Issuer Free Writing Prospectus
Filed Pursuant to Rule433
Registration Statement No. 333-214310
November 14, 2016

NASDAQ: CLRB

Safe Harbor Statement

This slide 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 experience 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, 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, our pharmaceutical collaborators' ability to successfully develop and commercialize drug candidates, competition from other pharmaceutical companies, product pricing and third-party reimbursement. 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, 2015, filed on March 11, 2016, as amended on July 18, 2016 and October 20, 2016. These forward looking statements are made only as of the date hereof, and we disclaim any obligation to update any such forward looking statements.

Statement about Free Writing Prospectus

- This presentation highlights basic information about us and the offering. Because it is a summary that has been prepared solely for informational purposes, it does not contain all of the information that you should consider before investing in our company. Except as otherwise indicated, this presentation speaks only as of the date hereof.
- This presentation does not constitute an offer to sell, nor a solicitation of an offer to buy, any securities by any person in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation.
- Neither the Securities and Exchange Commission (the "SEC") nor any other regulatory body has approved or disapproved of our securities or passed upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense.
- 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.
- We have filed a Registration Statement on Form S-1 with the SEC, including a preliminary prospectus dated October 28, 2016 (the "Prospectus"), with respect to the offering of our securities to which this communication relates. Before you invest, you should read the Prospectus (including the risk factors described therein) and, when available, the final prospectus relating to the offering, and the other documents filed with the SEC and incorporated by reference into the Prospectus, for more complete information about us and the offering. You may obtain these documents, including the Prospectus, for free by visiting EDGAR on the SEC website at http://www.sec.gov.
- Alternatively, we or any underwriter participating in the offering will arrange to send you the prospectus if you request it by contacting Ladenburg Thalmann & Co. Inc., 570 Lexington Ave, 11th Floor, New York, NY 10022 or by email at prospectus@ladenburg.com.

Company Overview

- Oncology-focused Biopharmaceutical Company in Madison, WI
- Rapid Company Transformation Effected in 2015
  - Strategy and therapeutic product focus
  - Financial Efficiency - Improved R&D and SG&A expenses
- Phospholipid Drug Conjugate (PDC) Delivery Platform
  - Phospholipid Ether cancer-targeting vehicle
  - Enables delivery of diverse oncologic payloads
  - Increases payload therapeutic window
- Strategy to Unlock PDC Delivery Platform Value
  - Advance CLR 131 therapeutic franchise
  - Develop early-stage chemotherapeutic conjugates
  - Expand PDC pipeline through collaborations
- Extensive Intellectual Property Portfolio

Phospholipid Ether Cancer-Targeting Vehicle

- Proprietary Small-molecule
- Highly Selective Cancer and Cancer Stem Cell (CSC) Targeting
- Uptake and Prolonged Retention in Malignant Cells
  - Proof of concept (POC) in broad range of cancers
- Ability to Attach Diverse Oncologic Payloads
- Extensive Research and Peer Reviewed Scientific Validation

Phospholipid Ether (PLE)

Basis for PDC Delivery Platform

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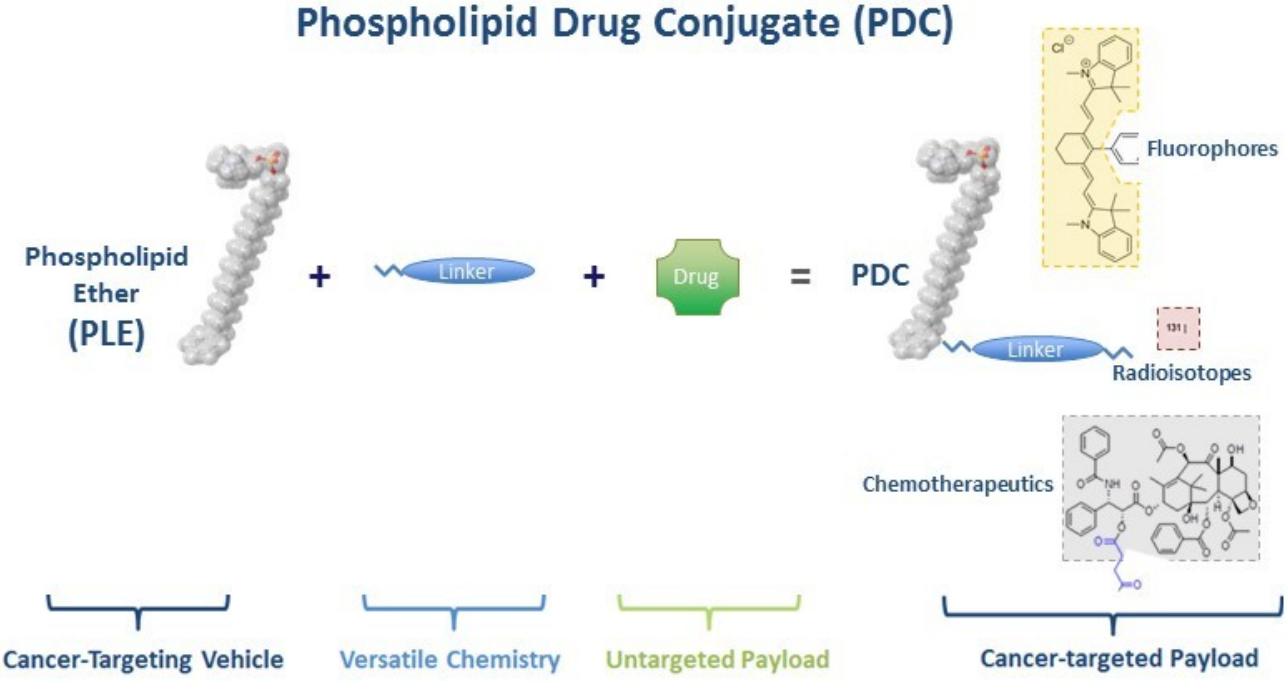
Image source: Generated in house, data on file.

