Forward-Looking Statements

This presentation contains forward-looking statements. Such statements are valid only as of today and we disclaim any obligation to update this information. These statements are only estimates and predictions and are subject to known and unknown risks and uncertainties that may cause actual future experiences and results to differ materially from the statements made. These statements are based on our current beliefs and expectations as to such future outcomes. Drug discovery and development involve a high degree of risk. Factors that might cause such a material difference include, among others, uncertainties related to the ability to raise additional capital required to complete the development programs described herein, uncertainties related to the disruptions at our sole supplier of CLR 131, the ability to attract and retain partners for our technologies, the identification of lead compounds, the successful preclinical development thereof, the completion of clinical trials, the FDA review process and other government regulation, the ability of our pharmaceutical collaborators to successfully develop and commercialize drug candidates, competition from other pharmaceutical companies, product pricing and third-party reimbursement. This presentation includes industry and market data that we obtained from industry publications and journals, third-party studies and surveys, internal company studies and surveys, and other publicly available information. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this presentation, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions that were used in preparing the forecasts from the sources relied upon or cited herein. A complete description of risks and uncertainties related to our business is contained in our periodic reports filed with the Securities and Exchange Commission including our Form 10-K for the year ended December 31, 2018.
Presentation Topics

1. Overview

2. CLR 131 r/r Multiple Myeloma

3. CLR 131 r/r Non-Hodgkin’s Lymphoma

4. CLR 131 r/r Pediatric Study

5. Corporate Information and Summary
# Executive Leadership

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Caruso</td>
<td>HIP Innovation Technology - Co-Founder, EVP &amp; COO, Allos Therapeutics - EVP &amp; CCO, BCI, Novartis, BASF, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>Dov Elefant</td>
<td>Akari Therapeutics PLC - CFO, Celsus Therapeutics, Inc. - CFO, Lev Pharmaceuticals - Corporate Controller</td>
</tr>
<tr>
<td>Igor Grachev, MD, PhD</td>
<td>TEVA - Global Development Leader &amp; Head of Innovative Clinical Trials, GE Healthcare, GSK, Novartis, Merck, Sanofi-Aventis, Schering-Plough, BioClinica - Clinical development and medical affairs leadership roles</td>
</tr>
<tr>
<td>Jarrod Longcor</td>
<td>Avillion LLP - CBO, Melinta Therapeutics, Inc. (formerly Rib-X Pharmaceuticals, Inc.) - VP Corp Development and Operations</td>
</tr>
</tbody>
</table>

**Executive Team With Extensive Healthcare Leadership and a Proven Track Record of Product Development and Commercialization**
### Company Highlights

<table>
<thead>
<tr>
<th>Highlight</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing oncology therapies for high unmet medical need in rare adult and pediatric orphan indications</td>
<td></td>
</tr>
<tr>
<td>Validated cancer-targeting platform with novel MOA; lead product is CLR 131 a small-molecule radiotherapeutic</td>
<td></td>
</tr>
<tr>
<td>Achieved Phase 2 primary endpoint; further validated unique efficacy and safety profile in r/r Multiple Myeloma and r/r NHL</td>
<td></td>
</tr>
<tr>
<td>Ongoing Phase 1 pediatric study in malignant brain tumors, neuroblastoma, and sarcomas</td>
<td></td>
</tr>
<tr>
<td>Multiple preclinical programs ready for IND enabling studies</td>
<td></td>
</tr>
<tr>
<td>Efficient capital allocation and low fixed-cost structure</td>
<td></td>
</tr>
</tbody>
</table>
## Company Milestones

