvaleukin

- Advanced Melanoma Cohort (n=47)
- Advanced Renal Cell Carcinoma Cohort (n=27)

Key Study Features

- Key inclusion criteria - progressed on:
  - Immune checkpoint inhibitor (e.g., anti-PD-(L)1 with or without anti-CTLA-4)
  - Targeted agent, as appropriate (e.g., BRAF inhibitor if BRAF-mut)

- Patients eligible to roll over to part C combination with pembrolizumab (at investigator’s discretion)

Enrollment as of May 25, 2021
ARTISTRY-1: IV Nemvaleukin Monotherapy Responses in Melanoma Patients

Preliminary data (ongoing study):

- Out of 30 evaluable patients (with ≥ 1 scans):
  - 2 patients with metastatic mucosal melanoma achieved partial response (PR) (1 unconfirmed)
  - 2 patients with cutaneous melanoma achieved PR (1 awaiting confirmation and 1 unconfirmed), as of May 3rd
  - Stable disease observed in 21 patients
  - 24 patients continued on study as of data cut off date

- Tumor Type (Line of Therapy)
- Time on Study (Weeks)

PD: Progressive disease; PR: Partial response; SD: Stable disease.

Data cut off March 19, 2021, unless otherwise noted
### IV Nemvaleukin: Monotherapy Anti-Tumor Activity in Melanoma

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Number of Prior Therapies*</th>
<th>Best Overall Response</th>
<th>Max Decrease in Target Lesions</th>
<th>Time on Therapy (Weeks)</th>
<th>Continued on Therapy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mucosal melanoma</td>
<td>1</td>
<td>PR</td>
<td>44%</td>
<td>79</td>
<td>Yes</td>
</tr>
<tr>
<td>Mucosal melanoma</td>
<td>1</td>
<td>uPR</td>
<td>39%</td>
<td>16</td>
<td>No†</td>
</tr>
<tr>
<td>Cutaneous melanoma</td>
<td>4</td>
<td>uPR</td>
<td>44%</td>
<td>19</td>
<td>Yes</td>
</tr>
<tr>
<td>Cutaneous melanoma**</td>
<td>2</td>
<td>PR, awaiting confirmation</td>
<td>35%</td>
<td>13</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* For full list of prior therapies, please see ASCO 2021 poster
† Patient discontinued therapy following progressive disease
** New response observed after the March 19, 2021 data cut off
PR: Partial response; uPR: Unconfirmed partial response

Data cut off May 3, 2021
ARTISTRY-1: IV Nemvaleukin Monotherapy Responses in Renal Cell Carcinoma (RCC) Patients

- Preliminary data (ongoing study):
  - Out of 20 evaluable patients (with ≥ 1 scans):
    - 2 patients achieved partial response (1 awaiting confirmation), as of May 3rd
    - Stable disease observed in 10 patients
    - 12 patients continued on study as of data cut off date

Tumor Type (Line of Therapy)

<table>
<thead>
<tr>
<th>Time on Study (Weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72</td>
</tr>
</tbody>
</table>

- Evaluation of SD
- Evaluation of PD
- Evaluation of PR
- Ongoing
- Rollover to Part C
- PR awaiting confirmation post-ASCO data cut date
- PR confirmed post-ASCO data cut date

PD: Progressive disease; PR: Partial response; SD: Stable disease

*Discontinued treatment for reasons other than disease progression, scans were continued in the follow-up period, per study protocol.

Data cut off March 19, 2021, unless otherwise noted
# IV Nemvaleukin: Monotherapy Anti-Tumor Activity in Renal Cell Carcinoma

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Number of Prior Therapies*</th>
<th>Best Overall Response</th>
<th>Max Decrease in Target Lesions</th>
<th>Time on Therapy (Weeks)</th>
<th>Continued on Therapy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal Cell Carcinoma</td>
<td>2</td>
<td>PR, awaiting confirmation</td>
<td>31% (C6 scan)</td>
<td>38</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27% (C8 scan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27% (C10 scan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal Cell Carcinoma</td>
<td>1</td>
<td>PR</td>
<td>48%</td>
<td>23</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* For full list of prior therapies, please see ASCO 2021 poster; PR: Partial response

