

Innovation and Collaboration with Industry

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Objective – The Five “I’s”

- Inspiration
- Imagination
- Innovation
- Intellectual property
- Industry



Outline

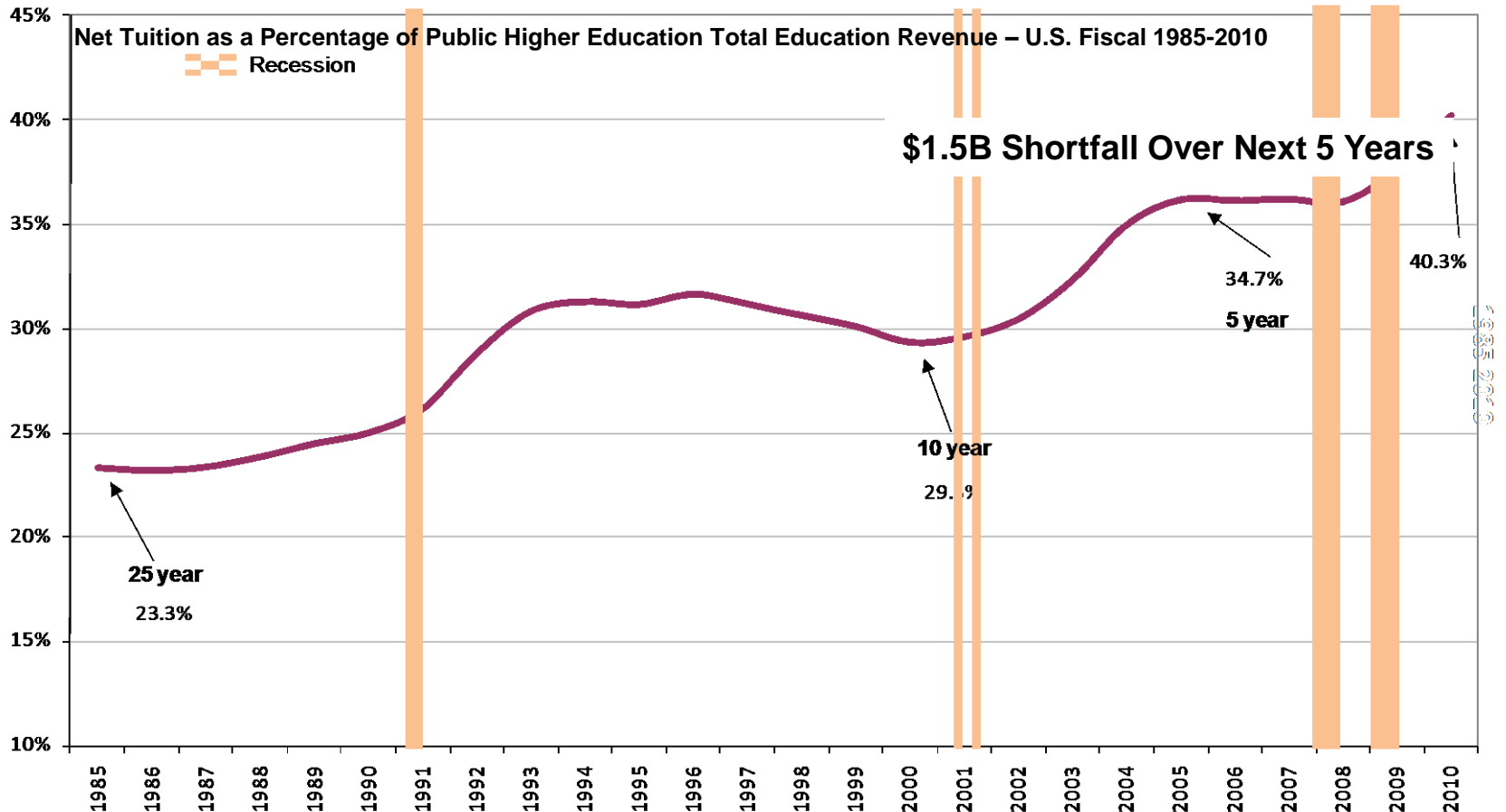
- Inspiration – Imagination – innovation
- Intellectual property
 - Documenting your idea
 - Whose idea is it? – Residency and intellectual property
 - Sharing your idea
- Partners in success – Working with industry
 - Options for moving ideas forward
 - How do you find and select an industry partner
 - Realistic expectations
 - The process of creating a medical device