PDC Delivery Platform Overview

Phospholipid Drug Conjugate (PDC)



Validated Targeted Delivery of Diverse Oncologic Payloads

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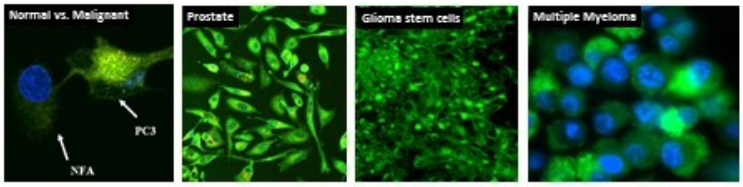
Data source: In house data, on file.

PDC Cancer-Targeting Validation in Broad Range of Cancers

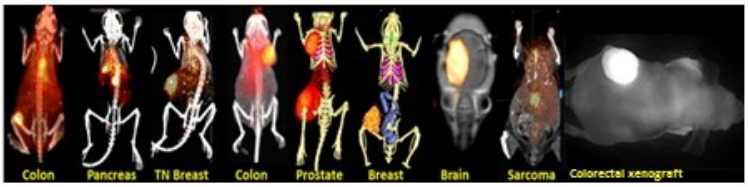
In Vitro Mechanistic POC

- Lipid Raft Uptake
- Cytoplasm & Cell Organelle Delivery
- Prolonged Retention



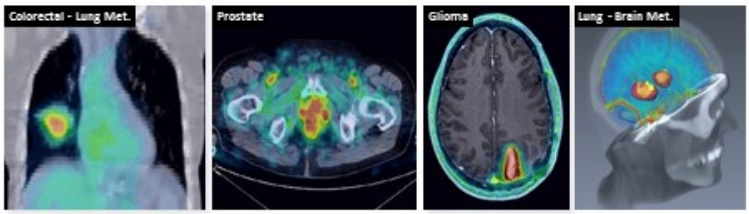
In Vivo POC

- 70+ Cancer & CSC Models
- Therapeutics & Imaging



In Human Data

- ~100 Patients
- 10+ Cancer Types



Demonstrated Clinical Translation

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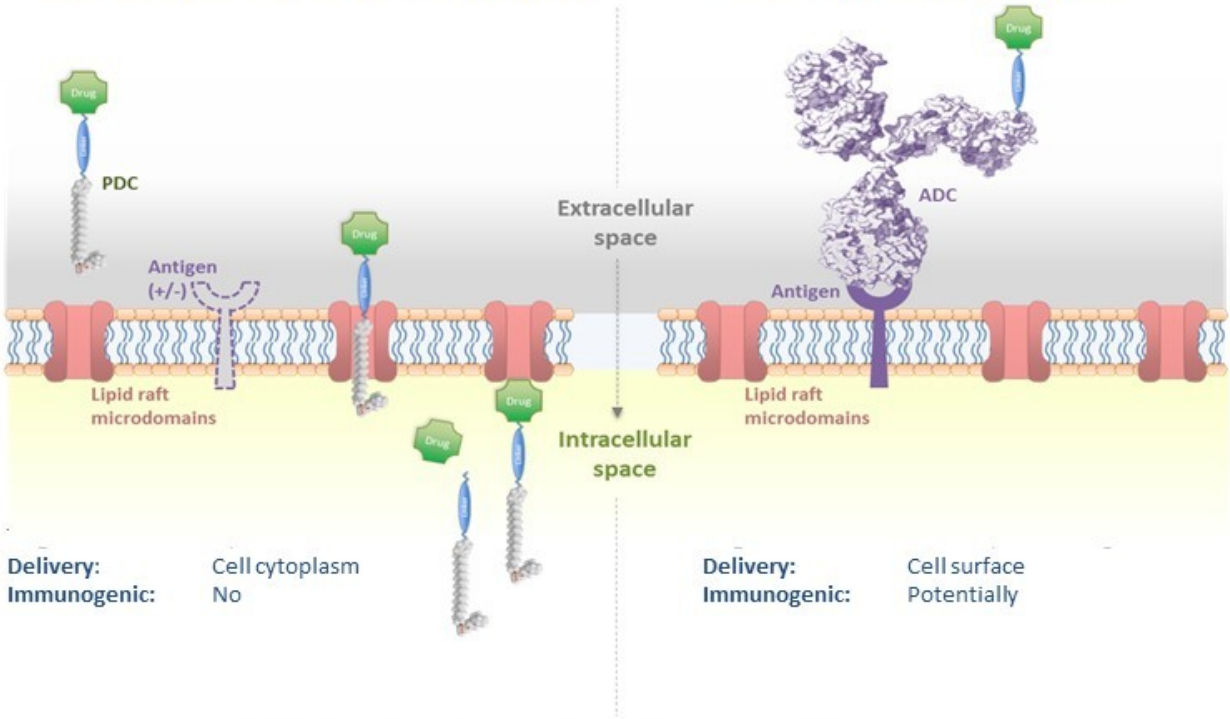
Data source: In house and /or adapted from Science Transl. Med. Vol. 6, 2014, Issue 240, pp. 240ra75

PDC vs. ADC Targeting & Payload Delivery

Phospholipid Ether-Drug Conjugates

Antibody-Drug Conjugates



Delivery: Cell cytoplasm
Immunogenic: No

Delivery: Cell surface
Immunogenic: Potentially

PDCs Exploit An Unalterable Metabolic Pathway

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Image source: schematic rendered in house based on current mechanistic understanding

PDC Delivery Platform Summary

DELIVERY PLATFORM	PDC	ADC
Description	PLE: Small-Molecule	Antibody: Biologic
Cancer Targeting		
Cancer Stem Cell Targeting		
Metastases Targeting		
Ability to Overcome Resistance		
Safety		
Cytoplasm Payload Delivery		
Payload Diversity		
Linker Options		
Manufacturing Cost/Complexity		

PDCs Represent a New Class of Cancer Targeting & Payload Delivery

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Good / Possesses Moderate / Some / Possibility Bad / Lacks

