

# **LiteHaus360 MarketPlaces**

**Life Sciences**

**&**

**Technology Incubator**

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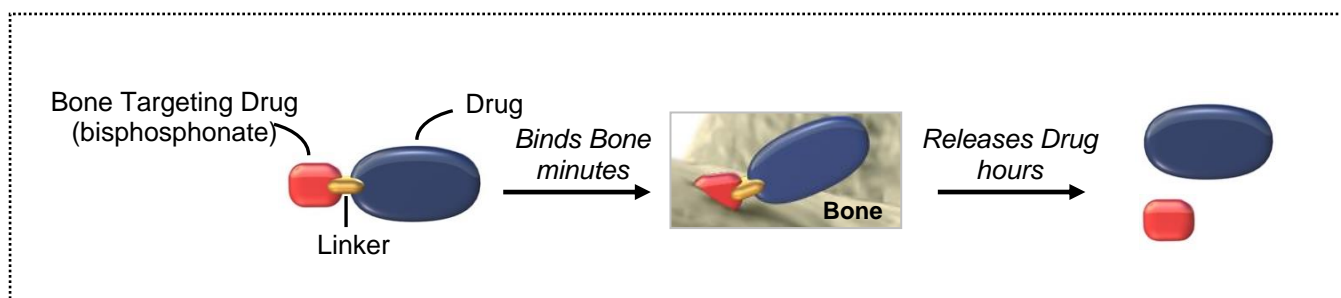
**MBC Pharma, Inc. - Business Summary**

August 2022

## MBC Pharma, Inc.: Novel bone-targeted bisphosphonate-drug conjugate for treatment of cancer- induced bone disease and primary bone cancer (osteosarcoma)

### Summary

- MBC Pharma demonstrated first-in-class efficacy in human subjects with Phase I clinical trial results of significant reductions in more than half of all bone lesions in prostate and breast cancers derived bone metastases
- We use proprietary phosphate-based linking chemistry to enhance bone-targeting, while increasing specificity and target cell uptake, and reducing toxicity
- Our compounds are designed to directly target cancer cells responsible for bone lesions, delivering therapeutically useful doses of anticancer drugs to the bone, in higher concentrations than possible with current therapies
- Our proprietary approach to drug combination therapy uses the novel interaction of two gradients: one from bone-released drug from the conjugate, and the second diffusing in from the blood stream
- A 2<sup>nd</sup> generation bone-targeting lead compound along with a chemotherapeutic agent has demonstrated this novel combination approach in osteosarcoma model systems and also shows promise in bone-targeted radiosensitization



## Company highlights

- 1. Reduced Development Risk:** Our patented drug design platforms connect two established drugs via a natural linker to form an NCE, that releases the drug upon binding to bone
  - a. The bisphosphonate moiety provides for bone targeting and anti-resorptive activity
  - b. The anti-cancer chemotherapeutic or antibiotic delivers the therapeutic activity
- 2. Human POC:** A Phase I clinical trial of the Company's lead compound in patients with cancer- induced bone disease demonstrated safety, tolerability and efficacy. Of the 206 total bone lesions measured across all patients 53.8% were significantly reduced after two cycles of therapy
- 3. IP Position:** MBC holds 23 US and international patents issued on its lead compound and various platform technologies with 16 additional US and overseas patents pending. Two PCT applications on formulation and method of use are currently at the stage of National Phase applications in multiple countries
- 4. Seasoned Leadership:** The management team brings extensive experience in R&D operations, chemistry and clinical development along with an exceptional track record of capital raise with \$5.9 M in non-dilutive (grant) funding and \$3M in seed funding to date
- 5. Large Markets:** Our developmental stage drugs will satisfy well-recognized, unmet medical needs for large and rapidly growing patient populations. The bone metastases market is currently a \$6.4 billion market, while osteomyelitis, or bone Infection is a \$1.7 billion market. While the combined oncology market exceeds \$100 billion, metastatic bone disease is almost universal in patients with breast, prostate, lung, multiple myeloma and other cancers, with significant incidence of fractures, bone pain and reduced QOL
- 6. Future Applications:** Extensions of the bone-targeted platform to deliver antibiotics to address osteomyelitis and other bone infections are under development. In addition, a non-osseous prodrug platform for viral and cancer indications based on the conjugation chemistry using vitamin B6 has been developed to eliminate the rate-limiting phosphorylation step required of nucleoside-based therapies

## Objectives

- MBC Pharma will pursue capital investment by a VC fund or partnering with or acquisition by a company that is able to realize the full potential of these lead compounds and development of the platform for a range of disease areas and indications
- The Company is seeking Series A funding of \$44M in two tranches for IND enabling studies on a number of pipeline compounds

Further details are available under CDA.

## Management Team Bios

### 1. Alexander Karpeisky, Ph.D. – President, Chief Scientific Officer

- Joined MBC in 2005
- Experience: Senior Scientist at Transgenomic, Inc, managing process development of specialty reagents for pharmaceutical manufacturing (2002-2005); Senior Group Leader at Ribozyme Pharmaceuticals, Inc (later SIRNA Therapeutics, acquired by Merck) managing drug discovery through IND (1993-2002); Researcher at Institute of Bioorganic Chemistry, Russian Academy of Sciences (1992-19933); Authored and coauthored 59 papers and 42 patents
- Ph.D. (Organic Chemistry), N. D. Zelinsky Institute of Organic Chemistry, Russian Acad. of Sciences (1988)

### 2. Shawn Zinnen, Ph.D. – Chief Executive Officer

- Joined MBC in 2005
- Experience: Associate Director of Biochemistry at SIRNA Therapeutics – key decision maker on 4 IND filings (1997-2005); Post-doctoral research (NIH Fellow), University of Colorado at Boulder (1994-97); Authored 19 papers and 38 patents
- Ph.D. in Biochemistry and Genetics from Duke University (1987-94)

### Board of Directors

1. **Alexander Karpeisky, Ph.D.** – Chairman of the Board
2. **Dmitry Kashin, Ph.D.** – Owner of the Moscow, Russia based Panorama Group of companies  
(Seed investor)
3. **Shawn Zinnen, Ph.D.** – Director, Secretary

### Scientific Advisory Board

1. **L. Michael Glodé, MD** – **SAB** Chairman, Professor Emeritus of Medicine, University of Colorado Health Science Center; President, Aurora Oncology, Inc
2. **Douglas T. Thamm, VMD, DACVIM**, Barbara Cox Anthony Professor of Oncology, Colorado State University Animal Cancer Center
3. **Daniel Von Hoff, MD**, Professor of Medicine at the University of Arizona Health Science Center
4. **Michael T. McDermott, MD**, Director of the Clinical Endocrinology Practice, University of Colorado Endocrinology Division
5. **Nebojsa Janjic, Ph.D.**, Chief Scientific Officer, Somalogic, Inc

### **About LiteHaus360**

MBC Pharma is housed within the LiteHaus360 incubator – a virtual ecosystem that offers entrepreneurs, start-ups as well as growth phase companies with key strategic, operational and financial advisory to advance on their objectives to bring novel technologies into the healthcare system and ultimately to bring life-saving medicines to patients.

LiteHaus360 offers a unique platform to founders by enabling them to showcase their businesses on the LiteHaus MarketPlace thereby reaching a global audience in their specific industry. Once listed on the StoreFront, LiteHaus assists incubatee companies network with the user community to spur adoption as well as raise capital by reaching an extensive network of biopharma companies, academic institutions and VC/PE funds.

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### **For more information:**

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