Data cut off May 3, 2021
ARTISTRY-1 Combination Cohorts: Enrollment Completed

Part C: IV Nemvaleukin + Pembrolizumab Combination Therapy

**Total Enrolled: 151**

**Nemvaleukin (3 μg/kg) + pembrolizumab (200 mg)**

<table>
<thead>
<tr>
<th>PD-1/L1 approved tumor types (PD-1/L1 treatment naïve)</th>
<th>PD-1/L1 unapproved tumor types*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-1/L1 approved tumor types (PD-1/L1 pretreated)</td>
<td>Monotherapy rollover</td>
</tr>
</tbody>
</table>

**Nemvaleukin (6 μg/kg) + pembrolizumab (200 mg)**

<table>
<thead>
<tr>
<th>Melanoma</th>
<th>Head and neck squamous cell carcinoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-small cell lung cancer (n=21)</td>
<td></td>
</tr>
</tbody>
</table>

*Includes colorectal cancer, triple-negative breast cancer, ovarian cancer, esophageal cancer, soft tissue sarcomas, and subjects with metastatic cancer

- 48 patients continued on study as of May 25, 2021

Enrollment as of May 25, 2021
ARTISTRY-1: IV Nemvaleukin in Combination With Pembrolizumab
PD-1/L1 Unapproved Tumor Types

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Number of Prior Therapies*</th>
<th>Best Overall Response</th>
<th>Max Decrease in Target Lesions</th>
<th>Time on Therapy (Weeks)</th>
<th>Continued on Therapy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum-resistant ovarian</td>
<td>5</td>
<td>CR</td>
<td>70%</td>
<td>121</td>
<td>Yes</td>
</tr>
<tr>
<td>Platinum-resistant ovarian</td>
<td>2</td>
<td>PR</td>
<td>95%</td>
<td>65</td>
<td>Yes</td>
</tr>
<tr>
<td>Platinum-resistant ovarian</td>
<td>7</td>
<td>uPR</td>
<td>45%</td>
<td>34</td>
<td>No</td>
</tr>
<tr>
<td>Platinum-resistant ovarian</td>
<td>6</td>
<td>PR</td>
<td>41%</td>
<td>55</td>
<td>Yes</td>
</tr>
<tr>
<td>Triple negative breast</td>
<td>8</td>
<td>iPR</td>
<td>66%</td>
<td>95</td>
<td>No</td>
</tr>
<tr>
<td>Pancreatic</td>
<td>3</td>
<td>PR</td>
<td>63%</td>
<td>17</td>
<td>No</td>
</tr>
<tr>
<td>Esophageal SCC</td>
<td>1</td>
<td>PR</td>
<td>48%</td>
<td>58</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Preliminary data (ongoing study):
- Out of the 14 patients with ovarian cancer
  - 1 complete response (CR) in a PROC patient
  - 3 PRs (1 unconfirmed) in PROC patients
  - 3 of the 4 PROC patients with objective responses had been on treatment for more than a year and continued on therapy
  - 6 had SD
- Partial responses were also observed in patients with esophageal, triple negative breast and pancreatic cancers

* For full list of prior therapies, please see ASCO 2021 poster; iPR: Immune partial response; PR: Partial response; PROC: Platinum-resistant ovarian cancer; uPR: Unconfirmed partial response; SCC: Squamous cell carcinoma; SD: Stable disease

Data cut off May 3, 2021
ARTISTRY-1: IV Nemvaleukin in Combination With Pembrolizumab
Best Response of Target Lesion in PD-1/L1 Unapproved Tumors

<table>
<thead>
<tr>
<th>Tumor Type (Lines of Therapy)</th>
<th>Best % Change in Tumor Size from Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td>-10</td>
</tr>
<tr>
<td>Stable Disease</td>
<td>-30</td>
</tr>
<tr>
<td>-50</td>
<td>-50</td>
</tr>
<tr>
<td>-70</td>
<td>-70</td>
</tr>
<tr>
<td>-90</td>
<td>-90</td>
</tr>
</tbody>
</table>

Data cut off March 19, 2021
# ARTISTRY-1: IV Nemvaleukin in Combination With Pembrolizumab