PDC Product Development Pipeline

Resources Focused On CLR 131 & CLR CTX Therapeutic Programs

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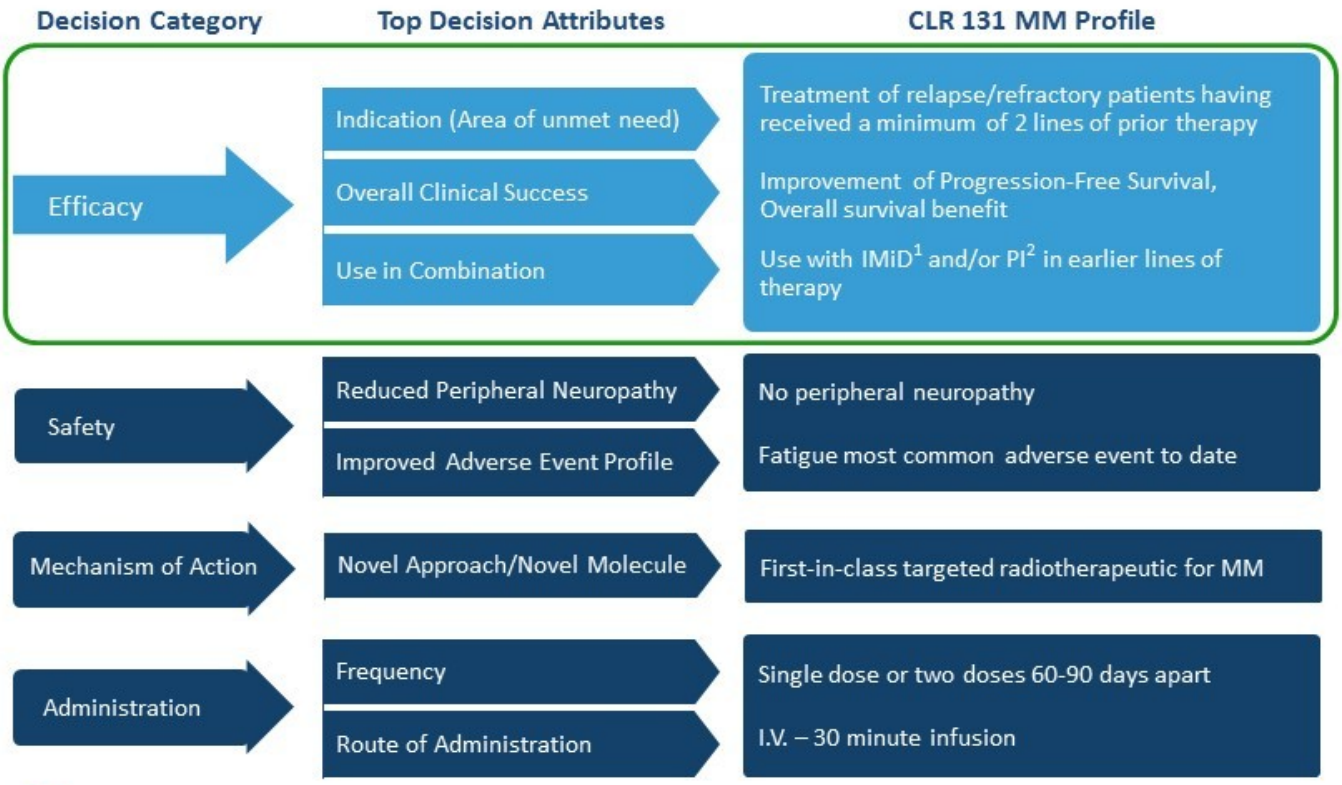
1. Funded by $2M NCI Fast Track Grant 2. To Be Determined 3. PTX = Paclitaxel

CLR 131: PDC Radiotherapeutic Overview

- Targeted, Precision Radiotherapeutic
  - Novel mechanism of action
- Phase I Maximum Tolerated Dose Study in R/R Multiple Myeloma
  - Demonstrates early signs of efficacy & excellent tolerability
- Improved Performance From Cohort 1 to Cohort 2
  - Progression-free survival (PFS) increased 30%
  - Average number of adverse events decreased
  - Average grade of adverse events increased slightly
- Initiating Phase II Clinical Study
  - Advancing relapse/refractory multiple myeloma development
  - Expanding into additional hematologic malignancies

CLR 131: MM Target Product Profile



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1. Immunomodulators 2. Proteasome Inhibitors

CLR 131: Clinical Development Strategy

- Near-term Hematologic Malignancy Focus
  - Indications with established radiosensitivity
  - Orphan designations
  - High rate of relapse/resistant disease settings
  - Niche opportunities with high unmet medical need
- Multiple Myeloma
  - Incurable
  - Surrogate markers provide easy assessment
  - Significant market opportunity
- Obtain Non-dilutive Funding to Accelerate & Expand Program

CLR 131: Non-dilutive NCI Funding

Cellectar Biosciences (CLRB) Receives Multimillion Second Phase of NCI SBIR Contract for CLR 131 Phase 2

StreetInsider.com
if you're not inside...you're outside

Cellectar Biosciences, Inc. (Nasdaq: CLRB) announced that it has received the second phase of a National Cancer Institute ("NCI") Fast-Track Small Business Innovation Research ("SBIR") contract award in the amount of $2 million to support funding of a Phase 2 clinical study of the company's lead product candidate, CLR 131, for the potential treatment of hematologic malignancies, including multiple myeloma.

"The NCI SBIR contract is important to Cellectar in a variety of ways, ranging from the opportunity to receive non-dilutive funding that will significantly support a Phase 2 clinical study of our lead product candidate, CLR 131, to further advance our understanding of the potential clinical utility of CLR 131 in additional hematologic malignancies with high unmet medical needs, as well as providing further validation of the benefits of our Phospholipid Drug Conjugate (PDC) development program," said Jim Caruso, president and CEO of Cellectar Biosciences. "Previous studies have demonstrated that hematologic malignancies are highly sensitive to radiotherapeutics. We anticipate observing the unique clinical benefits iodine–131, a cytotoxic radioisotope, may provide in combination with our cancer-selective delivery vehicle. We are also extremely pleased to be continuing our collaboratic with the NCI's SBIR program, which plays a vital role in the development of novel therapeutics."

