

The background of the slide features a magnifying glass held over a rough, grey, and yellowish textured surface, possibly concrete or rock. Inside the lens of the magnifying glass, numerous rod-shaped bacteria are visible, appearing as light grey, elongated structures against a dark background. The text is overlaid on the left side of the image.

# Finding Cures in Remote Locations: Using Nature to Nurture

Anthony William Maresso

Joseph Melnick Professor  
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Founder: **TAILOR LABS** and **PHIOGEN**

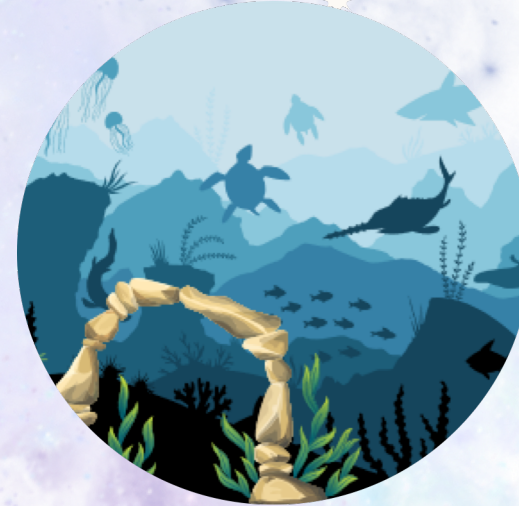
Baylor  
College of  
Medicine