<table>
<thead>
<tr>
<th>2019 Program Updates</th>
<th>2019 Program Updates</th>
<th>2020 Program Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLR 131: Phase 1 MM(^1) Cohort 6</strong></td>
<td>U.S. Fast Track Designation: MM and DLBCL(^4)</td>
<td>Provide Phase 2 Data 1Q &amp; 2H: Adult B-cell Malignancies</td>
</tr>
<tr>
<td><strong>CLR 131: Phase 2 MM Update</strong></td>
<td>EU Orphan Drug Designation: MM</td>
<td></td>
</tr>
<tr>
<td><strong>CLR 131: Phase 2 NHL(^2) Update</strong></td>
<td>US Orphan Drug Designation: LPL/WM(^5)</td>
<td>Initiate a Pivotal Study 4Q: Adult B-cell Malignancy</td>
</tr>
<tr>
<td><strong>CLR 131: Phase 1 MM Cohort 7</strong></td>
<td>PDC: 3 Programs Available for IND Enabling Studies</td>
<td>Provide Phase 1 Update 2H: Pediatric Study</td>
</tr>
<tr>
<td><strong>CLR 131: Phase 1 mOS(^3) Update</strong></td>
<td>MM: Oral presentation at ASH</td>
<td>Initiate IND Enabling Studies 2H: Select PDC</td>
</tr>
<tr>
<td><strong>CLR 131: Phase 1 Pediatric Study Initiation &amp; Status Update</strong></td>
<td>DLBCL: Oral presentation at ESMO</td>
<td>Medical Conference Data Presentations</td>
</tr>
</tbody>
</table>

### Comprehensive Phase 2 Clinical Data Reported in Feb. 2020; Pivotal Study Initiation in Adult Hematologic Cancer 4Q20

1. Multiple Myeloma  
2. Non-Hodgkin’s Lymphoma  
3. Median Overall Survival  
4. Diffuse Large B-cell Lymphoma  
5. Lymphoplasmacytic Lymphoma/Waldenstrom’s Macroglobulinemia
CLR 131 - A Phospholipid Ether Radio-Conjugate
Validated Mechanism of Targeted Delivery

• Tumor cells utilize lipids at significantly greater quantities than normal tissue
  – Energy source (β-oxidation)
  – Cell membrane production
  – Signaling molecules

• Cellectar’s phospholipid ethers exploit inherent tumor cell need for lipids to provide targeted delivery
  – Bind to specialized regions on tumor cells that provide more efficient uptake and internalization of lipids

• CLR 131 a phospholipid radio-conjugate
  – Provides delivery of the radioisotope I-131
  – Phase 3 pivotal study ready compound
  – Demonstrated efficacy in 4 different hematologic cancers in Phase 2

Combination of a Validated Delivery Platform and Therapeutic Payload
Presentation Topics

1. Overview
2. CLR 131 r/r Multiple Myeloma
3. CLR 131 r/r Non-Hodgkin’s Lymphoma
4. CLR 131 r/r Pediatric Study
5. Corporate Information and Summary
CLR 131 Phase 2\(^1\) Study Design

**Activity Observed in Four Indications**

### Study Structure

- **Patients Screened**
  - MM
  - DLBCL
  - CLL/SLL, MZL, LPL
  - MCL

- **Interim efficacy assessment by cohort; expansion if ≥20% response rate**

- **Final Efficacy Assessments**
  - MM
  - DLBCL
  - CLL/SLL, MZL, LPL
  - MCL

- **Follow-up (≥1 yr After Last Dose)**

### Study Dosing

- <50mCi Total Body Dose Single Bolus
- ~50mCi Total Body Dose Single Cycle
- ~75mCi Total Body Dose Single Cycle

**U.S. Fast Track Designation Granted for Multiple Myeloma and DLBCL**

1. Phase 2: NCT02952508
## Treatment Emergent Adverse Events (>25% of All Patients)

<table>
<thead>
<tr>
<th>Preferred Term</th>
<th>&lt;50mCi Total Body Dose n = 11</th>
<th>50mCi Total Body Dose n = 31</th>
<th>75mCi Total Body Dose n = 24</th>
<th>ALL DOSES Total n = 66</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall n (%)</td>
<td>&gt; Grade 3 n (%)</td>
<td>Overall n (%)</td>
<td>&gt; Grade 3 n (%)</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>11 (100)</td>
<td>6 (55)</td>
<td>27 (87)</td>
<td>24 (77)</td>
</tr>
<tr>
<td>Lymphocyte count decreased</td>
<td>11 (100)</td>
<td>10 (91)</td>
<td>15 (48)</td>
<td>13 (42)</td>
</tr>
<tr>
<td>Decreased White Blood Cell Count</td>
<td>10 (91)</td>
<td>6 (55)</td>
<td>23 (74)</td>
<td>19 (61)</td>
</tr>
<tr>
<td>Anemia</td>
<td>6 (55)</td>
<td>3 (27)</td>
<td>23 (74)</td>
<td>15 (48)</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>6 (55)</td>
<td>5 (45)</td>
<td>21 (68)</td>
<td>19 (61)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>4 (36)</td>
<td>0</td>
<td>18 (58)</td>
<td>10 (32)</td>
</tr>
<tr>
<td>Infections</td>
<td>0</td>
<td>0</td>
<td>15 (48)</td>
<td>7 (23)</td>
</tr>
</tbody>
</table>