ECONOTIMES | Business

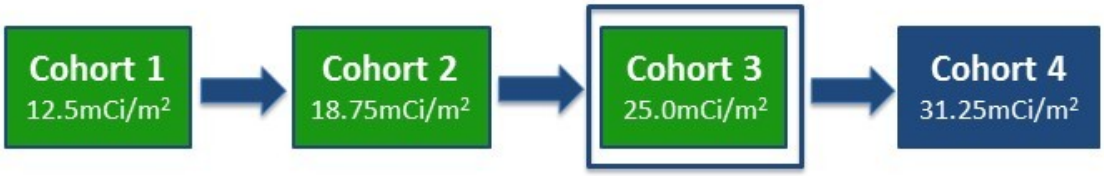
Cellectar Biosciences Announces Lead Compound CLR 131 To Be Studied In Head and Neck Cancer in $12M University of Wisconsin SPORE Grant

MADISON, Wis., Sept. 12, 2016 -- Cellectar Biosciences, Inc. (Nasdaq:CLRB) ("the company"), an oncology-focused biotechnology company, today announces that its lead therapeutic compound, CLR 131, currently in a Phase 1 clinical trial for multiple myeloma and preparing for a Phase 2 study in multiple myeloma and other hematologic malignancies, will be evaluated by the University of Wisconsin in combination with external beam radiation as a potential combination treatment for head and neck cancers (squamous cell carcinoma). The research will be conducted as part of a Specialized Program of Research Excellence (SPORE) grant, awarded to the University of Wisconsin by the National Cancer Institute.

"The rigorous peer review that SPORE grants undergo provides further validation of the therapeutic benefits that CLR 131 could provide in both hematological and solid tumor malignancies. While we remain focused on advancing CLR 131 as a therapy for hematologic malignancies, we look forward to seeing the outcomes of the University's research," said Jim Caruso, president and CEO of Cellectar Biosciences. "We are grateful for our long-standing relationship with the University of Wisconsin and congratulate them, and in particular, Dr. Paul Harari, chair of human oncology, who oversaw the SPORE grant application."

CLR 131: Phase I R/R Multiple Myeloma Study Overview

- Multi-center, Open Label, Dose Escalation Trial Initiated Q2 2015
- Primary Objective:
  - Characterize safety & tolerability
- Secondary Objectives:
  - Establish Phase II dose
  - Assess therapeutic activity
- Dose Escalation < 2 of 6 DLT's
- 85 Day Post-dose Study Follow-up



Currently In Cohort #3 at 25 mCi/m² Single Dose

CLR 131: Cohort 1 & Cohort 2 Patient Demographics

Demographic Metric	Cohort #1 (12.5 mCi/m^2)	Cohort #2 (18.75 mCi/m^2)
Evaluable Patients	4	4
Average Age	68	69
Gender (Female:Male)	1:3	2:2
Prior Treatment Lines	4[1]/6.5[2]	4
Prior Proteasome Inhibitor and IMiD Trx	4/4	4/4
Prior Rev, Velcade, Dex Trx, Including Triple Combinations	4/4	4/4
Prior Pomalyst & Kyprolis Trx, Including Triple Combinations	3/4	1/4
Stem Cell Transplant	1/4	3/4

Patient Demographics Essentially the Same Between Cohorts

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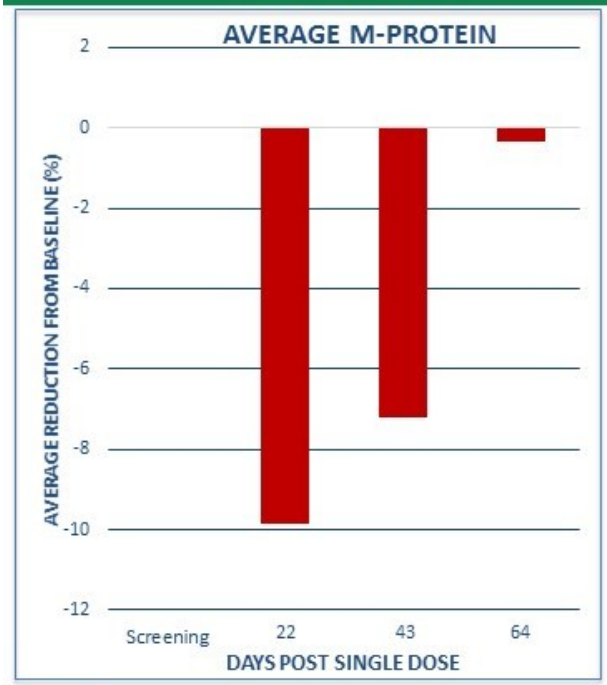
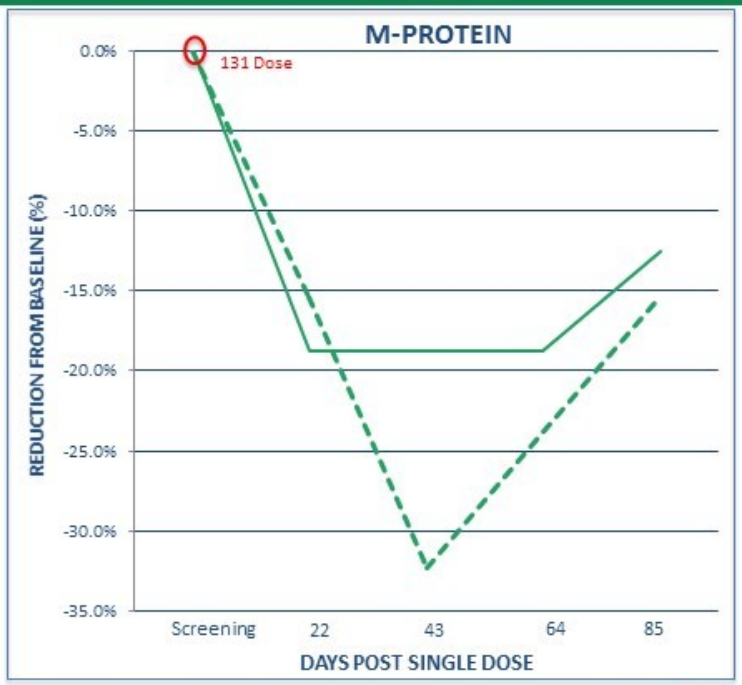
1.Excludes patient with 12 prior lines 2. Includes patient 108 2 Grade 4s (disease progression)