# WE SEARCH FOR MICROBES FOR MEDICINES AND TECHNOLOGY

Forest  
 $10^9$  VLP/mL



Ocean  
 $10^5$ - $10^7$  VLP/mL



gut  
 $10^8$  VLP/mL



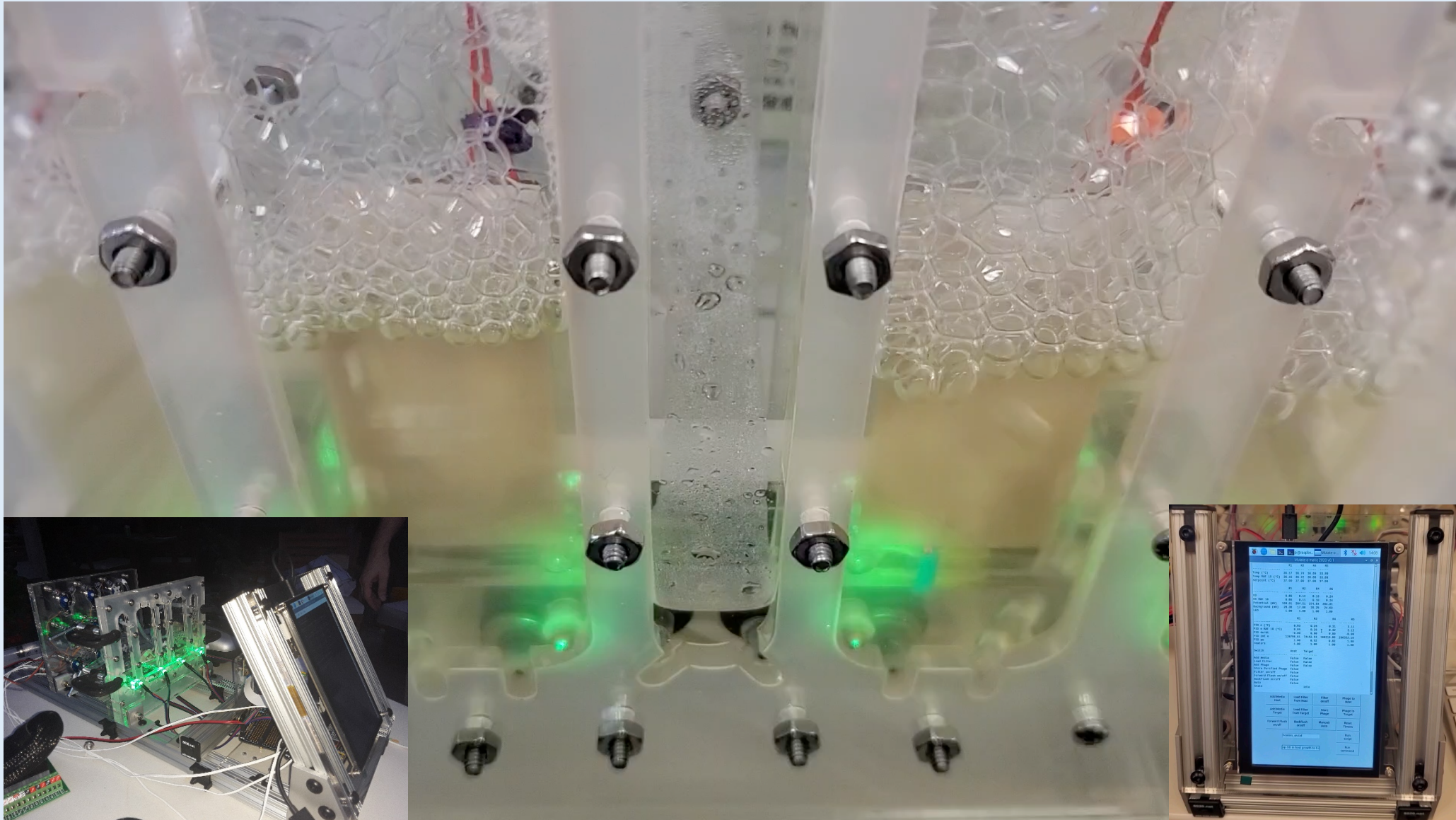
desert  
 $10^3$  VLP/mL



# INVENT MACHINES TO FIND MICROBES



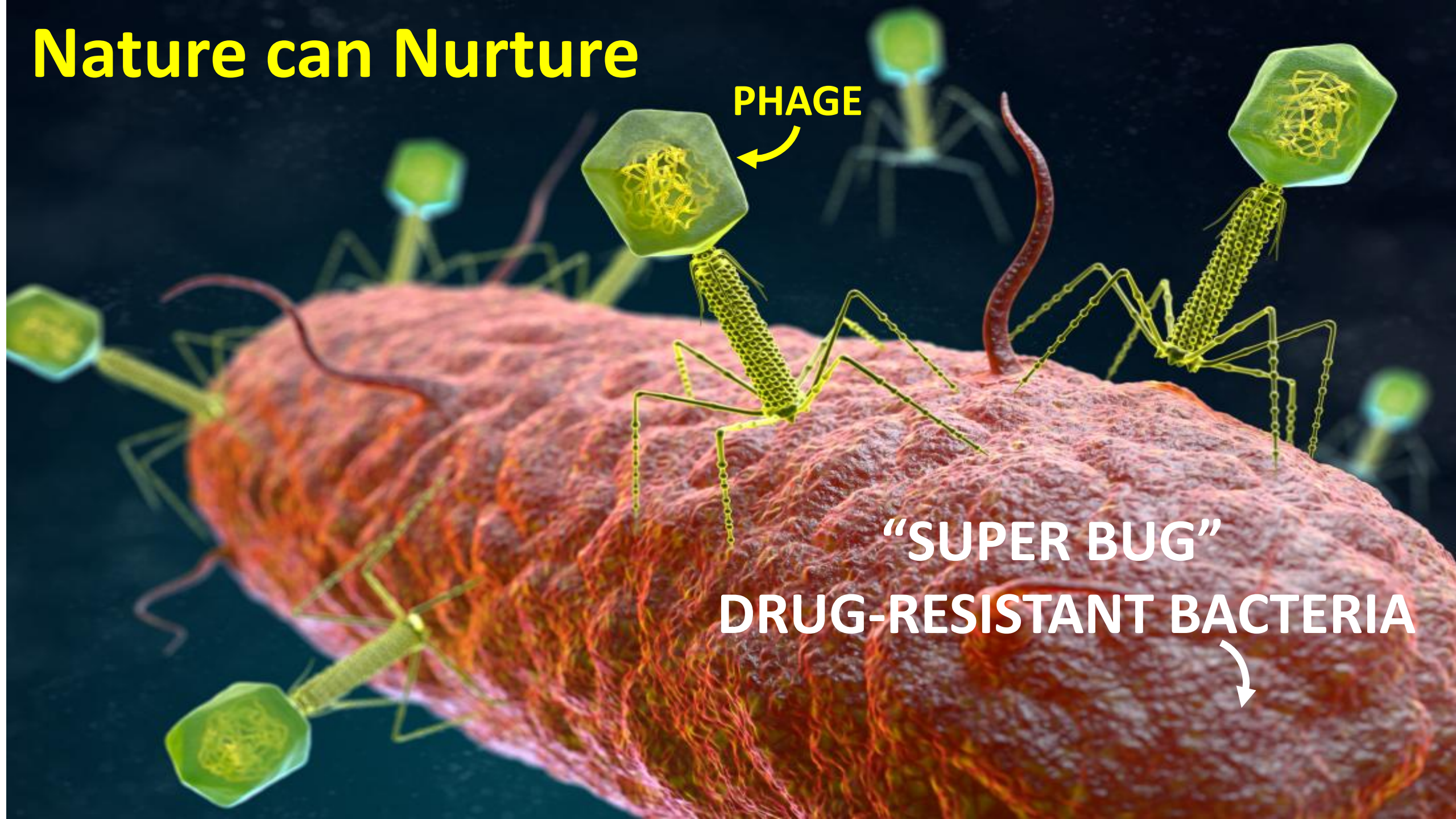
# AND MACHINES TO CHANGE MICROBES



# THE PHANTASTIC PHAGE – MIRACLE DRUG FOR BAD BACTERIA



# Nature can Nurture



PHAGE

“SUPER BUG”  
DRUG-RESISTANT BACTERIA



Tailored Antibacterials and Innovative  
Laboratories for phage (Φ) Research

A Baylor College of Medicine initiative empowering clinicians with ca-  
pable antibacterials to treat the most vulnerable patients.

