

Phil & Penny Knight Campus for Accelerating Scientific Impact

December 8, 2020

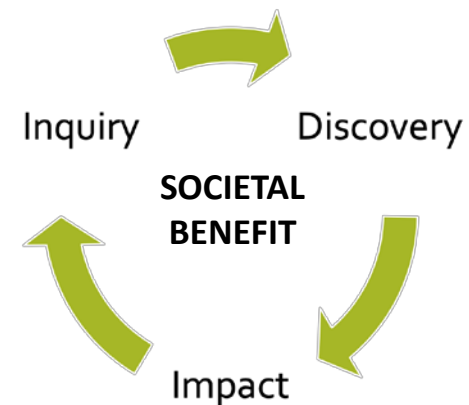




Mission and Vision

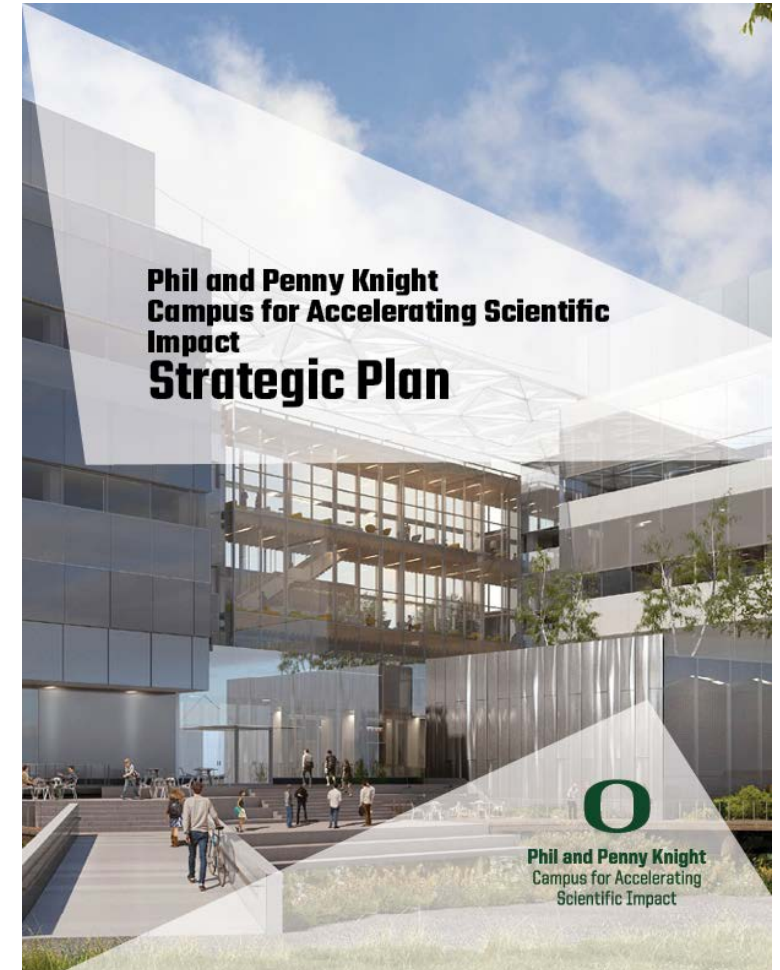
Science Advancing Society

The Knight Campus embodies a new paradigm for pioneering scientific inquiry that accelerates the cycle of translating scientific discoveries into societal impact.



Knight Campus Strategic Priorities

- **Catalyze impactful convergent research**
- **Accelerate the innovation cycle**
- **Train the next generation of leaders**
- **Cultivate a diverse and inclusive community**
- **Communicate discovery and innovation**



<https://accelerate.uoregon.edu/strategic-plan>

Leadership Team



Robert Guldberg
*Vice President and
Robert and Leona DeArmond
Executive Director*



Moira Kiltie
*Associate Vice President
and Chief of Staff*



Jim Hutchison
*Senior Associate Vice President
and Lokey-Harrington Chair in
the Department of Chemistry
and Biochemistry*



Andrew Nelson
*Associate Vice President of
Entrepreneurship and Innovation,
Randall C. Papé Chair in
Entrepreneurship and Innovation,
and Associate Professor of
Management*