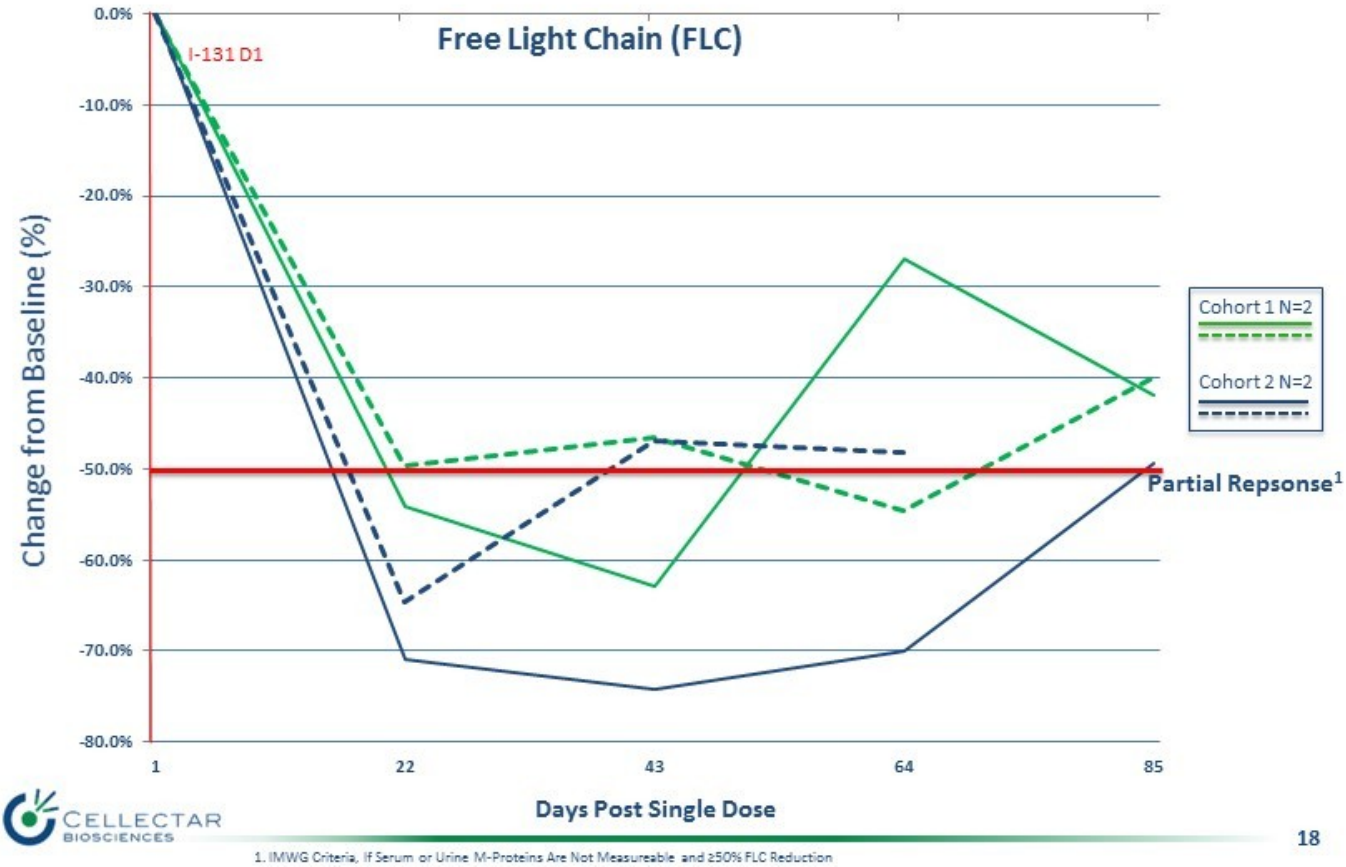
CLR 131: Cohort 1 (12.5 mCi/m²) Efficacy Markers





"Judging by the results of the first cohort, I believe there is significant potential for CLR 131 as a safe and tolerable treatment modality for relapsed or refractory multiple myeloma," stated Sikander Ailawadhi, MD, senior associate consultant, Division of Hematology/Oncology, Department of Medicine, The Mayo Clinic, Jacksonville, Florida, and the site's lead investigator – January 2016

CLR 131: Cohorts 1 (12.5 mCi/m²) & 2 (18.75 mCi/m²) Efficacy Markers



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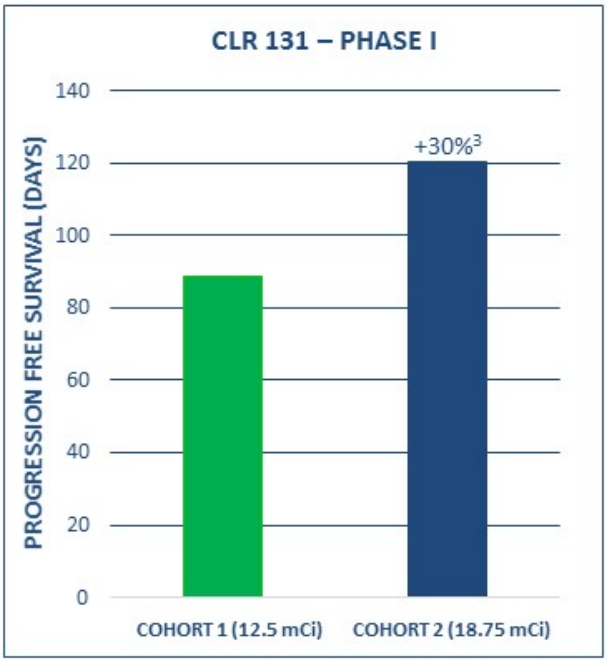
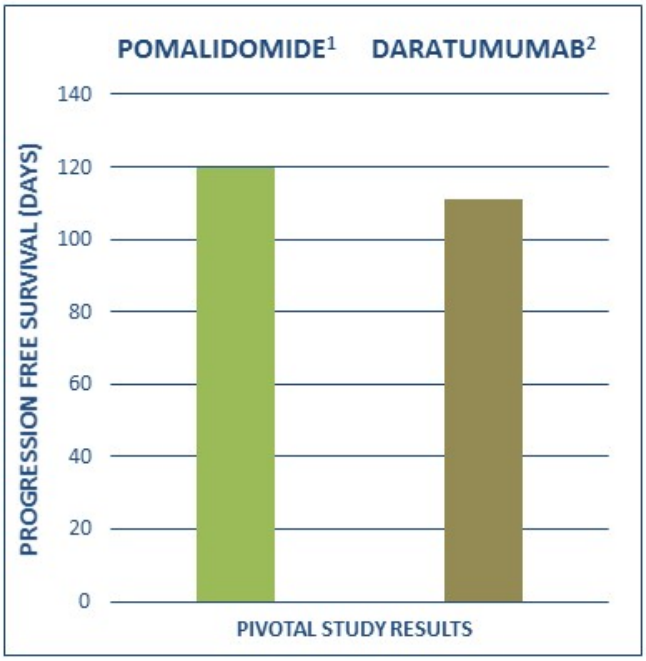
1. IMWG Criteria, If Serum or Urine M-Proteins Are Not Measureable and ≥50% FLC Reduction

