



PHILOSOPHY AND GOALS

UC Berkeley supports economic development and benefits society through knowledge and technology transfer and entrepreneurship. We establish multifaceted relationships with companies to diversify our funding sources for research, prepare students to contribute to the innovation economy and address pressing societal needs.

Top three goals for the next 10 years

- 1 Increase the number, size, variety, and value of our equity holdings. To enable this goal, create new sources of funding to invest in the portfolio.
- 2 Continuously expand the number and quality of multidisciplinary and industry-funded research institutes to advance the research I&E ecosystem.
- 3 Continue to develop *inclusive* I&E platforms, and further expand the involvement of alumni, students, and the community.

What are the barriers standing between UCB and the achievement of these goals?

- There are more initiatives to advance DEIB in the I&E space than resources to implement them
- Inadequate proof-of-concept funding
- Constructing novel research institutes in view of changing demands of sponsors, including federal funding agencies
- Inability to perform in-house analyses at UC of economic impact such as startup impacts
- Inadequate support for the Equity Solutions Group especially in view of requests for help from other UC campuses
- Local zoning and permitting obstacles that impede commercial development

BY THE NUMBERS

Performance output as measured by transactional activity

Fiscal years 2017 -2021

Invention and copyright disclosures	993
U.S. patents issued	492
Utility licenses issued	116
Plant licenses issued	0
Tech transfer startups formed	72
Tech transfer startups with equity	39
Licensed technologies that became available as commercial products and services	41
Licenses/Options receiving Income	317
Licenses/Options receiving > \$1 million	4
Royalty and fee income	\$61.1 M
Equity income	\$32.9 M
Industrial research expenditures	\$373.9 M
Total research expenditures	\$4.19 B

Source: UCOP — Office of Innovation Transfer & Entrepreneurship, UCB, and the NSF's HERD Survey

Staffing and budgetary resources

FY 2022

Current local FTE (filled positions only)	10.6
Local personnel costs (includes both working personnel + budgeted vacancies)	\$2,288,000
Fees paid to UCOP for services (includes PTS + financial services + patent prosecution services)	\$244,479
External Services (includes external software + external legal services + all other external services)	\$11,087
Total tech transfer operating budget (i.e., local personnel costs + fees paid to UCOP for services + external services)	\$2,543,566

Huron Consulting, December 2022

*Does not include IP invented by UCB inventors whose cases are managed by LBNL due to joint appointments between the two institutions.

53

#53* ranking Milken Institute “Concept to Commercialization: The Best Universities for Technology Transfer” (2017)

3

#3 ranking PitchBook “Universities: Top 100 colleges ranked by female founders undergraduate” (2022)

2

#2 ranking PitchBook “Universities: Top 100 [undergraduate] colleges ranked by startup founders” (2022)

2

#2 in the Patent Conversion Ratio metric

INNOVATION TRANSFER CONCENTRATIONS AND HIGHLIGHTS

Technology concentrations

Researchers at Berkeley tackle pressing challenges for the betterment of California and the world. From robotic exoskeletons to the CRISPR gene editing revolution and harvesting water from the air, research at Berkeley advances the state of the art in more than 130 academic departments and 80 multidisciplinary research units. Highlights include:

AI/ML

Bioengineering

Biological Sciences

Chemistry

Computer and Data Sciences

Electrical Engineering

Energy and Climate Change

Genome Editing

Medical Devices and Diagnostics

Robotics

Therapeutics

Did you know?

- 1 Circa establishment of its local technology transfer office (years in operation) **1990 (33)**
- 2 Projected amount of proof-of-concept funding to satisfy needs for (a) the next year, (b) the next three years, (c) the next five years. (As of 2021)
(a) \$450,000 (b) \$1.8 million (c) \$3.15 million
- 3 Of the 14 recommendations adopted in May 2021, which three would you prioritize (in order) as the most important for your I&E enterprise? (As of January 2023)
**(1) equity management
(2) legal compliance
(3) policy modernization**

Top three most profitable licenses

- 1 Yervoy, Gilead, BMS \$88.4M, 2000-2011 *Note: Additional revenue is still being received from tangible material (antibody) licensing under the same patent.*
- 2 Energy Transfer Primers, Probes for DNA Sequencing, Amersham, GE \$34.7M (1998-2017)
- 3 CRISPR/Cas9- based genome editing (improvement cases not included) Caribou Biosciences \$23.2M (2014-2023)

Top three equity cashouts

- 1 Berkeley Lights (acq. by PhenomeX) \$17.5M
- 2 Intellia Therapeutics \$15.3M
- 3 4D Molecular Therapeutics \$6.1M

Top three most impactful commercializations

Yervoy™ (Bristol-Myers Squibb) — Professor James Allison

Yervoy enables a patient’s own T-cells to find and attack cancerous cells and is now being used to treat 18 types of cancer.

CRISPR-Cas-9 (Caribou Biosciences and sublicensees)

Professor Jennifer Doudna

CRISPR-Cas-9 simply and precisely cuts DNA and has revolutionized the gene-editing field. It can repair genetic mutations that cause disease, engineer improved crops, mitigate climate change, and more.

e-Legs (Berkeley Bionics) — Professor Homayoon Kazerooni

Enabled a paralyzed student to walk across the graduation stage.

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