Knight Campus Faculty



Bala Ambati | *Research Professor*

Regenerative Medicine,
Ophthalmology, Vision Research



Paul Dalton | *Associate Professor*

Biofabrication, 3D Printing, Melt
Electrowriting, Neural Tissue Engineering



Tim Gardner | *Associate Professor and
Robert and Leona DeArmond Chair*

Neuroengineering, High Resolution Brain
Interfaces, 3D Printing Technologies



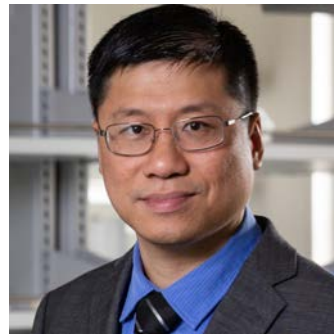
Marian Hettiaratchi | *Assistant Professor*

Biomedical Engineering, Controlled Protein
Delivery Systems, Regenerative Medicine



Parisa Hosseinzadeh | *Assistant Professor*

Protein Design, Computational Biology,
Biochemistry, Peptide-Based Therapeutics



Keat Ghee Ong | *Professor*

Bioengineering, Biosensors, Magneto-
Elastic Materials, Medical Devices



Calin Plesa | *Assistant Professor*

Synthetic Biology/ Molecular Engineering,
Large-Scale Gene Synthesis



Jonathan Reeder | *Assistant Professor*

Biomedical Engineering, Shape-Memory
Materials, Flexible Electronics,
Human-Machine Interfaces

Phase 1: Laying the Foundation

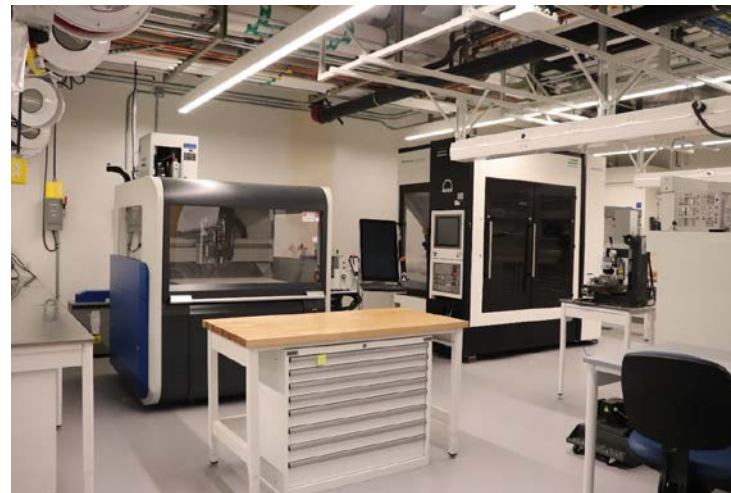
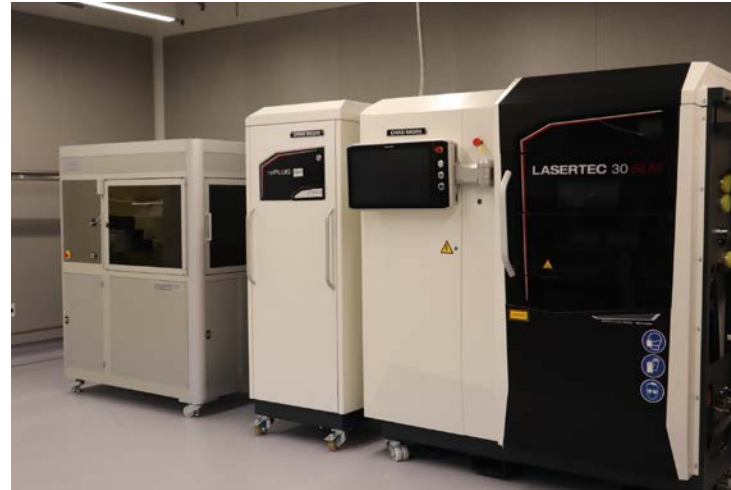


Phase 1 includes a 160,000 square-foot, five-story building with:

- World-class research laboratories
- Shared core facilities with highly sought after equipment and tools for rapid prototyping
- Innovation center with leasable labs and offices
- Flexible pedagogical environments for applied science and engineering

Core Facilities in the Knight Campus

- Rapid Fabrication
- 3D printing
- Clean room
- Imaging Facility



External Sponsored Projects

Sponsored Projects Portfolio	FY19 (July 2018 – June 2019)	FY20 (July 2019 – June 2020)	FY21 (Partial Year) (July 2020 – Oct 2020)
Total Number of Awards	4	12	3
Total Awarded (includes F&A)	\$1,640,976	\$7,889,827	\$2,637,753
Total F&A Awarded	\$423,289	\$1,806,192	\$825,057
Total Number of Proposals	7	43 (11 pending)	18 (17 pending)
Total Submitted (includes F&A)	\$2,108,879	\$34,058,827	\$14,802,382
Total F&A Submitted	\$557,823	\$8,680,034	\$3,923,368



Strategic Partnerships

In June 2019, UO and OHSU announced a “**Knight-to-Knight**” collaborative effort - the **Center for Biomedical Data Science**.

