Chicago Biotherapeutics Corporation

Preventing bacterial infections by design
The Fall of Antibiotics & Rise of Antibiotic-Free Poultry has Opened a Gap in the Market

Domestic sales of antimicrobial drugs in food-producing animals dropped by 30% (left) while fractional demand for antibiotic-free poultry increased by 180% since 2015 (right)
We Manufacture Ingestable Clostridia Spores that Prevent Deadly Intestinal Infections

**Science**

- Prevents gut colonization by infectious bacteria, such as Salmonella and E. coli
- Creates an infant animal gut environment that is inhospitable to pathogenic bacteria;

**Effect**

- Improves yields and the bottom line for livestock farmers

**Impact**

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Clostridia are environment-derived and are a dominant population in the healthy adult gut microbiome; our leading product leverages microbiome by design.
Our Technology Co-Inventors

Dr. Cathryn, PhD, Bunning Food Allergy Professor and Professor of Pathology, Medicine, Pediatrics, and the College at the University of Chicago  
President and Co-founder of ClostraBio

Dr. Gabriel Nunez, MD, Paul de Kruif Endowed Professor of Academic Pathology at the University of Michigan, Ann Arbor  
375 scientific publications resulting in >97,000 citations (h-index 145, Google Scholar)
Our Live Biotherapeutic Product has Proven Efficacy

<table>
<thead>
<tr>
<th>Starting Condition</th>
<th>Clostridia?</th>
<th>Pathogen</th>
<th>Ending Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Mice" /></td>
<td>+</td>
<td>+</td>
<td><img src="image2" alt="Mice" /></td>
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<tr>
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<td><img src="image4" alt="Mice" /></td>
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</tbody>
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Mice: Kim et al., 2017 Science 356, 315  
Chickens: Litvak et al., 2019, Cell Host & Microbe 25, 128
## Live Biotherapeutics are the Only Complete Solution

<table>
<thead>
<tr>
<th></th>
<th>Antibiotics</th>
<th>Probiotics</th>
<th>Live Biotherapeutics</th>
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<tbody>
<tr>
<td>Proven Efficacy</td>
<td>●</td>
<td>○</td>
<td>●</td>
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<tr>
<td>Disease Specificity</td>
<td>●</td>
<td>○</td>
<td>●</td>
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<tr>
<td>Environmental Health</td>
<td>○ (&lt; 50%)</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Ease of Regulation</td>
<td>○ (&lt; 50%)</td>
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<td>● (&lt; 50%)</td>
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<tr>
<td>Ease of Administration</td>
<td>●</td>
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Management Team Leverages Diverse Skill Set

Joe Bernstein, PhD, MBA
Co-Founder

Nabil Salem, CFA
Co-Founder

You!
Scientific & Technical Lead
Chicago Biotherapeutics was a Semifinalist in the 2019 Chicago Booth New Venture Challenge

Teams advancing to Finals (12 in 2019) make a final pitch for a share of seed funding from the University of Chicago.

Teams advancing to Phase II (32 in 2019) work with business professors, coaches, and competition judges to refine their business plans and make 2 pitches for inclusion in Finals.

Student/entrepreneur teams (90+ in 2019) submit business study for competitive admission to Phase II.
EXPERT TEAM WITH A PROVEN TRACK RECORD OF SUCCESS
DIFFERENTIATED APPROACH LEVERAGING MICROBIOME BY DESIGN
DEFINED PATH TO COMMERCIALIZATION WITH MANY STRATEGIC PARTNERS

Chicago Biotherapeutics

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