Why innovate

1. Further primary mission of patient care
2. Intellectual curiosity and satisfaction
3. Revenue
 - University
 - Community
 - Personal

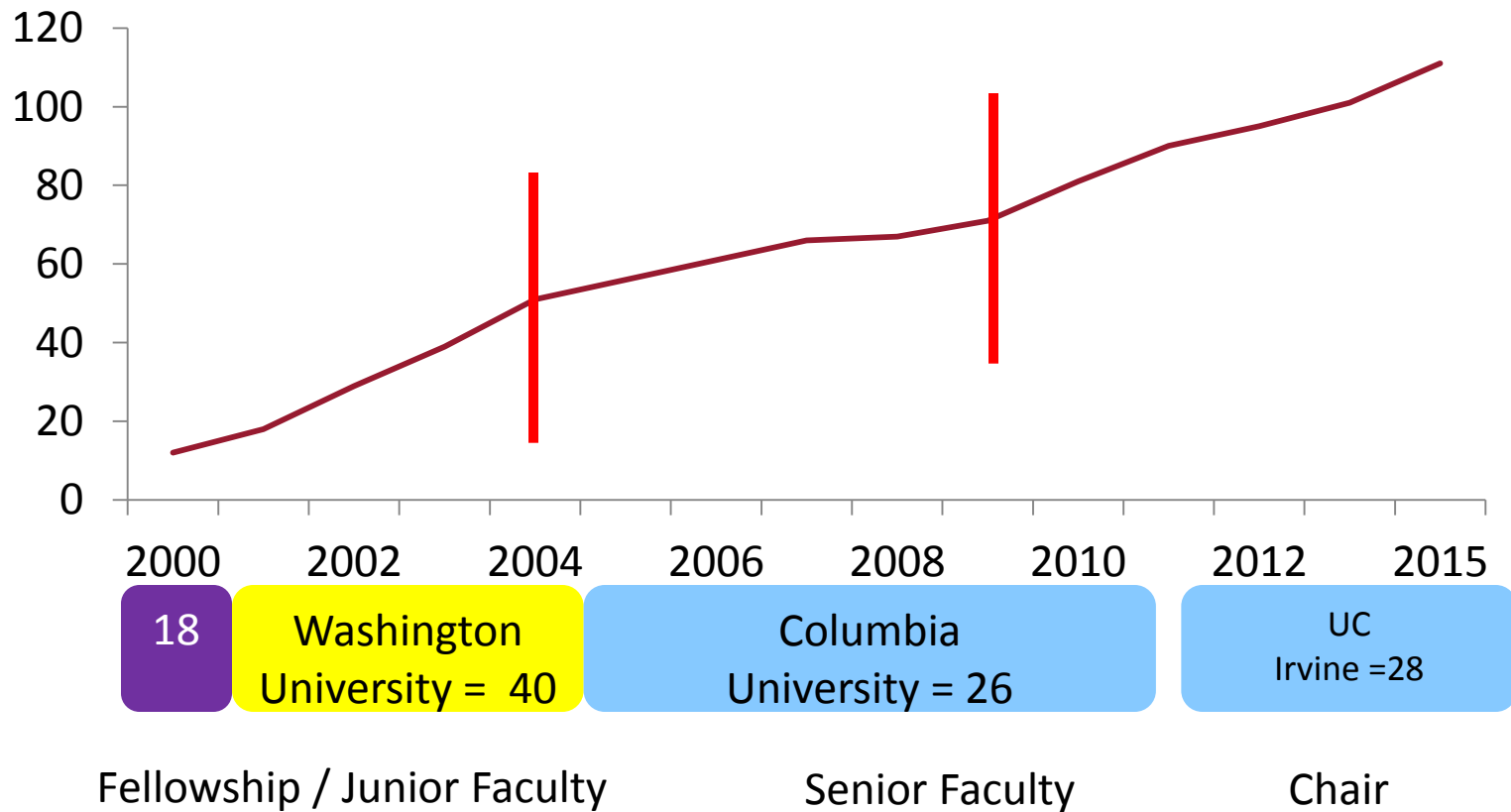
Why generate revenue

Across public higher education, commercialization efforts are becoming more important due to declining public subsidies and the search for alternative funding sources



Life and inspiration

Novel Ideas / Concepts



Find a mentor

Difficult

Identify a mentor with a track record of innovation

More difficult

Identify the altruistic mentor

Most difficult

Become the altruistic mentor



Imagination – Inspiration - Innovation

Actively work towards creativity

Isolate problems (don't just work around them) – assume everything can be better
Identify how and when you are inspired and create your own fertile ground!



Fertile ground for innovation

Identify employment opportunities which support innovation

Create a “team” environment which emphasizes collaboration and innovation

“None of us are as smart as all of us”