26 PATIENTS TREATED SO FAR  
76% SUCCESSFUL

BACTERIA-EATING VIRUSES KILL HARD-TO-STOP INFECTIONS

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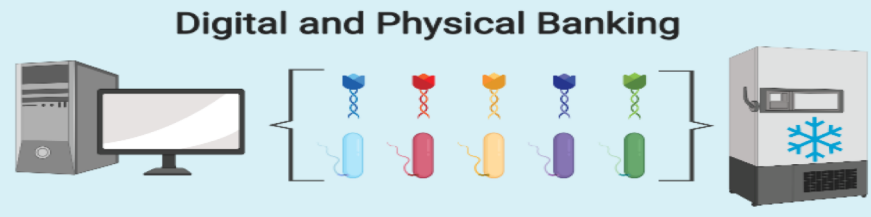
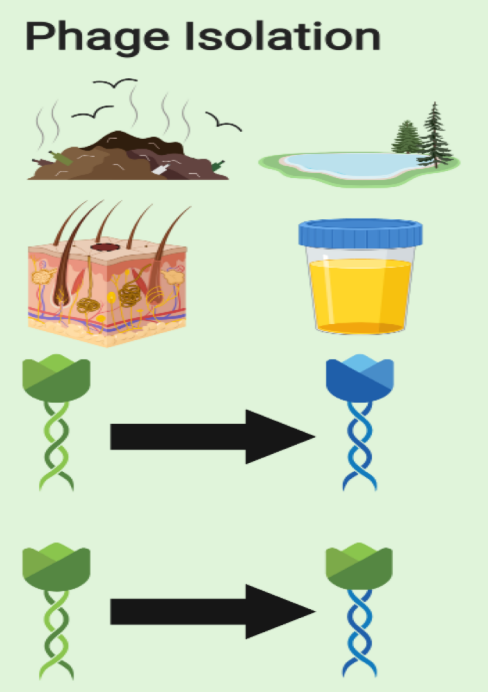
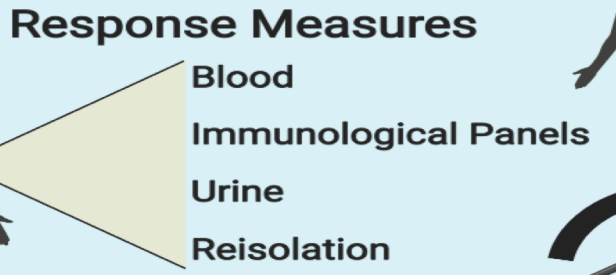
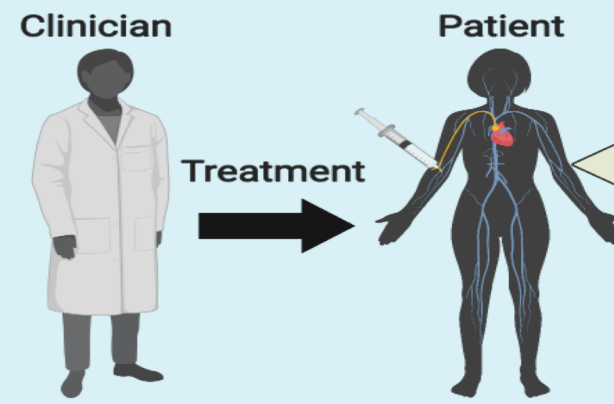