**PD-1/L1 Approved Tumor Cohort and Tumor-Specific Cohorts**

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Number of Prior Therapies*</th>
<th>Best Overall Response</th>
<th>Max Decrease in Target Lesions</th>
<th>Weeks on Therapy</th>
<th>Continued on Therapy?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nemvaleukin (3 μg/kg) + pembrolizumab (200 mg)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastric/GEJ</td>
<td>4 (PD-1/L1 treatment naïve)</td>
<td>PR</td>
<td>52%</td>
<td>68</td>
<td>Yes</td>
</tr>
<tr>
<td>Cervical</td>
<td>2 (PD-1/L1 treatment naïve)</td>
<td>PR</td>
<td>39%</td>
<td>41</td>
<td>Yes</td>
</tr>
<tr>
<td>Cervical</td>
<td>1 (PD-1/L1 treatment naïve)</td>
<td>PRa</td>
<td>39%</td>
<td>28</td>
<td>Yes</td>
</tr>
<tr>
<td>Bladder</td>
<td>1 (PD-1/L1 treatment naïve)</td>
<td>PR</td>
<td>59%</td>
<td>30</td>
<td>Yes</td>
</tr>
<tr>
<td>Hodgkin’s lymphoma</td>
<td>1 (PD-1/L1 treatment naïve)</td>
<td>PR</td>
<td>47%</td>
<td>31</td>
<td>Yes</td>
</tr>
<tr>
<td>ER+/HER2 breast</td>
<td>3 (PD-1/L1 pretreated)</td>
<td>uPR</td>
<td>32%</td>
<td>16</td>
<td>No</td>
</tr>
<tr>
<td>SCLC**</td>
<td>2 (PD-1/L1 treatment naïve)</td>
<td>PR²</td>
<td>33%</td>
<td>20</td>
<td>Yes</td>
</tr>
<tr>
<td>Colorectal**</td>
<td>2 (PD-1/L1 treatment naïve)</td>
<td>PR²</td>
<td>35%</td>
<td>25</td>
<td>Yes</td>
</tr>
<tr>
<td>Renal cell carcinoma (rollover)</td>
<td>2</td>
<td>PR</td>
<td>71%</td>
<td>5 (mono) + 36 (combo)</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Nemvaleukin (6 μg/kg) + pembrolizumab (200 mg)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mucosal melanoma</td>
<td>Treatment naïve</td>
<td>PR</td>
<td>100%</td>
<td>38</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-small-cell lung</td>
<td>3</td>
<td>PR</td>
<td>63%</td>
<td>25</td>
<td>Yes</td>
</tr>
<tr>
<td>Head &amp; neck SCC**</td>
<td>1</td>
<td>PR²</td>
<td>45%</td>
<td>27</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Cervical cancer: Of 4 evaluable patients, 2 achieved PR (1 awaiting confirmation); 3 of the 4 patients continued on therapy
- Responses also observed in bladder, Hodgkin’s lymphoma, breast, RCC, mucosal melanoma, head & neck, lung cancer

* For full list of prior therapies, please see ASCO 2021 poster; ** New response observed after the March 19, 2021 data cut; * Awaiting confirmation

ER+/HER2: Estrogen Receptor+ Human Epidermal Growth Factor Receptor 2; SCLC: Small cell lung cancer; GEJ: Esophagogastric junction; RCC: Renal cell carcinoma; SCC: Squamous cell carcinoma; PR: Partial response; uPR: Unconfirmed partial response

Data cut off May 3, 2021
ARTISTRY-1: IV Nemvaleukin in Combination With Pembrolizumab
Best Response of Target Lesion in PD-1/L1 Approved Tumors

![Graph showing best response of target lesion in PD-1/L1 approved tumors.](image_url)

- **Tumor Type (Lines of Therapy)**
- **Best % Change in Tumor Size from Baseline**
  - 80
  - 40
  - 20
  - 0
  - -20
  - -40
  - -60

