

Biosortia Pharmaceuticals, Inc.  
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#### **Leadership:**

Ross Youngs, CEO & Founder  
Guy Carter, Ph.D., CSO  
(Pharma & Natural Products expert)  
Ron Moss, M.D., CMO  
(Immunology and IND expert)  
John Ryals, Ph.D. (founder  
Metabolon & AgBiome)  
D.P. Verma, Ph.D.  
(Ag Metagenomics Expert)  
David Coho, Operations & Finance  
Chad Hummell, Business Dev.

#### **Partners & Collaborators:**

See Business Plan for Listing:  
Commercial Research, Pharma,  
Academic, others

**Industry:** Pharmaceuticals,  
Agrochemical, Cosmetics,  
Biotechnology

#### **Company Status:**

2009-16 - Research stage  
(ARPA-E, USAFRL, DARPA)  
2016-18 - POC stage  
Q4 2019 - Commercial Ready  
Q4 2021 - Execution  
Q3 2022 - Profitability

Number of Employees: 5 currently  
growing to 16 with funding

Accountant: Rea & Associates  
Law Firm(s): Baker Hostetler  
Bank: Huntington, Heartland

Current Investors: Angels and Small  
Family Offices

#### **Business Description:**

Biosortia has a fully developed technology that obtains new drug-like cell to cell communication chemistry directly from the microbiome. We access this chemistry that is completely elusive to researchers and product developers. Biosortia's technologies, initially supported by ARPA-E, DARPA, and USAFRL with extensive follow-on research and six years of development, make this proven breakthrough possible. Biosortia creates valuable intellectual property for early licensing and product revenue from the actual hidden chemistry of the microbiome for therapeutics, agrochemical, cosmetics, and other segments. We are seeking \$15 million to execute our plan in order to drive hundreds of millions in sales with early revenue from licensing and research agreements.

#### **Industry Problem: Devastating Roadblocks to Pharma and Agrochemical Companies**

Drug discovery/therapeutic research has never had meaningful access to the critically important chemistry of microorganisms. Pharmaceutical and agrochemical businesses depend on new products (IP and patents) to survive and prosper. Historically, most drugs came directly or indirectly from microbes which can be grown in the lab allowing the study of their chemistry. Unfortunately, less than 1% of microorganisms can grow in the lab; however, from this 1% over 50% of all drugs came from this limited resource.

#### **Solution: First in Class Breakthrough Technology**

Biosortia created the world's only technology delivering unlimited access to the hidden chemistry of microorganisms. Biosortia's technology and systems successfully demonstrate full scale access to this next frontier yielding novel microbiome chemistry. Typically, the company will process 20,000,000 liters of an aquatic microbiome safely collecting all 500-1,000 species in the chosen habitat. The *Microbiome Mining Mill* is an integrated process that obtains the chemistry for testing for new therapeutic and product opportunities. Biosortia's solution is a leap in magnitudes over the best in class technology and will significantly impact future discoveries in pharmaceutical, agriculture, and consumer/cosmetic applications, as well as other industries.

Biosortia's exclusive breakthrough technology is highly differentiated and will set a new standard for decades.

#### **Market:**

Companies that develop pharmaceuticals are Biosortia's primary target market. The first priority segment within pharmaceuticals is immuno-oncology and immunology therapeutic discoveries. Biosortia's goal is to obtain a long-term discovery deal based on upfront dollars and milestones for achievement, a typical agreement for platform discovery technologies. Based on comparable discovery platform deals, Biosortia believes an 8-figure upfront with possible milestones in the 10-figure range is achievable as the plan successfully executes. Additional platform/licensing opportunities exist in other therapeutic and industrial segments that will generate substantial profits in these multi-billion-dollar markets.

## COMPETITION - COMPARISON METHODS & TECHNOLOGIES

### Biosortia: **NEXT GENERATION**

Biosortia's technology is unique, efficient, and a massive advancement of the technology and will become the gold standard on the future.

### Culturing: **REDUNDANT REDISCOVERY**

The 1% of culturable microbes has led to >50% of products.

Competitors include many research groups including PharmaMar & Sirenas who are focused on a number of discovery methods including culturing.

### Combinatorial Libraries: **FAILED**

Combinatorial derived chemistry has failed miserably with billions over decades with only one approved product.

RodinX and Adapsyn Bio are focused on developing new chemistry through combi-chem methods, unfortunately the limited success substantiates that natural product chemistry has purposeful life applications.

### Genomics & Computational **FAILING**

Indirect omics approaches have nearly infinite sets of potential outcomes and have not delivered relevant small molecules. These indirect omics approaches may provide relevant supplemental understanding and secondary enhancement of newly discovered small molecules.

### Business Model:

Biosortia creates valuable proprietary microbiome chemistry for Pharma, Ag, and consumer companies. Each of Biosortia's recovered collections contain ~70,000+ addressable secondary metabolites and small molecules. Over the next 3 years, we expect to have 50,000+ addressable novel cell-to-cell-signaling molecules represented in our library of chemistry. Comparatively, the world's combined microbial libraries represent about 3,000 secondary metabolites. Biosortia's business model is an upfront licensing product revenue IP model.

### Use of Funds: \$15M Full Raise

Phase 1 Advance Products, Deep Dive Library Extraction & Deconvolution- \$ 2.5M

Phase 2 Therapeutic Program to Lead Compound/IND- \$ 3.5M

Phase 3 Scaled Mining (Extraction Deconvolution), drive revenue - \$9.0M

### Traction and Intellectual Property:

Biosortia, resides within JLABS, the #1 funded incubator system in Pharma. Biosortia is in talks with a Top 10 Pharma for an R&D Partnership agreement and with a top 5 Ag Company for an R&D Partnership. Biosortia is a listed contractor on a government budget for \$1 million annually starting in October 2019. Licensing will commence on newly discovered known and unknown chemistry one year after the off the shelf microbiome mining systems are purchased; its platform will deliver portfolios of patentable drug programs. Biosortia has substantial IP, Patents and trade secrets in the area of harvesting and mining the microbiome (9,546,101; 9,095,808; 8,286,801; 8,092,691).

### Company History:

Biosortia presented its patent filed new technology for obtaining microorganisms from a dilute solution at a renowned research meeting in Washington, DC in 2009. Biosortia's initial invention was presented for development to the DOE and was ultimately recognized by winning a highly competitive research grant for 6.2 million dollars. Developmental research progressed until 2016. From 2016 to 2018 full scale demonstration and proof of concept was achieved. In November 2018, the American Chemical Society recognized a peer reviewed scientific paper describing the proof of concept of Biosortia's technology as 'Editor's Choice'.

### Board of Directors & Advisory Board:

Refer to business plan for details of Biosortia's supporting experts.

Our goal is to strategically add to the board and our advisors with additional experience, expertise and skills. Currently we have seasoned executives in leadership, services, and research sciences that relate to our markets

### Exit & Inflection Points:

Licensing will drive initial valuation and inflection points. Exit is anticipated via sale or IPO.

Financial Results, Projections (\$000) FYE MARCH	2019	2020	2021	2022	2023
REVENUE	N/A	N/A	800	10,500	25,000
PROFIT BEFORE TAX	N/A	N/A	(340)	1,125	4,075