CLR 131: Cohorts 1 (12.5 mCi/m²) & 2 (18.75 mCi/m²) Efficacy Markers

Progression Free Survival (PFS) Performance





PFS For Cohort 2 Increased By 30% And Continues For 2 of 4 Patients

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1.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5009959/#__sec6title 2. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)01120-4/abstract 3. As of 10-7-16, PFS Ongoing

CLR 131: Adverse Event Profile

- Excellent Safety Profile Through 2 Cohorts and 28[1] Patient Data Set
  - No neuropathies/neurotoxicity
  - No cardiotoxicities
  - No GI[2] toxicities
  - No risk of DVT[3]
  - Most common AEs hematological in nature

Adverse Events	Avg. Number/Patient	Avg. Grade/Patient	Median Grade
Cohort 1 (12.5)	4.75	2.00 ± 0.91	2.0
Cohort 2 (18.75)	4.0	2.00 ± 1.00	2.0

"As seen in the results to date, CLR 131 has demonstrated an outstanding safety profile in heavily pretreated, relapsed or refractory multiple myeloma patients with limited treatment options," stated Natalie Callander, MD, Associate Professor of Medicine, Director, University of Wisconsin Carbone Cancer Center Myeloma Clinical Program, and the study's lead investigator. "I am excited that Cellectar will open the next treatment cohort to offer patients access to this novel treatment's encouraging efficacy signals." – September 2016

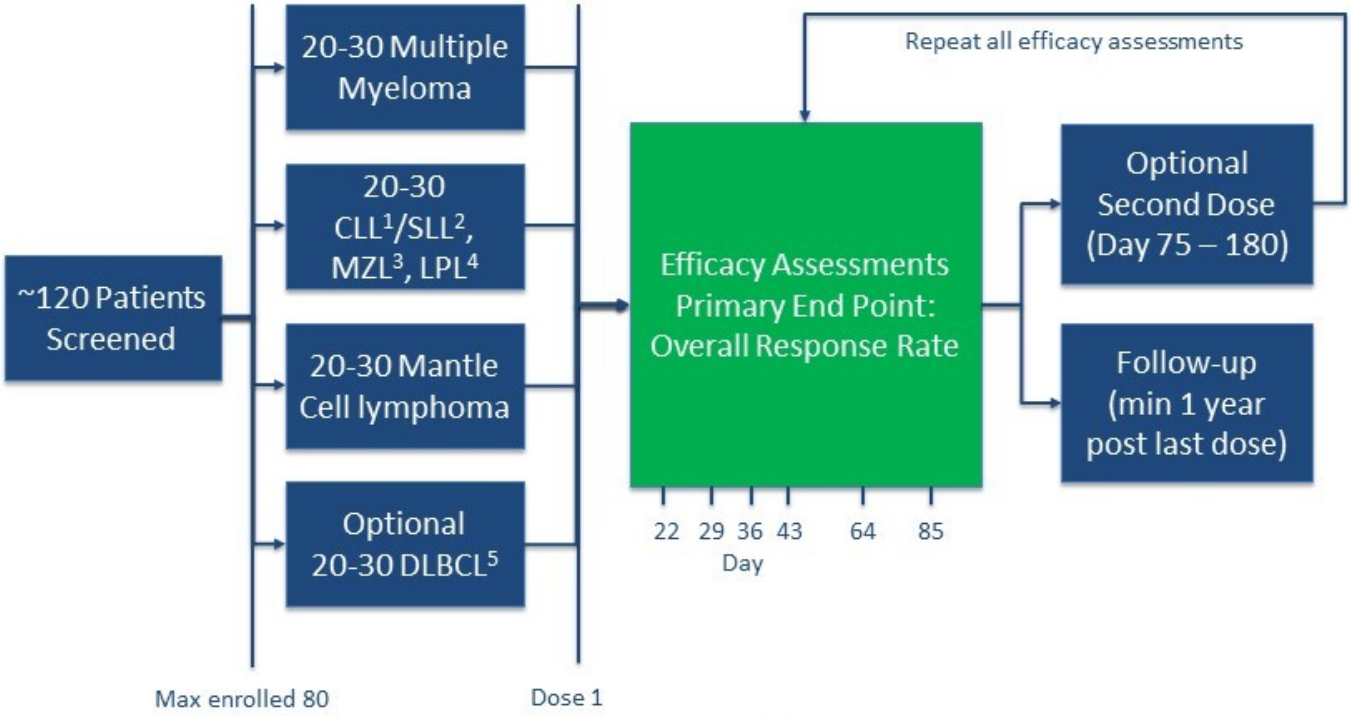
1. 28 CLR 131 patients dosed 2. Gastrointestinal 3. Deep Vein Thrombosis