- **PD-1/L1 pre-treated**
- **PD-1/L1 treatment naive**

**Data cut off March 19, 2021**
ARTISTRY-1 Data Summary

• IV nemvaleukin demonstrated monotherapy activity in CPI-experienced melanoma and RCC patients, consistent with its molecular design
  ◦ 2 PRs (1 unconfirmed) reported in mucosal melanoma; 2 PRs (1 unconfirmed, 1 awaiting confirmation) reported in cutaneous melanoma; 2 PRs (1 awaiting confirmation) reported in RCC

• Combination activity of IV nemvaleukin with pembrolizumab has been observed across a broad range of tumor types, including in PD-1/L1 approved and unapproved tumors
  ◦ Durable and deepening responses observed in PROC: 1 CR, 3 PRs (1 unconfirmed); 3 of these 4 patients had been on treatment for more than a year and continued on therapy
  ◦ Objective Responses observed in cervical cancer: 2 PRs (1 awaiting confirmation) out of 4 patients
  ◦ Objective responses also observed in esophageal, bladder, Hodgkin’s lymphoma, breast, RCC, mucosal melanoma, gastric, pancreatic, head & neck, and lung cancer

• In Parts B and C evaluating IV nemvaleukin as monotherapy or in combination with pembrolizumab, treatment-related adverse events (AEs) were mostly transient and manageable
ARTISTRY-2 Data Updates
ARTISTRY-2: Phase 2 Efficacy Expansion Initiated Following Determination of Subcutaneous (SC) RP2D

**Phase 1: Dose Escalation, 6-Week Monotherapy Lead-in**

Followed by combination of 200 mg pembrolizumab q21d and either SC nemvaleukin q7d or q21d

- **Cohorts A2 to A5 (0.6 mg – TBD)**
  - q7d SC nemvaleukin
  - Dose Escalation + pembrolizumab

- **Cohorts B2 to B5 (1.0 mg – TBD)**
  - q21d SC nemvaleukin
  - Dose Escalation + pembrolizumab

**Phase 2: Efficacy Expansion in Solid Tumors**

*INITIATED at RP2D*

Combination SC nemvaleukin + pembrolizumab

**Efficacy expansion in select solid tumors:** NSCLC, Head & Neck SCC, PROC, Gastric/gastroesophageal junction adenocarcinoma

**Primary Objectives**
- Safety and Efficacy
- 3.0 mg q7d in combination with pembrolizumab q21d

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RP2D: Recommended phase 2 dose; q7d: Administered once weekly; q21d: Administered once every three weeks; NSCLC: Non-small cell lung cancer; SCC: Squamous cell carcinoma; PROC: Platinum-resistant ovarian cancer

*Secondary objectives include clinical pharmacokinetic profile and immunogenicity, clinical pharmacodynamic effects (all parts), anti-tumor activity and ORR (objective response rate), and DOR (duration of response) (phase 2)*
Safety Profile of Subcutaneous Nemvaleukin Consistent With Mechanism of Action and IV Nemvaleukin

**RP2D Regimens Selected**

SC 3 mg q7d declared as RP2D based on totality of data
- 6 mg q21d dose may offer additional flexibility in treating certain tumor types and/or in combination settings in the future
- MTD for SC nemvaleukin were determined to be 6 mg q7d and 10 mg q21d

**Most Commonly Reported AEs at RP2D Monotherapy**

3 mg q7d (n=7):
- Pyrexia, fatigue, nausea, anemia, chills, injection site reaction, and lymphopenia were most frequently (>30%) reported TEAEs;
  - Transient; majority anticipated effects of cytokine administration
- Most frequent (>10%) Grade 3-4 TRAEs were lymphopenia and neutrophil count decrease
- No treatment-related discontinuations or deaths

6 mg q21d (n=8):
- Safety profile was consistent with 3 mg q7d
- Most frequent (>10%) Grade 3-4 TRAEs were AST/ALT increase, arthralgia, neutropenia and fatigue
- No treatment-related discontinuations or deaths

**No additional toxicities were reported in combination with pembrolizumab**

**DLTs at MTD**

Three DLTs reported at MTDs of 6 mg q7d and 10 mg q21d
- DLTs were manageable with either dose interruption, discontinuation and/or standard of care treatment
  - Atypical Capillary Leak Syndrome, without hypotension (Grade 3)
  - Non-serious injection site reaction (Grade 3)
  - Non-serious, transient fatigue, nausea, vomiting (Grade 3)