- Most frequent TEAEs\(^2\) are cytopenias
- The cytopenias are very predictable and manageable
  - Nadir occurs ~34 days post initial dose; recovery occurs within ~21 days post nadir
- No deaths, cardiotoxicities, liver, renal or neurologic toxicities, keratopathy, etc.
# CLR 131 r/r Multiple Myeloma

**Challenging Patient Population - Characteristics**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total Body Dose &lt;50mCi (n=10)</th>
<th>Total Body Dose ~50mCi (n=20)</th>
<th>Total Body Dose ~75mCi (n=17)</th>
<th>Total (n=47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age (Min-Max)</td>
<td>68.5 (55-85)</td>
<td>70 (51-82)</td>
<td>70 (59-83)</td>
<td>70 (51-85)</td>
</tr>
<tr>
<td>Male (%)</td>
<td>50</td>
<td>60</td>
<td>71</td>
<td>62</td>
</tr>
<tr>
<td>Median ECOG PS</td>
<td>1</td>
<td>1</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Median Prior Therapies (Min-Max)</td>
<td>4 (3-12)</td>
<td>5 (2-13)</td>
<td>5 (3-17)</td>
<td>5 (2-17)</td>
</tr>
<tr>
<td>Median Days Since Last Treatment (Range)</td>
<td>49 (28,485)</td>
<td>69 (22,1035)</td>
<td>54 (13,407)</td>
<td>52 (13,1035)</td>
</tr>
<tr>
<td>ISS Stage at Diagnosis [n (%)]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage I</td>
<td>5 (50)</td>
<td>6 (30)</td>
<td>7 (41)</td>
<td>18 (38)</td>
</tr>
<tr>
<td>Stage II</td>
<td>4 (40)</td>
<td>4 (20)</td>
<td>5 (29)</td>
<td>13 (28)</td>
</tr>
<tr>
<td>Stage III</td>
<td>0</td>
<td>5 (25)</td>
<td>1 (6)</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Unknown</td>
<td>1 (10)</td>
<td>5 (25)</td>
<td>4 (24)</td>
<td>10 (21)</td>
</tr>
<tr>
<td>Cytogenetics at Diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk [n (%)]</td>
<td>2 (20)</td>
<td>6 (30)</td>
<td>6 (35)</td>
<td>14 (30)</td>
</tr>
<tr>
<td>Unknown [n (%)]</td>
<td>0</td>
<td>3 (15)</td>
<td>3 (18)</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Median Beta-2 Macroglobulin (Range)</td>
<td>2.62 (2.09,4.4)</td>
<td>3.9 (1.98,9.49)</td>
<td>2.65 (1.1,4.4)</td>
<td>2.83 (1.1, 9.49)</td>
</tr>
</tbody>
</table>

**Total Evaluable Patients n=43 (%)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Refractory to Immediate Prior Therapy</td>
<td>38 (88.4)</td>
</tr>
<tr>
<td>Quad/penta-refractory</td>
<td>23 (53.5)</td>
</tr>
<tr>
<td>Triple Class Refractory</td>
<td>20 (46.5)</td>
</tr>
</tbody>
</table>

1. Data as of 31Jan2020 2. Eastern Cooperative Oncology Group Performance Status 3. When patients are refractory to 4 therapeutic agents 4. When patients are refractory to proteasome inhibitor, immunomodulatory drug, and CD38 antibodies
### CLR 131 r/r Multiple Myeloma

