

## THE ULP BIOTECH EXPERIENCE

### High School Program (I)

#### Program Overview

The [ULP Biotech Experience](#) is a community outreach program that engages high school and college students to the exciting field of biotechnology through workbased-learning by placing them in the shoes of a biotech startup. Participating students learn from start-to-finish how biotech companies are conceived, piloted, protected, pitched, and exited - working hands-on with industry scientists at ULP's state-of the art wet lab incubator.

This immersive program employs a cross-disciplinary curriculum combining science, law, business, and finance to impart a real-world view of the multidisciplinary skills that are needed to thrive in the biotech entrepreneurial world. Student teams plan their own biotech company devising a proof of principle concept, an IP and patent strategy, and exit plan which they pitch to scientists within the ULP community. They also gain exposure to the practical skills needed to develop a biological prototype, working hands-on with commonly used assays and stem cell research models in ULP's premier wet lab facilities equipped with cutting-edge scientific equipment.

The ULP Biotech Experience is a unique workbased-learning program that employs a variety of inquiry-based and active-learning strategies to engage students in the practical, theoretical, and professional skills needed for higher education and biotech employment. With hands-on labs, interactive lecture discussions, presentations, team projects, and career education, the ULP biotech experience is the only program of its kind that provides an in-depth window into the biotechnology sector.

Please see the [video](#) here.

#### Program Goals:

**Real-World Exposure and Skills Gain through Workbased Learning:** Immerse high school/college students to the entrepreneurial biotech experience and equip students with the practical, theoretical, and soft skills needed to pursue successful biotech careers and beyond.

**Career Exploration:** Inform high school and college students about the wide array of biotech/lifescience careers they could pursue.

**Workforce Development:** Address the biotech skills-gap by creating a pipeline of skilled biotech workers starting early in high school.

### The ULP Biotech Experience Timeline (High School Programming):

The ULP Biotech Experience is a 1-day immersion held at ULP’s state-of the art biotech incubator. Led by industry biotech professionals, the experience engages classes of 20 students + 3 teachers/faculty in the following activities:

Time	Activity	Name	Description
9:00am	Interactive lecture - discussion	Welcome and Introduction to Biotechnology	Students will kick off the day with a social team building exercise, followed by an introduction to biotechnology and the day’s activities.
9:30am	Student-led inquiry discussion	Building a biotech company: Phase 1+2: Basic Research and developing an idea/ biotech application	Starting with the development of a scientific idea, students will work in teams to explore the stages of building a biotechnology company.
10:00am	Laboratory session	Building a biotech company: Phase 3: Proof of concept prototype. Lab 1: Developing a Research Model Lab 2: Developing Assays (and facility tour)	Students will gain exposure to the practical skills needed to create a minimal viable proof of concept product focusing on two areas while working with stem cells: 1. Developing a research model 2. Creating experimental assays.
12:00pm	LUNCH (provided)		
1:00pm	Student-led inquiry discussion	Building a biotech company: Phase 4+5: Forming and Protecting a Biotech Company IP, patents and protection	Students will learn about the mechanics of forming a company and the patents that are needed to protect their intellectual property. Working in teams, students will plan their company structure and devise a patent strategy for their concept.
1:30pm	Student presentation	Building a biotech company: Phase 6+7 Funding and Product Development	Students will learn how emerging companies gain funding and develop their final product or application. Working in teams, students will devise a product testing strategy.
2:00pm	Student-led inquiry discussion	Building a biotech company: Phase 8+9: Commercialization and Exit	Students will learn how working products are commercialized and successful companies are exited or operated. Working in teams, students will devise a strategy for commercializing and exiting their company.
2:30pm	BREAK		
2:45pm	Student presentation	Student Presentations	In teams, students will give a 5-minute “investor pitch” of their company, competing for a novelty prize
3:30pm	Q+A	Wind Down Session and Career Discussion	The day will end with a brief discussion of biotech careers with a Q+A session
4:00pm	END		

\*Students to bring their laptops for the ULP Biotech Experience



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Students will be using state-of-the-art, industry-level equipment such as:

- Microscopy
  - Inverted Tissue Culture - Zeiss Primo Vert
  - Inverted/Upright - ECHO Rebel
  - Inverted/Upright Fluorescence - ECHO Revolve
- Tissue culture facility - BSL2+ Biosafety cabinets

Cost: \$3,600/day for 20 students + 3 faculty (all materials and supplies are provided)

Scholarship opportunities available

For inquiries, please contact Karin Koch at [karin@universitylabpartners.org](mailto:karin@universitylabpartners.org). Please send your top 3 date preferences for scheduling. The ULP Biotech Experience (High School Program) is offered on most Saturdays.

#### About University Lab Partners:

[University Lab Partners](http://universitylabpartners.org) is a non-profit, independent, wet lab incubator located in UCI Research Park. ULP is a professionally managed and equipped wet-lab incubator along with the benefits of peer-to-peer interactions among a biomedical focused entrepreneurial community. ULP offers exceptional value to entrepreneurs looking to launch and grow their business in the biomedical industry with no IP or equity claims. University Lab Partners is a project of the Beall Family Foundation.