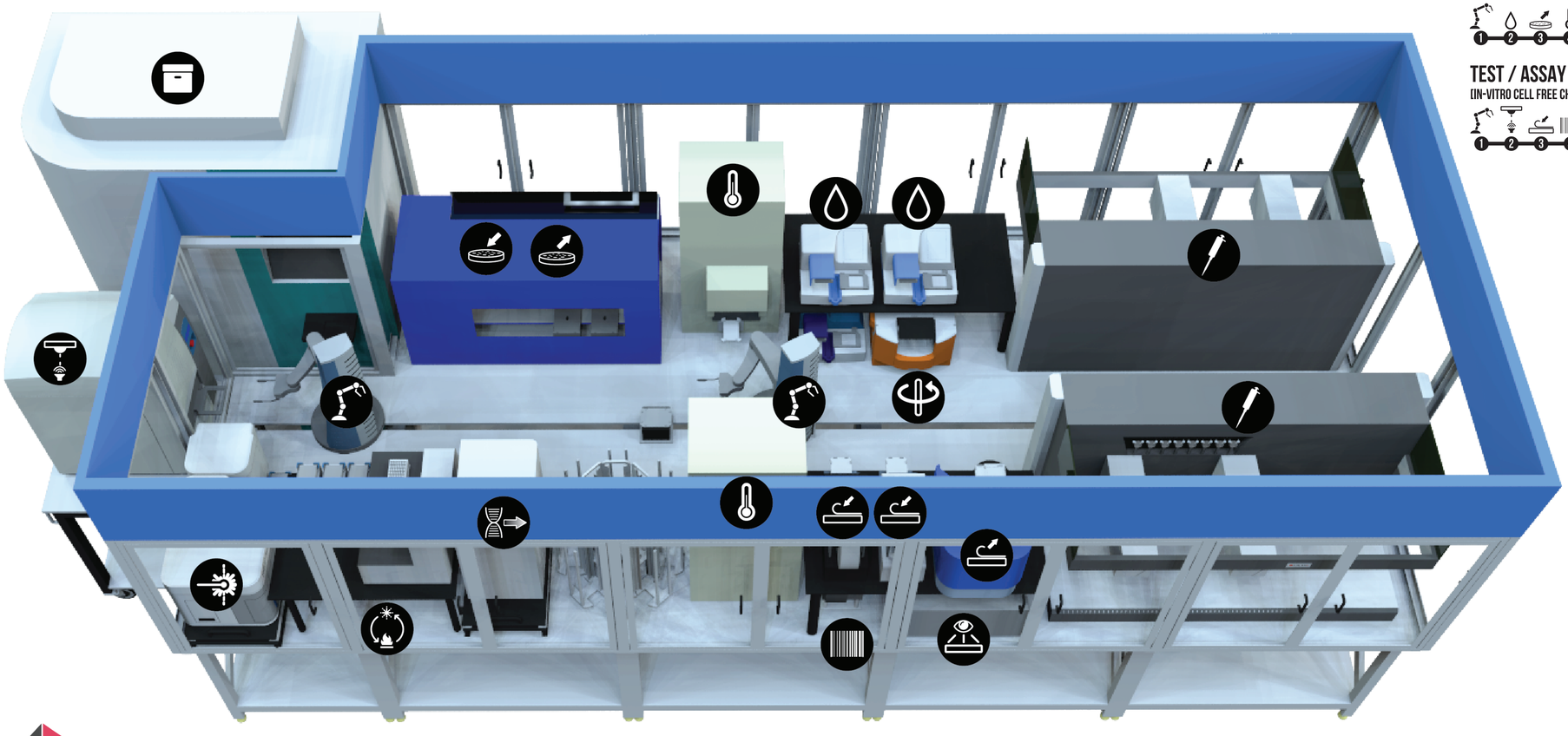
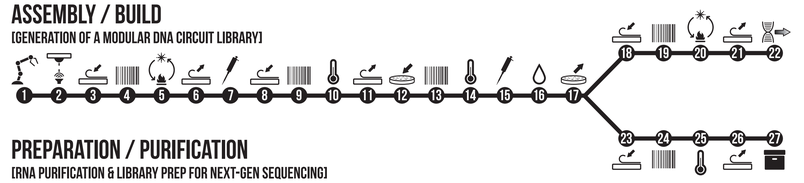
BIOFOUNDRY INTEGRATED INSTRUMENTATION SYSTEM

The mission of the DAMP Lab and the Biofoundry Integrated Instrumentation System (BIIS) is to develop novel biological systems using formal representations of protocols and experiments for the specify-design-build-test cycle. We manufacture state-of-the-art, low cost, customized microfluidic platforms enabled by computer-aided-design. Both automated experiments and custom microfluidics will allow for faster, more scalable, and reproducible research results that can be transitioned from academia to society. Our team is a diverse group of researchers with a broad skill set, all passionate about advancing synthetic biology and bio-design automation.

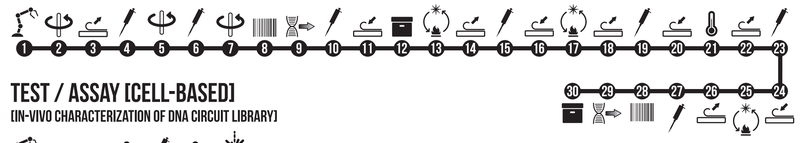


EXAMPLE PROCESSES

ASSEMBLY / BUILD
[GENERATION OF A MODULAR DNA CIRCUIT LIBRARY]



PREPARATION / PURIFICATION
[RNA PURIFICATION & LIBRARY PREP FOR NEXT-GEN SEQUENCING]



TEST / ASSAY [CELL-BASED]
[IN-VIVO CHARACTERIZATION OF DNA CIRCUIT LIBRARY]

TEST / ASSAY [CELL-FREE]
[IN-VITRO CELL FREE CHARACTERIZATION OF DNA CIRCUIT LIBRARY]

CAPABILITIES

- LIQUID HANDLING
- SAMPLE RELOCATION
- THERMOCYCLING
- CENTRIFUGATION
- ACOUSTIC DISPENSING
- INCUBATION
- SPECTROPHOTOMETRY
- REAGENT DISPENSING
- PLATE SEAL REMOVAL
- MICROBIAL COLONY PICKING
- MICROBIAL CULTURE PLATING
- ELECTROPHORESIS
- SAMPLE STORAGE
- BARCODING
- PLATE SEALING
- FLOW CYTOMETRY

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CIDAR

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