CLR 131: Multiple Myeloma Market Overview

- Unmet Need Remains in The Relapsed or Refractory (R/R) Setting
- Annual U.S.: 2nd Most Common Hematologic Cancer[1]
  - Prevalence ~ 90,000
  - Incidence ~ 30,330
  - Relapsed/Refractory ~ 13,000
- MM Drug Market
  - $8.9B (2014) - $22.4B (2023) – CAGR 11.2%[2]
  - Average R/R treatment drug cost $75K - $250K[3]
  - Average ≥ 3rd line treatment drug cost $450K - $500K[3]
- CLR 131 Premium Pricing Opportunity – One or Multiple Doses
- Third Party Payor Preferred Position
  - Cost-to-benefit relationship

1. SEER data and ACS stats- http://bit.ly/1SU5Zlm 2. Global Data report (2015)- http://bit.ly/2db3mNC 3. Midwest CEPAC (Comparative Effectiveness Public Advisory Council)

CLR 131: Phase II Study in Relapse Refractory B-cell Malignancies



- One interim assessment conducted for each cohort
- Each cohort read-out upon last patient last visit

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1. Chronic Lymphocytic Leukemia 2. Small Lymphocytic Leukemia 3. Marginal Zone Lymphoma 4. Lymphoplasmacytic Lymphoma 5. Diffuse Large B-Cell Lymphoma

CLR 131: HemOnc Market Opportunity

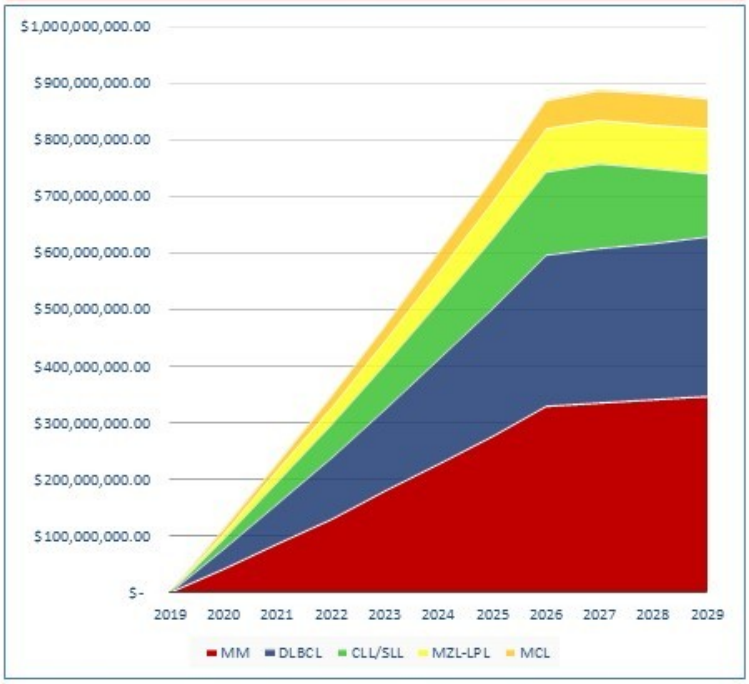
Relapsed/Refractory

- Multiple Myeloma
- Diffuse Large B Cell Lymphoma
- Chronic Lymphocytic Leukemia/ Small Lymphocytic Lymphoma
- Marginal Zone Lymphoma and Lymphoplasmacytic Lymphoma
- Mantle Cell Lymphoma

MM Line Extension

- Dose & Regimen
- Combination Therapy
- ASCT Conditioning

$850+ Million Annual Top Line Revenue Potential[1]



Significant Projected Return In Selected R/R HemOnc Indications

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1. Assumes: 15% peak market penetration, 6 years to peak sales, 2020 approval, average of 1.5 doses per patient

PDC Chemotherapeutic Program Overview

- Objective
  - Develop chemotherapeutic PDCs with improved efficacy & tolerability
- Clinical Rationale
  - Chemotherapeutics highly effective, yet highly toxic drugs
  - Combining the unique targeting capabilities of PDCs with cytotoxic drugs improves therapeutic index through targeted drug delivery
  - Cancer stem cell delivery – increased durability
- Business Rationale
  - Reinvigorate failed, pre-clinical, and clinical chemotherapeutics
  - Reduced regulatory hurdles
  - New products, new patent life & life cycle management
- Expansion of Intellectual Property Portfolio
  - Patent published May 2016 - "Existing or future cytotoxic agents"
  - Issued patent protecting series of paclitaxel PDCs

Pierre Fabre PDC Collaboration

- Announced December 2015 – Launched Q1 2016
- Pierre Fabre Provides Selection of Proprietary Cytotoxins
- Objectives
  - Co-design library of PDCs
    - Lead product conjugation completed
  - Conduct *in vitro* assessments
  - Conduct *in vivo* POC studies
    - Targeting/biodistribution data
  - Evaluate therapeutic index vs. untargeted payloads
- Cellectar to lead conjugation and POC studies
- Cellectar retains rights to all new intellectual property

"We are convinced that Cellectar's proprietary technology will provide our cytotoxic molecules with tissue specificity and enhanced safety which are typically lacking with untargeted agents."