We also envision a dual-shield graduate program between the **Knight Campus** and the **Knight Cancer Institute** that will bring big data science training and capability to both institutions, with initial focus on applications in cancer and understanding cell behavior in health and disease.



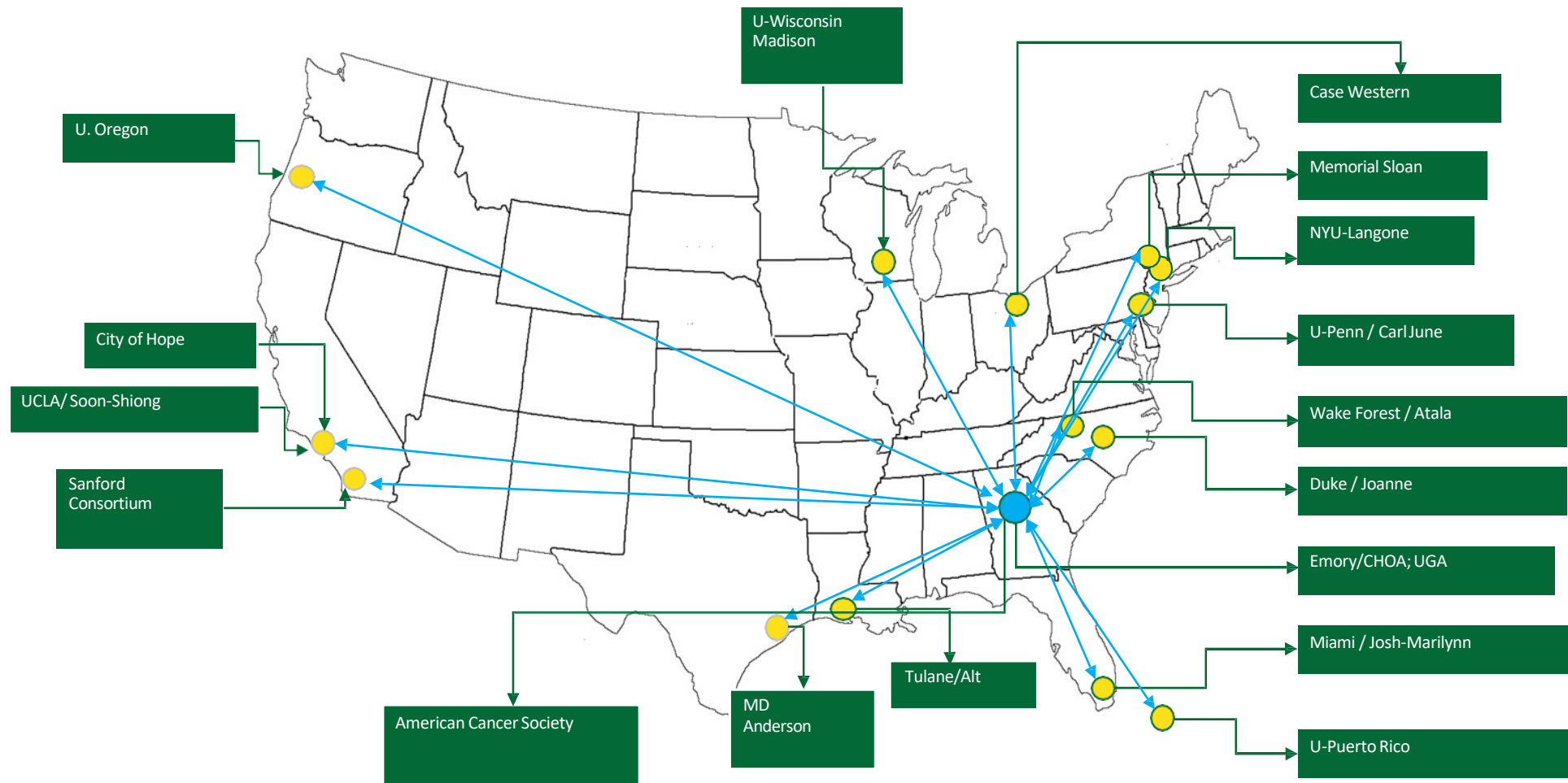
Strategic Partnerships

This fall, the Knight Campus and PeaceHealth announced a **joint center for biomedical research**, initially focused on facilitating clinical need-based research collaborations and supporting careers of underrepresented scientists and engineers.