AEs: Adverse Events; ALT/AST: aspartate aminotransferase / alanine aminotransferase; TRAEs: Treatment-related adverse events; DLTs: Dose-limiting toxicities; MTD: Maximum tolerated dose; RP2D: Recommended phase 2 dose; SC: Subcutaneous, IV: Intravenous

Data as of March 19, 2021
SC nemvaleukin showed dose-dependent increase in exposure and led to increased levels of IFNγ, a cytokine for anti-tumor activity, with minimal transient increase in IL-6, which is associated with side effects of immunotherapy.

*Serum concentrations after the first dose of SC nemvaleukin

Data cut off March 19, 2021
SC Nemvaleukin Selectively Expanded Circulating NK and CD8+ T Cells, and Demonstrated Initial Anti-Tumor Activity

- 3 mg q7d SC nemvaleukin provided greater expansion of CD8+ T cells and NK cells relative to IV nemvaleukin
- NK cells are known to play a key role in tumor cell killing

**Initial anti-tumor activity observed in dose escalation cohorts**
- Of 57 patients with ≥ 1 on-treatment scans, 31 (54%) had stable disease on first scan
- Of 37 patients with ≥ 2 on-treatment scans, 17 (46%) had stable disease on 2 or more consecutive scans


Data cut off March 19, 2021
ARTISTRY-2: Nemvaleukin in Combination With Pembrolizumab
Case Study: 69-Year-Old Female With High-Grade, Serous PROC

99% reduction in CA-125 level (from 1920 to 23 U/mL) at Cycle 5**

Prior Treatment

<table>
<thead>
<tr>
<th>Line</th>
<th>Therapy</th>
<th>Duration (months)</th>
<th>Best Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CBP/PAC</td>
<td>6</td>
<td>PR</td>
</tr>
<tr>
<td>2</td>
<td>OLP/BEV</td>
<td>2</td>
<td>PD</td>
</tr>
<tr>
<td>3</td>
<td>BEV/DOX</td>
<td>&lt; 1</td>
<td>PD</td>
</tr>
</tbody>
</table>

Treatment-related AEs
- Manageable with no known dose modifications
- Hypotension and dehydration events (grade 2), which were resolved with IV fluids
- Injection site reactions (grade 1) which were resolved with low dose prednisone

Continued on study

Data as of May 3, 2021
ARTISTRY-2 Data Summary

• SC nemvaleukin selectively increased CD8+ T and NK cells, with low-level, transient, non-dose-dependent expansion of Tregs
  ◦ These effects were similar to or greater than those observed with IV nemvaleukin

• Of 57 patients treated with SC nemvaleukin during dose escalation (phase 1), 31 had stable disease on first scan
  ◦ Of 37 patients with ≥ 2 on-treatment scans, 17 had stable disease on two or more consecutive scans

• Phase 2 tumor-specific expansion cohorts at SC nemvaleukin RP2D of 3 mg q7d in combination with pembrolizumab have started enrolling

• In phase 2 expansion stage: 1 PR has been observed in a patient with PROC
Nemvaleukin Program Summary

- Unique cytokine designed to harness validated IL-2 pathway biology, utilizing **native IL-2 and IL-2Rα sequences to confer differentiated properties**

- **Demonstrated monotherapy activity** in tumors where rhIL-2 is known to be active: **melanoma** and **RCC**
  - Granted FDA Orphan Drug Designation in mucosal melanoma
  - Initiated ARTISTRY-6 study in patients with melanoma

- **Demonstrated durable and deepening responses** in combination with pembrolizumab in platinum-resistant ovarian cancer
  - Planned phase 3 study expected to initiate in H2 2021 in collaboration with MSD (a tradename of Merck & Co., Inc. Kenilworth, NJ, USA)

- Anti-tumor activity observed in a range of difficult-to-treat cancers, suggesting **broad potential applicability**

- ARTISTRY-2 study evaluating **potential dosing optionality** with subcutaneous administration
Panel Discussion With
Dr. Valentina Boni and Dr. Omid Hamid