**Heavily Pretreated Patient Population - Prior Treatments**

<table>
<thead>
<tr>
<th>Prior Therapies - Median (Range)</th>
<th>Total Evaluable Patients n=43¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM Prior Therapies - Median (Range)</td>
<td>5 (2,17)</td>
</tr>
<tr>
<td>Prior Autologous SCT² [n (%)]</td>
<td>29 (64%)</td>
</tr>
<tr>
<td>Bortezomib</td>
<td>Exposed n (%)</td>
</tr>
<tr>
<td>Carfilzomib</td>
<td>42 (97.7)</td>
</tr>
<tr>
<td>Lenalidomide</td>
<td>17 (39.5)</td>
</tr>
<tr>
<td>Pomalidomide</td>
<td>43 (100)</td>
</tr>
<tr>
<td>Daratumumab</td>
<td>25 (58.1)</td>
</tr>
<tr>
<td>Refractory to Immediate Prior Therapy</td>
<td>38 (88.4%)</td>
</tr>
<tr>
<td>Quad/penta-refractory³</td>
<td>23 (53.5%)</td>
</tr>
<tr>
<td>Single Class Refractory</td>
<td>43 (100)</td>
</tr>
<tr>
<td>Dual Class Refractory</td>
<td>43 (100)</td>
</tr>
<tr>
<td>Triple Class Refractory⁴</td>
<td>20 (46.5)</td>
</tr>
</tbody>
</table>

- Patients were most often refractory to lenalidomide, pomalidomide, bortezomib, daratumumab.
- 23% of patients were previously treated in clinical trials (100% refractory to those treatments).

**95% of Patients Exposed to IO’s, PI’s and CD38 Antibodies Were Refractory to All 3 Drug Classes**

1. Data as of 31Jan2020  2. Stem Cell Transplant  3. When patients are refractory to 4 therapeutic agents  4. When patients are refractory to proteasome inhibitor, immunomodulatory drug, and CD38 antibodies
High Unmet Need Remains in Multiple Myeloma

Limited Progression Free Survival (PFS) for Patients in 3rd Line or Later

Disease Progression in Multiple Myeloma (Median PFS)

- NDMM with ASCT: ~5.7 years
- NDMM without ASCT: ~2 - 4+ years
- 2nd Line: ~1 - 3.5 years
- 4th Line +: ~4 months

Treatment:

- 1st Line
  - ORR: 58%
  - NDMM ASCT
  - Induction: ~35%
  - Post-ASCT: ~45-60%

- 2nd Line
  - ORR: 45%
  - NDMM No ASCT
  - Early Relapse (1-2 prior lines): ~15-43%

- 3rd Line
  - ORR: 30%
  - Early Relapse (1-2 prior lines): ~30-42%

- 4th Line
  - ORR: 15%
  - Late Relapse (>3 prior lines): <3%

40% of Eligible Third Line+ Patients Decline Further Treatment; Opportunity Remains for More Patient Friendly Drug Administration & Treatments

Source: Phase 3 studies or package inserts of SoC therapies; ASCT includes RVd, VTd, R Maintenance; No ASCT includes Rd, RVd, VMP, DVMP, DRd; Early Relapse includes DRd, KRd, ERd, IRd, DVd, Kd; Late Relapse includes Pd, Dara mono, Selinexor; Gandhi, et al. Leukemia 33
CLR 131 r/r Multiple Myeloma

Achieves Primary Efficacy Endpoint

- Detailed evaluation of 75mCi dose
  - 85.7% of patients experienced tumor reduction
  - 50% overall response rate in high risk patients
  - 66% of patients who responded were triple class refractory
- 100% of patients across all doses achieved a minimum of stable disease
- 75mCi Total Body Dose - **42.8% ORR (95% CI: 30 - 57%)**
- Combined ORR for ~50mCi and ~75mCi TBD = 34.5%\(^2\)

1. 95% Confidence Interval (13 - 40%)  
2. 95% Confidence Interval (24-45%)
r/r Multiple Myeloma Competitive Landscape