This is the first collaboration of its kind between the **Knight Campus** and **PeaceHealth**. The Knight Campus will recruit fellows to work with UO faculty members and PeaceHealth providers on mentored independent research with a clinical emphasis in the PeaceHealth medical domains.



Cell Therapy Consortium



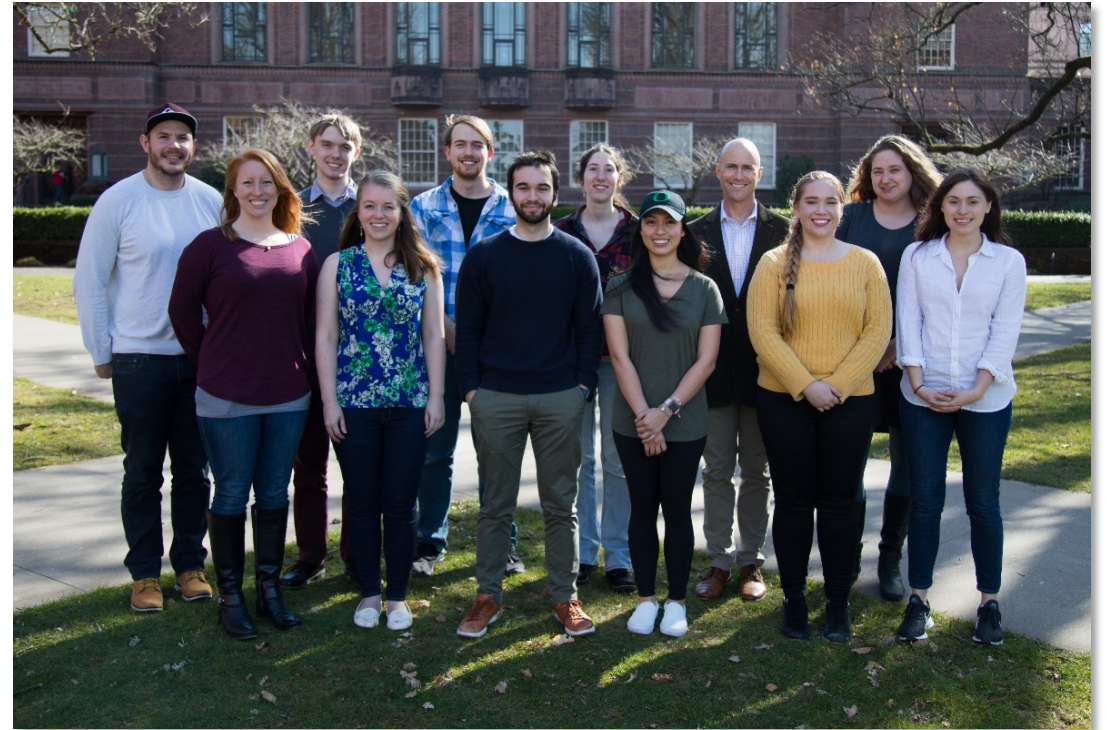
Innovative Education

- Knight Campus Undergraduate Scholars
- UO/OSU Graduate Program in Bioengineering
- UO Minor in Bioengineering
- Knight Campus Graduate Internship Program (KCGIP)



Knight Campus Undergraduate Scholars

- Immersive research experience for an undergraduate cohort for a full year in a Knight Campus-affiliated lab
- Career development programming began in January, 2019 with a cohort of 6 pairs of students and mentors
- Current cohort includes 9 pairs of students and mentors
- Program Sponsors: the Maybelle Clark Macdonald Fund, Dave and Nancy Petrone, the Clark Honors College, Thermo Fisher Scientific, Industrial Source, Inc., and Bob and Tina Guldberg