Dean R V Clayman

Actively seek out medical and non-medical partners

Engineering

Basic scientist

Physiologist

Computer Science

Art

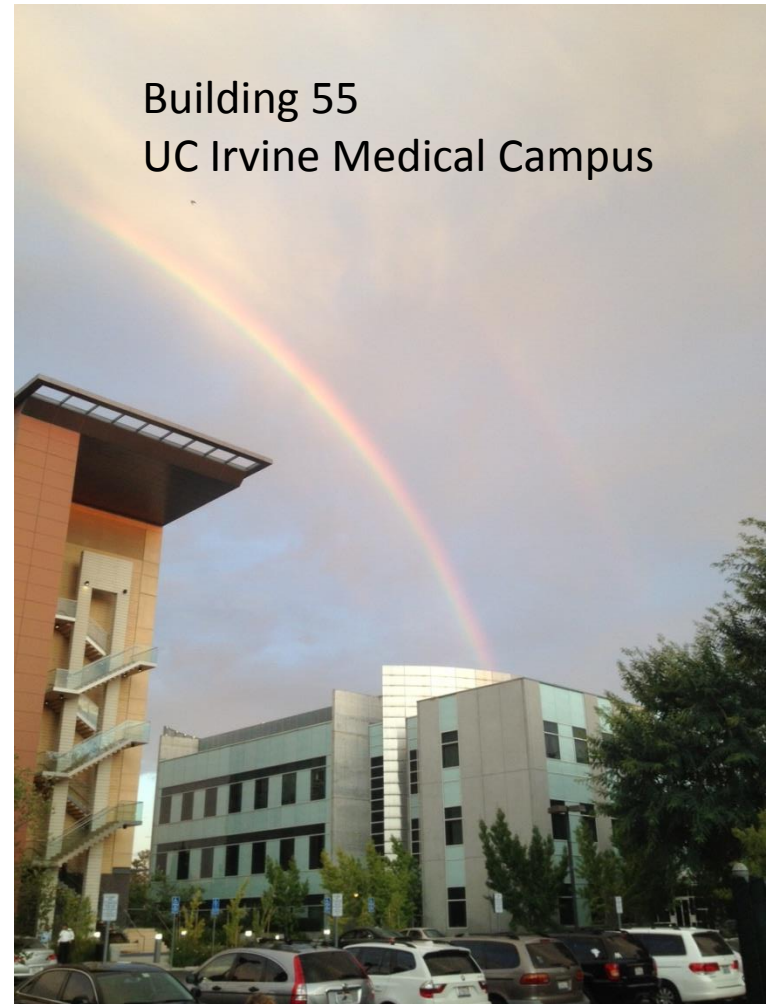
Industry

Nephrology

Pathology

Anatomy

Surgery



Building 55

UC Irvine Medical Campus

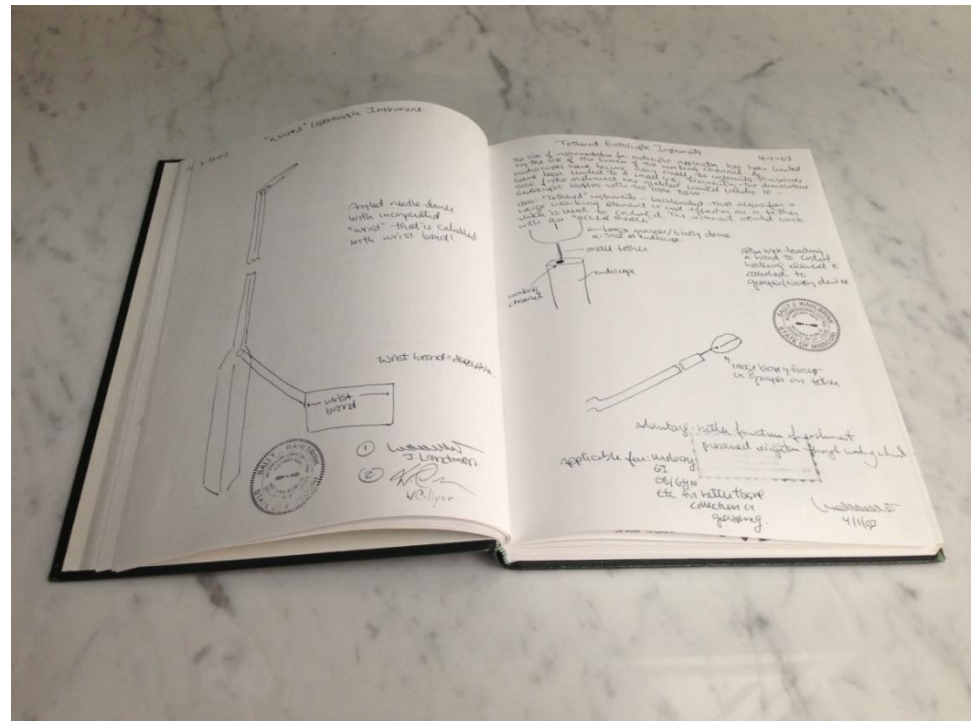
Document your ideas

Create a bound idea book with blank numbered pages

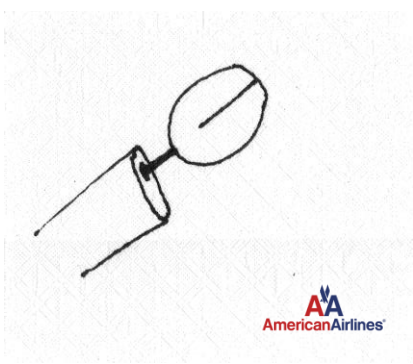
Document each idea with a date and signature

Notarize each idea

Having the book is in itself inspirational



Documenting your idea



Tethered Endoscopic Instruments. 4-1-03

The size of instrumentation for endoscopic application has been limited by the size of the lumen of the working channel. As endoscopes have become very small, the instruments themselves have been limited to a small size. Frequently, the diminutive size of the instrument has yielded limited utility. i.e. - endoscopic biopsies with too little tissue.

Idea: "Tethered" instruments - backloaded - that allow for a large working element or end effector on a tether which is used to control it. The instrument would work with an "access sheath".