Approved Products 3rd Line or Later Monotherapy

Data Used for Approval

<table>
<thead>
<tr>
<th>Drug</th>
<th>Overall Response Rate (ORR) - %</th>
<th>Progression Free Survival (PFS) - Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selinexor</td>
<td>25.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Daratumumab</td>
<td>29.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Pomalidomide</td>
<td>29.2</td>
<td>4</td>
</tr>
<tr>
<td>Bortezomib</td>
<td>27.7</td>
<td>3</td>
</tr>
<tr>
<td>Carfilzomib</td>
<td>22.9</td>
<td>3</td>
</tr>
</tbody>
</table>

- All approved drugs achieved an ORR between 22.9% and 29.2%; currently little difference reported in Progression Free Survival
  - All data except Selinexor’s are based upon 3rd line treatment
- CAR-Ts & BCMA antibody drug conjugates have demonstrated increased ORR & PFS
  - If approved for MM, initial utilization likely in later treatment lines
In r/r MM, Potential Market Share Ranges from ~15-35%; Dosing Regimen Supports Consistent Rx Value Regardless of Line of Therapy
CLR 131 Two Cycle Dosing Optimization

Pharmacokinetics - ~200% Increase of Area Under the Curve

- Increased plasma exposure demonstrates increased tumor uptake and responses\(^1\)
- Fractions separated by 14 days increases the plasma exposure of first cycle

Second Cycle More Than Doubles Plasma Exposure, Further Increasing Tumor Uptake

1. Weichert data
CLR 131 r/r Multiple Myeloma
Fifth Line Median Treatment

Overall Response Summary by Total Body Dose

Patients Receiving a Second Cycle Achieved an Average Additional Reduction of 18% in Efficacy Marker; Opportunity for an Increased Overall Response
## Most Recent Approvals & In-development Competitive Products

<table>
<thead>
<tr>
<th></th>
<th>ORR - %</th>
<th>PFS - Months</th>
<th>ORR High risk</th>
<th>ORR Triple refractory</th>
<th>Top TEAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selinexor</td>
<td>25.4</td>
<td>3.7</td>
<td>NR</td>
<td>25.4%</td>
<td>Thrombocytopenia 74%</td>
</tr>
<tr>
<td>Belantamab</td>
<td>34</td>
<td>4.9</td>
<td>38.3%</td>
<td>NR</td>
<td>Keratopathy 75%</td>
</tr>
<tr>
<td>bb2121</td>
<td>73.5</td>
<td>8.6</td>
<td>NR</td>
<td>NR</td>
<td>CRS¹ 83.6%</td>
</tr>
<tr>
<td>JnJ4528</td>
<td>100</td>
<td>Ongoing</td>
<td>NR</td>
<td>NR</td>
<td>Neutropenia 93%</td>
</tr>
<tr>
<td><strong>CLR 131</strong></td>
<td><strong>42.8</strong></td>
<td><strong>Ongoing</strong></td>
<td><strong>50%</strong></td>
<td><strong>33%</strong></td>
<td><strong>Thrombocytopenia 71%</strong></td>
</tr>
</tbody>
</table>

- A single cycle of CLR 131 offers a unique combination of unmatched efficacy and safety
- A second cycle of CLR 131 provides an opportunity to maintain safety profile and meet or exceed CAR-T efficacy
- CLR 131 offers a unique combination of efficacy and safety that is unmatched at a single cycle
- Second cycle offers an opportunity to match or beat some of the CAR-Ts on efficacy & maintain the same safety profile

---

**CLR 131 Outperforms All in High-risk and Triple Class Refractory Patients**

1. Cytokine Release Syndrome
Presentation Topics

1. Overview
2. CLR 131 r/r Multiple Myeloma
3. CLR 131 r/r Non-Hodgkin’s Lymphoma
4. CLR 131 r/r Pediatric Study
5. Corporate Information and Summary
r/r Non-Hodgkin’s Lymphoma Epidemiology

Response Rates by Line of Treatment

- Estimated 2019 incidence: 74,200
- Median age at diagnosis: 67 years
- Response rates and survival decrease significantly in second or third-line treatment
  - DLBCL response rates in third line is 20% with 1-year survival <20%
  - LPL/WM response rate in third line is ~10%