Knight Campus Graduate Internship Program



Betsy Tanenbaum
Alumni Network
Manager & Recruiter



Leslie Coonrod
Assoc. Director &
Senior Lecturer, Life
Sciences Program



Nima Dinyari
Optics Track
Manager



Fuding Lin
Semiconductors
Track Manager



Lynde Ritzow
Assoc. Director,
Materials Science
Program



Clay Small
Lecturer,
Bioinformatics



Casey Check
Polymers Track
Manager



Stacey Wagner
Director, Life
Sciences Program



Stacey York
Director, Materials
Science Program



- An immersive academic and career preparation program for Master's students in an accelerated format of 12-18 months
- Five tracks in high-tech and fast-growing fields developed with industry partners to meet the needs of the employers
- Tracks: Bioinformatics & Genomics, Molecular Sensors & Probes, Polymer Science, Photovoltaic & Semiconductor Device Processing, and Optical Materials & Devices

Knight Campus Graduate Internship Program



- 98% graduation rate
- 90% of alumni are employed within 3 months of graduation
- 1st in the US for the number of Master's degrees in physics granted
- Average internship salary for this year's interns was \$57,000/year when annualized
- Comparing three-year averages of admitted students before and after the launch of the program's inclusion initiative, the number of students traditionally underrepresented in STEM increased 19%

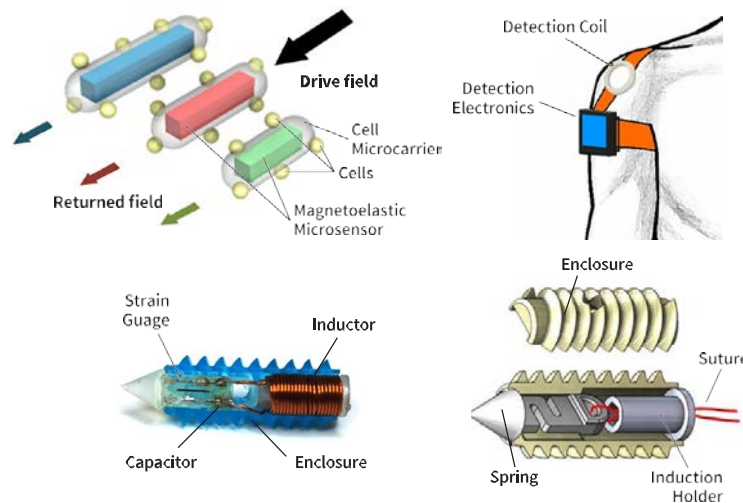
Startup Company Overviews

The Knight Campus energizes economic possibility from within. Start-up companies founded by faculty are quietly taking shape to improve patient care with 3D-printed, patient-specific implants; orthopedic sensors that monitor healing; high-throughput medical testing; and a novel therapy for vision complications caused by diabetes. These are the first of many such startups, spawning from the world-class faculty we continue to hire, providing potential economic rejuvenation as we pursue discovery in areas such as regenerative medicine.

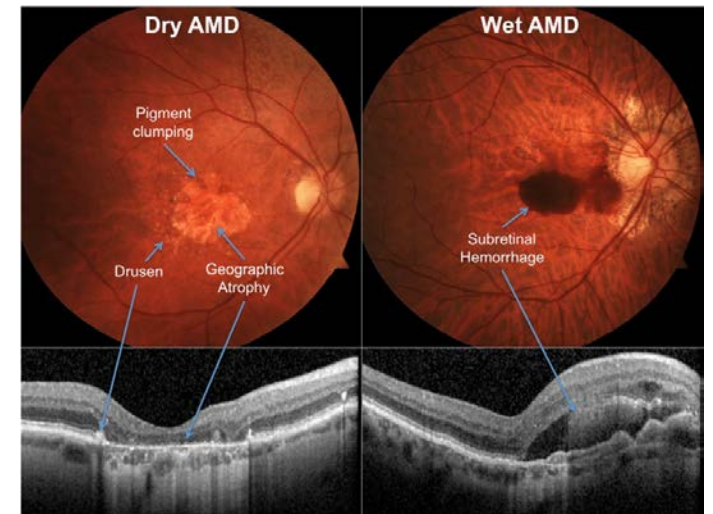
RESTOR3D, INC.



PENDERIA TECHNOLOGIES, INC.