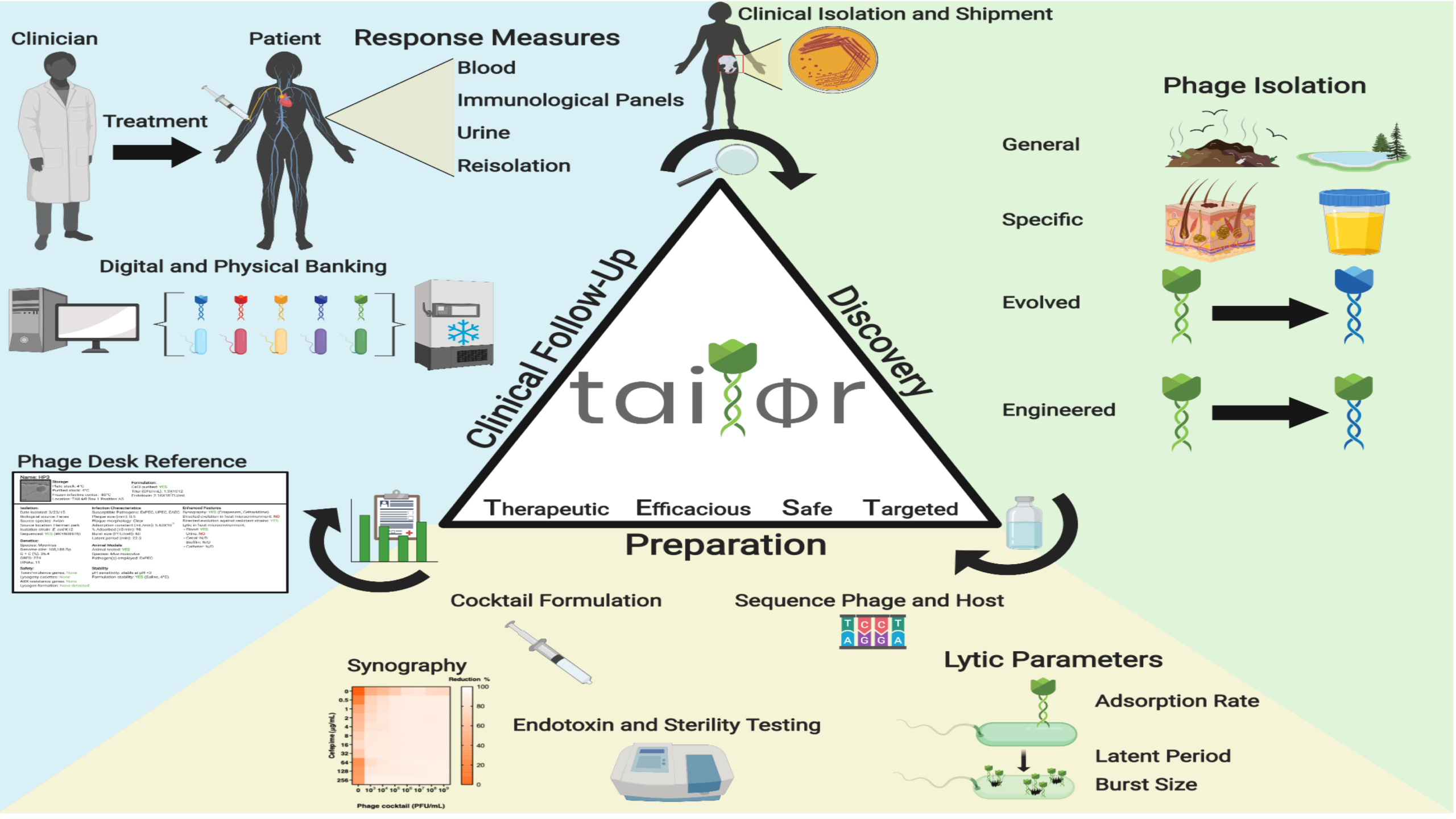
A photograph of an older man with white hair, wearing a blue and white plaid shirt, smiling and standing in a grassy field. He is surrounded by three children: a young boy in a blue polo shirt, a young girl in a black top, and a young girl in a pink and white patterned top.

