

LIVING BIOFOUNDRY

THERMOFISHER SYNTHETIC BIOLOGY AUTOMATION SYSTEM

Automated, high-throughput platform for gene assembly, amplification, transformation, strain growth, and metabolite analysis ✓

AUTOMATED SYNTHESIS

CHEMSPEED AUTOMATED CHEMISTRY PLATFORM

Automated library synthesis for ATRP, ROMP, RAFT, and photo-controlled polymerizations ✓
Parallel synthesis reactors for photo-, high-pressure, high and low-temp reactions ✓

HIGH THROUGHPUT CHARACTERIZATION

THERMOFISHER MICROED

First-of-its-kind TFS Spectra 300C TEM Operating from 30kV to 300kV for microED & 4D STEM ✓
State-of-the-Art Single Tilt and Double Tilt Cryo-Transfer Holders plus Cryobox ✓

✓ Enables the production of bio-based monomers and polymers with precise repeat units, domains and chirality directly from microorganisms.

VAPOURTEC R-SERIES FLOW CHEMISTRY SYSTEM

- ✓ Column reactor, PFA reactor, High temp SS reactor, Cooled reactor
- ✓ Electro-chemical reactor, Photo-chemical reactor (365, 405, 450 nm LEDs)
- ✓ Inline Flow FTIR, Inline 60 MHz NMR

HIGH-THROUGHPUT MICRORHEOLOGY TOOL

- ✓ Passive, high-throughput method for automated microrheology
- ✓ Coupled with a software that increases throughput by 30X for data acquisition and 60X for analysis for microscale volumes of fluids and soft solids

✓ Accelerates from 10s of samples per week to >500 samples per-week ✓

Automated liquid handling ✓

Automated incubators ✓

GYROS PROTEIN TECHNOLOGIES SYMPHONY X SOLID PHASE SYNTHESIZER

Employs 40 unique monomers and 24 reaction vessels ✓

Automatic cleavage and reagent recovery ✓

Scale up to 2 grams of resin per vessel ✓

NEXT GENERATION X-RAY

High-brilliance X-ray source. Equivalent to a 2nd generation synchrotron ✓

Sample environments that allow for kinetic SAXS measurements upon mixing of complex fluids (mix-SAXS) ✓

THERMOFISCHER TSQ ALTIS INLINE TRIPLE QUADRUPOLE UHPLC/MS/MS

✓ 5-2000 m/z mass range w/ Active Ion Mgmt

✓ 6 channel high-pressure solvent blending

SHIMADZU NEXERA REVERSE-PHASE ANALYTICAL/PREPARATIVE HPLC-MS

✓ Dual prep and analytical flow paths with dedicated UV-VIS and PDA detectors

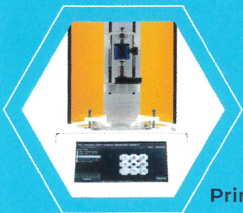
✓ Inline mass spectrometry for both analytical and prep

TEXTURE TECHNOLOGIES TEXTURE ANALYZER

✓ Mechanical testing capabilities for soft materials

✓ ~1mN of force via a 50N load cell

ADDITIVE MANUFACTURING



GELLINK LUMEN X SLA

Prints living cells ✓

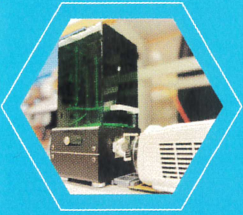
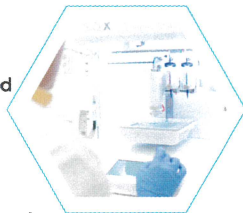
DLP printer leverages digital micromirror device (DMD) for high resolution (50µm XY, 5µm z) prints. ✓

Prints with a 385 nm light source using an STL (stereolithography file) ✓

GELLINK BIO X

✓ Extrusion 3D printer with different printheads offering flexibility to print hydrogels, thermoplastics, and bio inspired materials

✓ Printheads: Pneumatic, Electromagnetic Droplet (EDM), Temperature-control pneumatic, thermoplastic and syringe pump heads



MONO1 & MONO3 DLP PRINTERS

Wavelengths: mono1: 405 nm ✓
mono3: 460, 525, 615 nm ✓

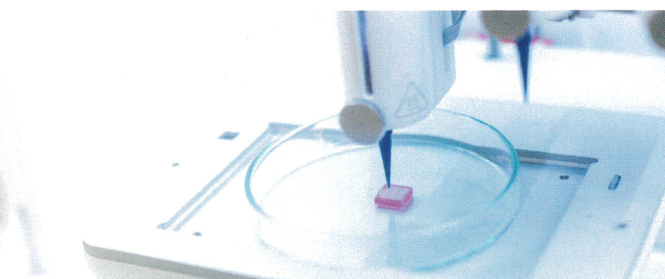
XY resolution: 20-45 µm ✓

Print speed: 420 µm/min ✓

SOLUTION MASK LIQUID LITHOGRAPHY (SMALL)

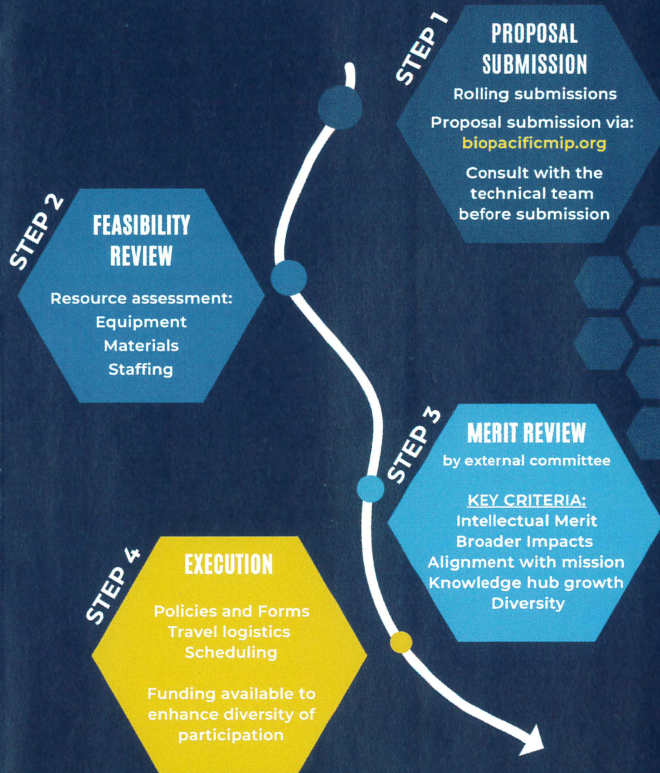
✓ One-step multi-material 3D printing with visible light

✓ Wavelength 480-700nm



BECOMING A USER

BIOPACIFIC MIP RESOURCES ARE FREE OF CHARGE TO U.S. BASED USERS WITH APPROVED PROPOSALS



APPLY NOW AND GAIN FREE ACCESS

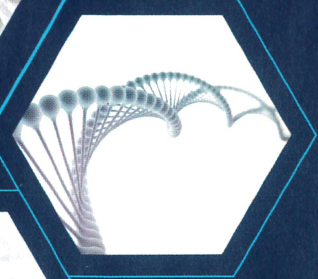
For more information please visit the BioPACIFIC MIP website:

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- ✓ High Throughput Characterization
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