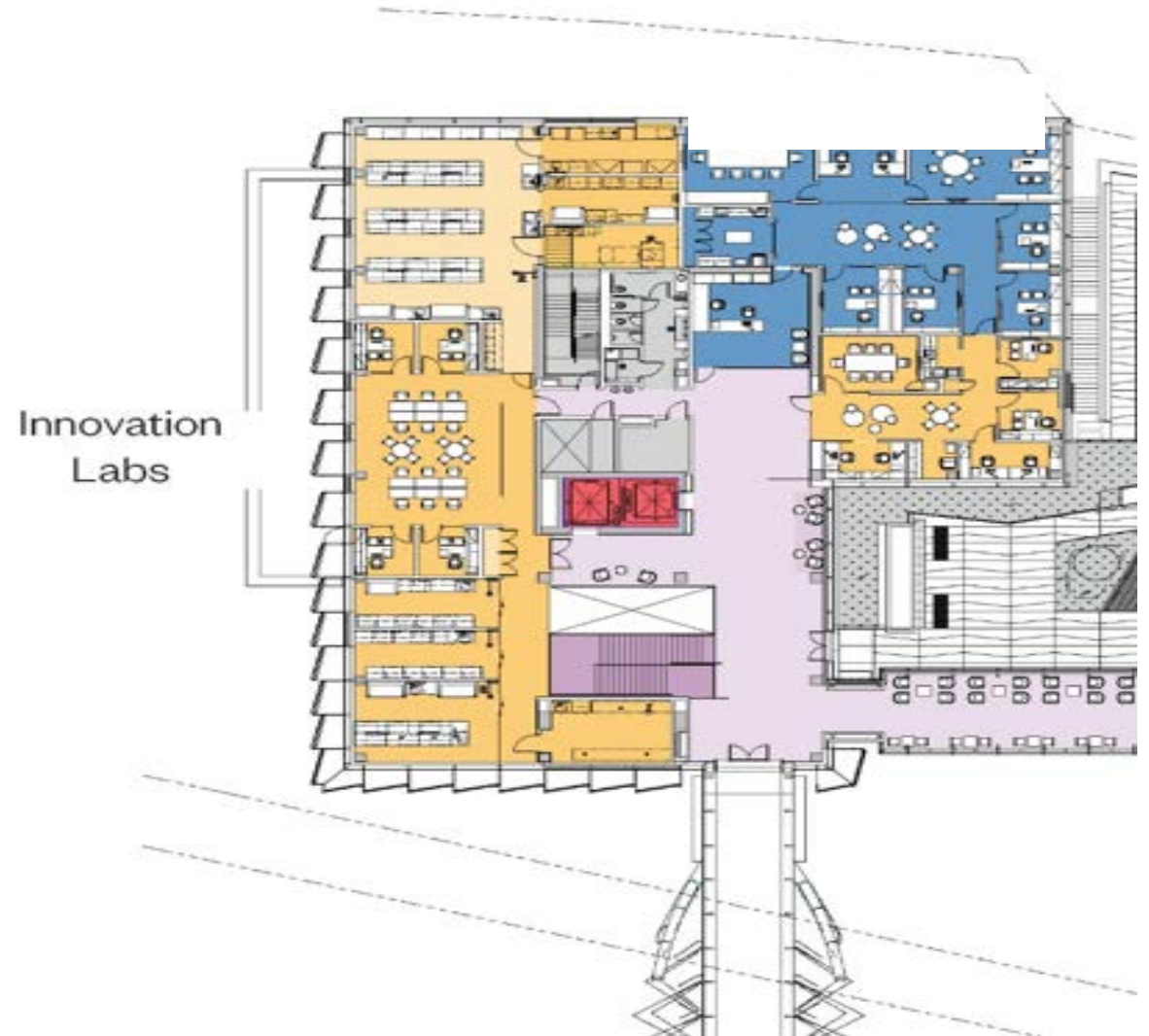


DICERX



Innovation Center in the Knight Campus

- 6,000 sq. ft. of space, ranging from "a seat at a bench" to private labs to dry work spaces and meeting rooms
- Available to internal and external entities and individuals through membership and fee structures
- Addressing the need for early discovery laboratory spaces for those in the life science market



Phase 2: Driving Sustainable Transformation

Vision for a three-building, 400,000 square foot Knight Campus.

- **Building 1** (160,000 square-feet) – *completed*
- **Building 2** (up to 176,200 square-feet) – Research and Innovation – *proposed*
- **Building 3** (60,000 square-feet) – Academic – *proposed*



How will the Knight Campus Transform Oregon?

- Build a campus of three state of the art collaborative research and education buildings that bridge UO basic sciences to applied science to a city-planned innovation district
- Recruit outstanding faculty in applied sciences and bioengineering
- Offer engineering, applied science and data science degrees never previously available to UO students
- Forge more and deeper inter-institutional collaborations in Oregon
- Establish a significant focus on private-public partnerships
- Enhance the visibility of the UO on the national stage both in academics and in the business community



Phil and Penny Knight
Campus for Accelerating Scientific Impact