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BACTERIA-EATING VIRUSES  
KILL HARD-TO-STOP INFECTIONS

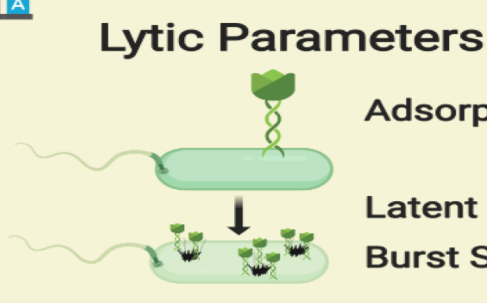
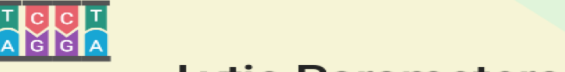
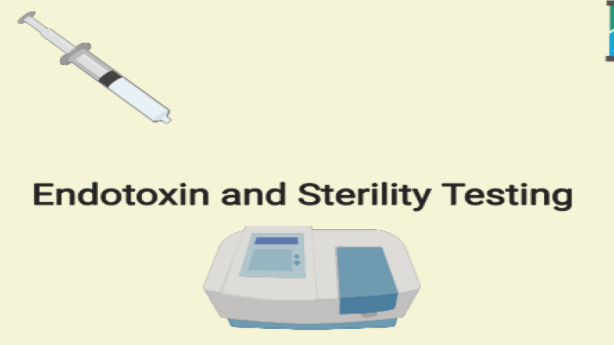
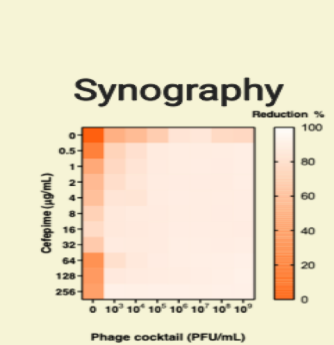
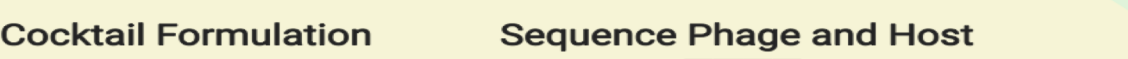
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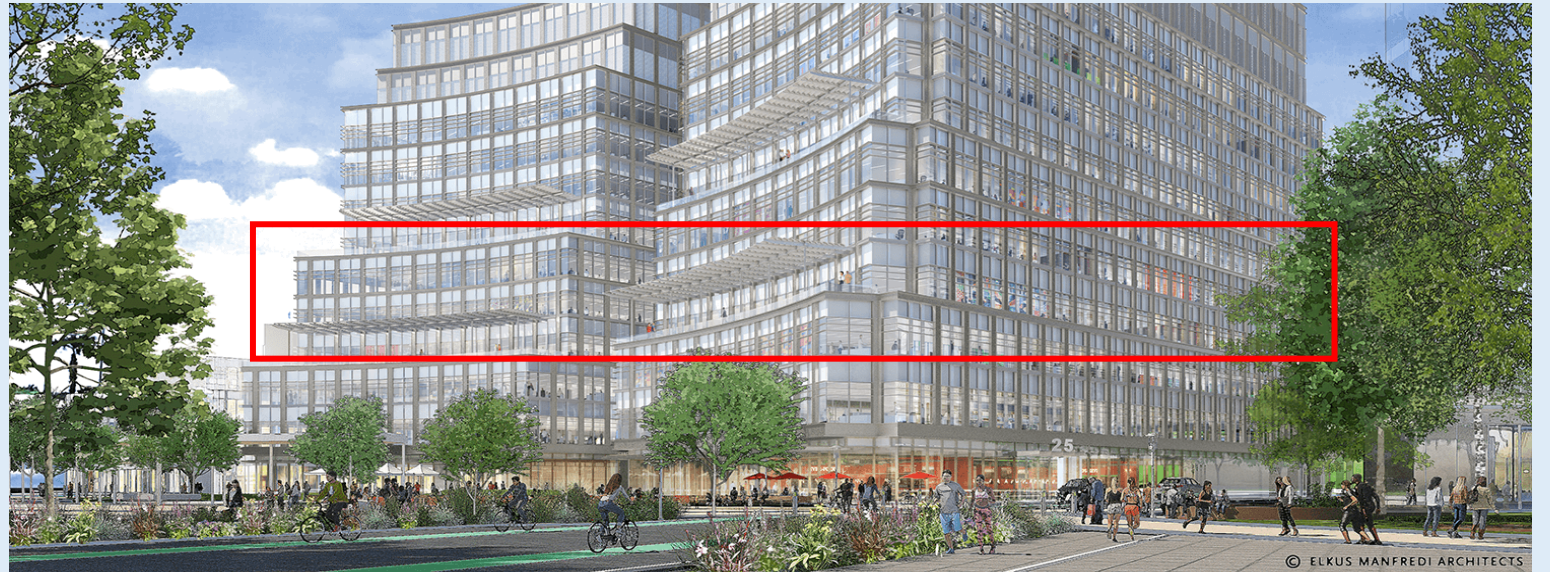
**Phage Desk Reference**

