Living Biofoundry Becomes Available

UC Los Angeles

What was accomplished?

The BioPACIFIC MIP Living Biofoundry (LBF) has been installed at UCLA and is now available to users. This automated, high-throughput platform for synthetic biology and microbial engineering enables the rapid production of bio-based monomers and polymers with precise repeat units, domains and chirality directly from microorganisms. The LBF offers leading-edge tools and workflows for gene assembly, amplification, transformation, strain growth, and metabolite analysis in a single, integrated platform.

Why is it important?

By providing a dedicated platform for automated pathway assembly at the gene level and metabolite detection at the cellular level, the Living Biofoundry will enable high-throughput discovery and engineering of new enzymes, commodity chemicals, and pharmaceuticals from renewable sources. Users of the LBF can also mine a data library of biosynthetic pathways to accelerate the discovery and scaled-up production of bioderived building blocks and biopolymers. The platform will uniquely provide the next-generation workforce hands-on training in industry-relevant technologies and empower the development of new research programs that leverage automated synthetic biology.

Figure 1. The Living Biofoundry's installation is complete, and the facility becomes available to users. It will allow researchers to perform experiments at scale developing microbes into factories for novel materials and compounds.