← large grasper/biopsy device
i.e. size of endoscope.

small tether

endoscope

working channel

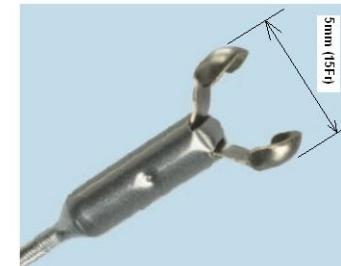
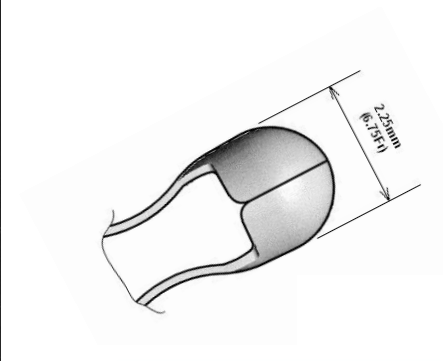
After high-loading a hand to control working element is attached to grasper/biopsy device

large biopsy forceps or grasper on tether

Advantages: better function of instrument
provened insertion through working channel.

applicable for: urology
GI
OB/GYN
etc. for better tissue collection or grasping.

(unlabeled)
4/1/03 31



Secret weapons

- Partnerships (friendships) based on trust!
- Partner with people you trust and who manifest only the highest degree of integrity
- Be fair in your expectations and thoughtful about sharing credit



Mr. Walter Ryan
Met at 20th WCE
2002

Document your ideas

Disclosure to the Office of Technology Alliances

Review each idea and determine if the University wishes to pursue or decline

Accepted intellectual property is evaluated for patent

Legal assistance to gain a patent is provided by the University

University assists the investigator to find an outlet for the IP (eg industry partner)

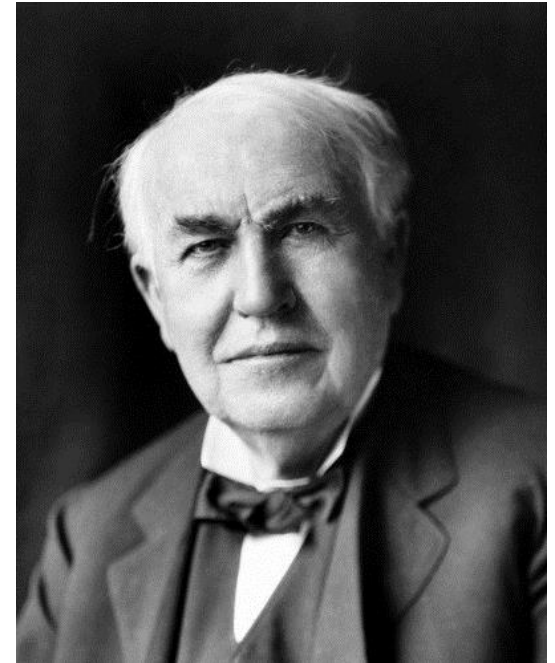
Confidence in your ideas

Your best ideas will elicit the most robust antagonistic response you can imagine

Currently working on a successful project that has been rejected by fine institutions (Washington University and Columbia University) who have a track record of “innovation”

Industry will similarly not always have vision to appreciate your ideas

Listen to the critics so you can learn their concerns, but have confidence and persistence in pursuing your innovative ideas



Whose idea is it?

Residents are considered paid employees and have signed a “patent acknowledgment.” IP is the property of the university just as with any faculty member

Work done outside the scope of residency responsibilities can be considered independent, but must have the Dean’s written approval

Revenues are divided:

35% inventor(s)

15% unit or department

50% Regents of the UC

Options for moving ideas forward

Licensing to an existing company

- Most standard approach
- Exclusive vs. non-exclusive
- Licensing fees and royalties generated
- More work done, higher expected gain

Startup Company

- University will still license the IP
- Similar fees but can be deferred/waived and can be negotiated for ownership
- University will want its investment back

Patent Sales

- Rarely done and only if no federal funding

What are realistic expectations for inventors?

- Understand process which is lengthy and unpredictable
 - 10 universities account for 60% of royalty income
 - At UC, .2% of disclosures account for 80% of revenues
- Low yield