<b>Name:</b> I-PO	<b>Storage:</b> Plaque stock: -4°C Inactivated: -80°C Frozen infectious cocktail: -80°C Inoculum: TSB and 10% Protein AS	<b>Formulation:</b> Cell count: YES Titer: 10 <sup>7</sup> to 10 <sup>12</sup> Endotoxin: 2.56x10 <sup>10</sup> U/ml
<b>Isolation:</b> Date isolated: 3/23/15 Biological source: Feces Source species: Avian Source location: Limerick park Isolation strain: E. coli K12 Sequenced: YES (MGY001076)	<b>Infection Characteristics:</b> Susceptible Pathogen(s): E. coli, L. monocytogenes Phage adsorption: 100% Phage morphology: Clear Adsorption constant (ml/min): 5.53x10 <sup>10</sup> % Adsorbed (10 min): 98 Burst size (PFU/cell): 80 Latent period (min): 22.5	<b>Enhanced Features:</b> Thymoprotease: YES (Thymoprotease, CathepsinB) Bivalency: YES (Bivalency) Directly evolution against resistant strains: YES Lytic in host microenvironment: -Bacter: YES -Cancer: NO -Cell: YES -Sulfite: NO -Cofactor: NO
<b>Genetics:</b> Species: Myovirina Genome size: 168,188 bp G + C (%): 26.4 ORF(s): 774 ORF(s): 11	<b>Accreditation:</b> Animal tested: YES Species: Myovirina Pathogen(s) employed: E. coli	<b>Stability:</b> pH sensitivity: stable at pH 3-10 Formulation stability: YES (Stable, -4°C)
<b>Safety:</b> Toxin resistance genes: None Lysogenic cassette: None ADE resistance genes: None Lysogenic formation: None detected		