Poor Response Rates for 3rd Line DLBCL and LPL/WM

## CLR 131 r/r Non-Hodgkin’s Lymphoma

### Phase 2 Patient Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total Body Dose ~50mCi (n=12)</th>
<th>Total Body Dose ~75mCi (n=7)</th>
<th>Total (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age (Min-Max)</td>
<td>70 (52-79)</td>
<td>72 (65-86)</td>
<td>70 (52-86)</td>
</tr>
<tr>
<td>Male (%)</td>
<td>47.5</td>
<td>71</td>
<td>55</td>
</tr>
<tr>
<td>Median ECOG PS³</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Median Prior Therapies (Min-Max)</td>
<td>3 (1-9)</td>
<td>3 (2-5)</td>
<td>3 (1-9)</td>
</tr>
<tr>
<td>Median Days Since Last Treatment (Range)</td>
<td>250 (25,1212)</td>
<td>61 (17,2221)</td>
<td>135 (17,2221)</td>
</tr>
<tr>
<td>Refractory to at Least 1 Prior Treatment (%)</td>
<td></td>
<td></td>
<td>14 (73.7)</td>
</tr>
</tbody>
</table>

- Median age: 70 years
- Median prior lines of systemic therapy = 3
- Average bone marrow involvement 23% (Range 1-60%)

**~74% of Patients Refractory to at Least 1 Prior Treatment**

---

1. Non Hodgkin’s Lymphoma patients include: Chronic Lymphocytic Leukemia (CLL); Lymphoplasmacytic Lymphoma (LPL)/Waldenstrom’s Macroglobulinemia (WM); Marginal Zone Lymphoma (MZL); Mantle Cell Lymphoma (MCL); Diffuse Large B-cell Lymphoma (DLBCL)
2. Data as of 31Jan2020
3. Eastern Cooperative Oncology Group Performance Status
CLR 131 r/r Non-Hodgkin’s Lymphoma
Efficacy in Heavily Pretreated Patients

- Diverse, advanced and heavily pretreated patient population
  - Multiple r/r B-cell lymphoma histologies: DLBCL, transformed DLBCL, CLL/SLL, MZL, MCL, LPL/WM
  - Median 3 prior lines of systemic therapy
  - ~47% of patients were refractory to prior therapy
  - ~53% of patients were refractory to rituximab
- Differentiated safety profile

Both ~50mCi & ~75mCi Doses Demonstrate Efficacy in r/r non-Hodgkin’s Lymphoma

1. To date  2. Total Body Dose  3. 95% confidence interval (10 – 60%), (19 - 62%), (29 – 55%) respectively  4. (Overall Response Rate)  5. Complete Response
CLR 131 r/r Non-Hodgkin’s Lymphoma

**Efficacy by Sub-indications**

### Response Rates by Indication

<table>
<thead>
<tr>
<th>Condition</th>
<th>ORR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLBCL ORR</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td>DLBCL CR</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>LPL/WM ORR</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>LPL/WM CR</td>
<td>25%</td>
<td></td>
</tr>
</tbody>
</table>

- Activity demonstrated in both aggressive and indolent NHL disease
- 75% of LPL/WM patients were refractory to rituximab or ibrutinib
- 70% of DLBCL patients were refractory; 60% to rituximab

**CLR 131 Only Reported Monotherapy Achieving a Complete Response in r/r LPL/WM**
Female, 52 years old with subpectoral lymph node mass
- Germinal cell DLBCL
- Single hit: MYC positive; BCL-2 negative

3 prior lines of treatment - R-CHOP, RICE and chemotherapeutic combination

Relapse within 10 months of 1st line treatment, refractory to 2nd and 3rd line TRX

Patient continues to be a complete responder; 570+ days post treatment

CLR 131 r/r DLBCL
Patient Case Study - Complete Response

Scan Day 1
Scan Day 90
CLR 131 demonstrates highly encouraging efficacy
- 100% Overall Response Rate; 25% Complete Response Rate

All patients were relapsed or intolerant to ibrutinib and rituximab combinations
CLR 131 r/r LPL/WM