- Laurent Audoly, Pierre Fabre - Head of R&D - December 2015

Financial Summary

Capitalization as of September 30, 2016

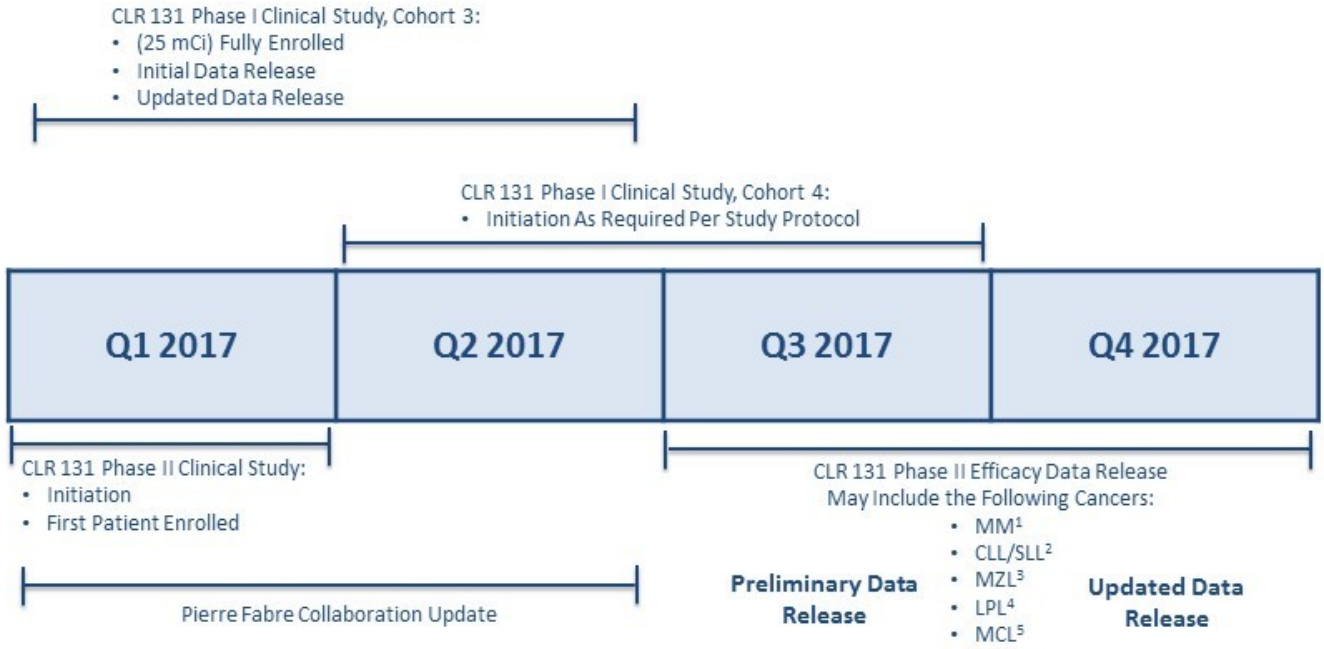
Common Stock Outstanding	**5,368,235**
Warrants (Exercise prices ranging from $2.13 to $250.00)	**4,629,842**
Stock Options	**488,142**
Fully Diluted Securities Outstanding	**10,486,219**
Cash Position	**$5,645,968**

Cost Efficient, Targeted Investment Extends Runway

Company Developments

Q3 - Q4 2015	Q1 - Q2 2016	Q3 - Q4 2016
☑ PDC Delivery Platform Introduced - **Q3** -Therapeutic Focus -CTX Program -Collaboration Model	☑ Pierre Fabre - **Q1** -PDC Collaboration Initiated	☑ CLR 131 $2M NCI Fast Track Award - **Q3** -Contract Granted -Phase II Clinical Study in Hematologic Cancers
☑ $3.3M Financing Completed - **Q4**	☑ $8M Financing Completed - **Q2**	☑ CLR 131 SPORE Grant Research - **Q3** -In Combination W/ External Beam For Head & Neck
☑ NCI Fast Track Award - **Q4** -CLR 125 Grant Phase I Initiated - $300K -Phase II TBD - $2M	☑ CTX Patent Publication - **Q2** -Delivery Vehicle & Cytotoxic Conjugation	☑ MM Phase I Clinical Study - **Q3** -Positive Initial Data Release- Cohort #2 (18.75 mCi)
☑ CTX Patent Application Conversion - **Q4** -Delivery Vehicle & Cytotoxic Conjugation	☑ Paclitaxel Conjugate Patent Issued - **Q2** -CTX 1600 Product Series	☑ MM Phase I Clinical Study - **Q3** -Cohort #3 (25 mCi) Initiated -First Patient Enrollment Announced
☑ Pierre Fabre - **Q4** -PDC Collaboration Announced	☑ Stem Cell Cancer-Targ. Patent Issued - **Q2** -CLR 131 and External Beam Combination	☑ USPTO Issues Formal Patent Allowance - **Q3** -CLR 1603 Solid Tumors
☑ MM Phase I Clinical Study - **Q4** -Positive Cohort #1 Data Release -Cohort #2 Enrollment Initiated	☑ CTX Program Update - **Q2** -CLR 1602 Cancer-targeting Data	☑ CLR 131 $2M NCI Fast Track Award - **Q4** -Phase II Study Design Announced
☑ MM Phase I Clinical Study - **Q4** -Cohort #2 Initiated	☑ CLR 125 $300K NCI Fast Track Award - **Q2** -Grant Phase I Completed	☐ MM Phase I Clinical Study - **Q4** -Updated Data Release - Cohort #2
		☐ American Society of Hematology (ASH) - **Q4** -Presentation

Company Developments: 2017 Clinical Events



Cellectar to Announce Additional Developments and Events As They Occur

1. Multiple Myeloma 2. Chronic Lymphocytic Leukemia / Small Lymphocytic Leukemia 3. Marginal Zone Lymphoma 4. Lymphoplasmacytic Lymphoma 5. Mantle Cell Lymphoma

Company Leadership

Management		Independent Directors	
Jim Caruso President, CEO and Director	HIP Innovation Technology- EVP & COO; Allos Therapeutics- EVP & CCO; BCI, Novartis, BASF, BMS	Stephen A. Hill, B.M. B.Ch., M.A., F.R.C.S Director	Faraday Pharmaceuticals- CEO; Targacept- President and CEO; Solvay Pharmaceuticals- President and CEO; ArQule, F. Hoffmann- La Roche Ltd.
Chad Kolean Vice President, CFO	Pioneer Surgical Technology- CFO; TomoTherapy- Corporate Controller	Stefan Loren, PhD Director	Loren Capital Strategy- Founder; Westwicke Partners- Head of Life Science Practice; Perceptive Advisors, Legg Mason
Jarrod Longcor SVP Corporate Development and Operations	Avillion LLP- CBO Rib-X Pharmaceuticals, Inc.- VP Corp Dev and Operations	John Neis Director	Venture Investors, LLC; Managing Director, Head of Healthcare Practice