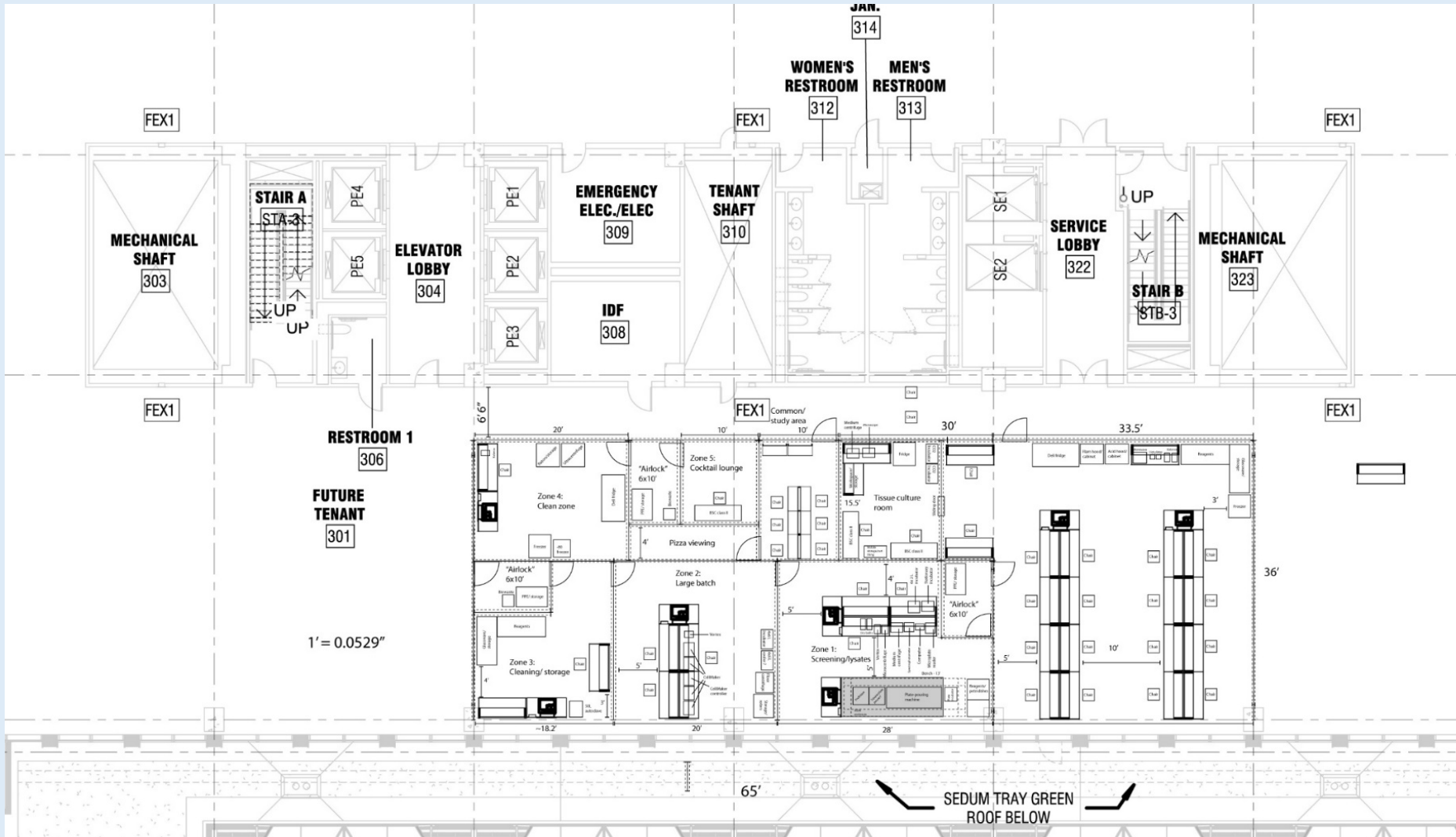




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# PHIOGEN™

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MAYUKH DAS  
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