**Patient Case Study - Complete Response**

- Baseline pleural effusion & multiple large tumor nodules; third line treatment
  - Patient was refractory to all previous treatments
- Day 187 CT: 100% overall tumor burden reduction & complete resolution of 5/5 tumors
- Day 406 CT: Confirmed Complete Response ongoing as of day 764 (DOR >25 months)
## LPL/WM Competitive Landscape
### 2nd Line or Later Monotherapy - 1 Approved Product

<table>
<thead>
<tr>
<th></th>
<th>Overall Response Rate (ORR)</th>
<th>Complete Response Rate</th>
<th>Treatment Emergent Adverse Event of Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ibrutinib</strong></td>
<td>90.5%</td>
<td>0%</td>
<td>Cardio: 10%</td>
</tr>
<tr>
<td>(n=63)</td>
<td></td>
<td></td>
<td>Bleeding: 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Infections: 50%</td>
</tr>
<tr>
<td><strong>Zanubrutinib</strong></td>
<td>80.8%</td>
<td>0%</td>
<td>Bleeding: 54.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gi: 36%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Infections: 79%</td>
</tr>
<tr>
<td><strong>Acalabrutinib</strong></td>
<td>93%</td>
<td>0%</td>
<td>CNS: 39%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bleeding: 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gi: 93%</td>
</tr>
<tr>
<td><strong>Venetoclax</strong></td>
<td>86%</td>
<td>0%</td>
<td>Infections: 35%</td>
</tr>
<tr>
<td>(n=20)</td>
<td></td>
<td></td>
<td>Gi: 97%</td>
</tr>
</tbody>
</table>

- Rituximab combinations are first line treatments
- Ibrutinib is the only drug approved for second line treatment
  - Oral medication taken daily until progression
- No approved or in-development monotherapy has achieved a complete response

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CLR 131 r/r LPL/WM

Potential Market Share

LPL/WM Global Market

- 2019 incidence ~10,100
- Prevalence = ~89,000
- r/r population = ~6,100

Model Assumptions

- 6 years to peak market share
- Second line approval
- Limited competition
- Base case utilizes a 50% ORR
- Optimal case utilizes a 90%+ ORR

In r/r LPL/WM, Potential Market Share Ranges from ~30-80%
Proposed Pivotal Study Design

Program Timing
- Pursuing traditional & innovative regulatory strategies
- Pivotal study initiation/start-up activities 4Q20
- Estimate 4 years to complete

Clinical Costs
- Pivotal study = $30 million
- Eligible for pivotal study SBIR Grant up to $4M

Relapsed/Refractory Multiple Myeloma

Proposed Pivotal Study Design
- Granted U.S. ODD, Fast Track and EU ODD
- Relapsed/refractory 5th line Multiple Myeloma
- Pivotal, single-arm (n=75-100)
  - Primary endpoint: Overall Response Rate (ORR)

Program Timing
- Pursuing traditional & innovative regulatory strategies
- Pivotal study initiation/start-up activities 4Q20
- Estimate 4 years to complete

Clinical Costs
- Pivotal study = $30 million
- Eligible for pivotal study SBIR Grant up to $4M

Relapsed/Refractory LPL/WM

Proposed Pivotal Study Design
- Granted U.S. ODD for LPL/WM
- Relapsed/refractory ≥2nd line LPL/WM
- Pivotal, single-arm (n=30-60)
  - Primary endpoint: Overall Response Rate (ORR)

Program Timing
- Pursuing traditional & innovative regulatory strategies
- Pivotal study initiation/start-up activities 4Q20
- Estimate 3 years to complete

Clinical Costs
- Pivotal study = $20 million
- Eligible for pivotal study SBIR Grant up to $4M
### CLR 131 Pivotal Study Designs

