



**Lysimmune BioScience**

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## Lysimmune BioScience

### Executive summary

Lysimmune Bioscience develops recombinant antibody solutions for methicillin resistant *Staphylococcus aureus* (MRSA) and other Gram-positive pathogens. The company's core lysibody technology generates superior immunity against conserved bacterial targets using highly evolved binding domains from bacteriophage origin.

**Company history:** Lysimmune BioScience was founded by Assaf Raz and Vincent A. Fischetti in 2017, as a spin-off from Dr. Fischetti's lab at Rockefeller University.

**Unmet need:** The MRSA (methicillin-resistant *Staphylococcus aureus*) market is \$1.4 billion, split 75% in the US and 25% EU and Japan. MRSA infection leads to a median increase in hospital stay of 10 days, and \$34,000 compared to antibiotic-sensitive strains.

**Lead product:** LI-03, a lysibody targeting all strains of *Staphylococcus aureus*, including antibiotic resistant variants such as MRSA and VRSA.

**Current state of development:** LI-03 has been optimized for large-scale production (at LakePharma), and is currently being tested for PK and efficacy (at Covance), with support from Tri-I TDI.

**Intellectual property:** PCT/US2017/061684 "Chimeric antibodies comprising binding domains of phage lysins, bacterial autolysins, bacteriocins, and phage tail or tail fibers"; covers several lysibodies against MRSA and other Gram-positive pathogens.

**Competition:** Directly competing products on the market are antibiotics with limited efficacy (Merck, Allergan, Pfizer). Products in the pipeline include monoclonal antibodies against limited epitopes and phage lysins.

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<b>Industry</b>	Biotech
<b>Management</b>	CSO - Assaf Raz, PhD
<b>Advisory board</b>	Head of SAB - Vincent A. Fischetti, PhD
<b>Core advisory group</b>	Mina Pastagia, MD (clinical development) Kenneth J. Gorelick, MD (Regulatory and Management)
<b>Amount of financing sought</b>	\$5 MM (to reach IND milestone)