*Innovative, Rapid to Market Approaches*

<table>
<thead>
<tr>
<th>Study Type</th>
<th>Summary</th>
<th>Patient Number</th>
<th>Submission Timing¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option A</strong> Accelerated Approval Phase 2</td>
<td>Expand ongoing 2 cycle arm</td>
<td>20 additional MM 10 additional LPL/WM</td>
<td>2021-2022</td>
</tr>
<tr>
<td><strong>Option B</strong> Phase 2/3 Expanded Study</td>
<td>Amend Phase 2 to be Phase 2/3</td>
<td>75 total MM 30 total LPL/WM</td>
<td>2022-2023</td>
</tr>
<tr>
<td><strong>Option C</strong> Phase 3 Hybrid Basket Design</td>
<td>Single study: 2 arms (1 LPL/WM and 1 MM)</td>
<td>70 additional MM 30 additional LPL/WM</td>
<td>2023-2024</td>
</tr>
</tbody>
</table>

- A & B study designs may require additional post-marketing studies
- Option C pursues both indications in parallel
- All options reduce time & expense; eligible for SBIR Phase 2b Grant ≤$4M²

Presentation Topics

1. Overview
2. CLR 131 r/r Multiple Myeloma
3. CLR 131 r/r Non-Hodgkin’s Lymphoma
4. CLR 131 r/r Pediatric Study
5. Corporate Information and Summary
**CLR 131 Pediatric Clinical Development Strategy**

**FDA Agreement on Phase 1 Accelerated Study Design**

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### Proposed Phase 2/3 Pivotal Study Design\(^1\)
- Granted U.S. ODD\(^3\) & RPDD\(^4\) for NB, RMS, Osteo & Ewing’s Sarcoma
- Eligible for Fast Track, Breakthrough, Accelerated Approval and Priority Review in US; PRIME and Conditional Approval in EU
- Initial enrollment of 10-15 patients in Phase 1 to confirm dose; upon appropriate efficacy expand into Phase 2/3 pivotal study (n=30-60)

### Program Timing\(^2\)
- Phase 1 to complete 1H21
- Phase 2/3 pivotal initiation 2H21
- NDA submission 2022

### Clinical Costs\(^2\)
- Phase 1 = ~$3 million
- Pivotal study = ~$13 - $15 million

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**Pivotal Study Initiation Targeted for 1H2021; Approval in Any Indication May Provide Priority Review Voucher**

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1. Relapsed/Refractory  2. Estimated  3. Orphan Drug Designation  4. Rare Pediatric Disease Designation
Presentation Topics

1. Overview
2. CLR 131 r/r Multiple Myeloma
3. CLR 131 r/r Non-Hodgkin’s Lymphoma
4. CLR 131 r/r Pediatric Study
5. Corporate Information and Summary
CLR 131 Clinical Development

Additional Market Opportunities

**Adult Heme Indication(s)**
- Late-line Hematologic Pivotal Study
- Expand into Additional Hematologic Indication(s)
- Evaluate Pre-transplant MRD+
- Evaluate Early-line Combination Therapies

**Pediatric Indication(s)**
- Identify Activity and Effective Dose in Phase 1
- Expansion into Pivotal Phase 2/3 for Approval
- Additional Pediatric Indication(s)
Financial Summary

Capitalization as of September 30, 2019

**Common Stock Outstanding** 9,396,036

Reserved for issuance:

- Convertible Preferred Stock 537,500
- Warrants 9,268,352
- Employee Stock Options 638,714

**Fully Diluted** 19,840,602

**Cash/Equivalents as of September 30** ~$13.3 million

*Cash Available to Fund Operations Into Q1 2021 Based on Projected Burn Rate*
CLR 131 r/r Multiple Myeloma and NHL Data Update

Conclusion

• High unmet medical need remains in r/r MM and NHL

• CLR 131 r/r MM and NHL efficacy impressive at either a ~50mCi or ~75mCi Total Body Dose in a heavily pretreated patient population
  – MM: 26.3% ORR at ~50mCi and 42.8% ORR at ~75mCi
  – NHL: 42% ORR at ~50mCi and 43% ORR at ~75mCi
  – LPL/WM: 100% ORR

• CLR 131 profile is safe and tolerable, predictable and manageable

• CLR 131 two cycle dosing optimization may increase ORR, extend durability of response and maintain safety and tolerability profile

• Near-term Pivotal Study considerations include r/r MM & LPL/WM

• Pediatric program with potential in rare indications with unmet need
Thank You