REDI Committee – Board of Regents
By Paul M. DeLuca, Jr. and Mark E. Cook
February 6, 2014
Paul DeLuca
Provost
Medical Physics

Mark Cook
Chair of D2P Advisory Board
Animal Sciences
UW-Madison’s research engine

- UW-Madison research expenditures=$1B
- UW discloses 350 inventions/year to WARF
- WARF applies for 200 patents per year
- WARF has over 50 new license agreements/year
- WARF will help spin out 5-7 new companies this year, impressive but....
- UW-Madison and WARF have identified a gap in technology transfer
$1 billion in research expenditures. Are we missing something?
SHINE Medical and Phoenix Nuclear Labs
SHINE Medical Technologies™ is dedicated to being the world leader in safe, clean, affordable production of medical tracers and cancer treatment elements.

Highest priority is safely delivering a highly reliable, high-quality supply of the medical ingredients required by nearly 100,000 patients each day.

Spun out of ideas developed at the University of Wisconsin—Madison.

Will create hundreds of jobs in Janesville, WI, solve a critical global problem facing the supply of vital medical radioisotopes.
Examples of Medical Isotope Scans

- Approximately 45 million procedures are performed with medical isotopes each year (> 1 every second)

Some examples

- Stress Test (Cardiac perfusion)
- Cancer Screening (Bone scans)
- Alzheimer’s disease
- Lung Perfusion
- Kidney Scan and Function
- Liver Scans
- Brain Perfusion
- Gall Bladder Function
- Thyroid Scans
- Salivary Gland Scans
- Meckel’s Scans
- Sentinel Lymph Node Localization
New Technology is Accelerator based: Dramatically improves safety, efficiency

- Accelerator generates only neutrons and stable helium
- Uranium target reusable; moly-99 separated after several days and target put back into system
- *Radioactive byproducts reduced by hundreds of times compared to other production methods*
Solid Progress to Market

• Technology: All elements demonstrated at full scale
• Regulatory: Major applications filed and accepted—first since 1961!
• Market: Existing suppliers raising prices, shortages persisting, supply agreements with major customers imminent
• Financing: $30 M spent on project so far, $150 M remaining to market
Inventor Initiated
D2P Shepherds
Scout, Connect, Incubation, Launch

Discovery to Product

Disclosure → Incubation Plan → Business → License → Startup → Funding → Marketplace

Weinert Center for Entrepreneurship
Wisconsin School of Business

Innovation Days
Wisconsin Alumni Research Foundation

Law & Entrepreneurship Clinic
University of Wisconsin-Madison

Merlin Mentors

Wisconsin Economic Development Corporation

UW ACE
Wisconsin MBA | Operations and Technology Management
Erdman Center for Operations and Technology Management (OTM)

ARF
Wisconsin Alumni Research Foundation

University Research Park
University of Wisconsin-Madison

G. Steven Burrill Business Plan Competition
Friday, May 2, 2014

Fostering Innovation Through Entrepreneurial Competition
D2P Structure

Target Areas – High Potential Technologies

- Physical Sciences/Engineering
- Agriculture
- Medical Devices
- Comp. Science/Info Tech
- Pharma
- Other Target areas

Discovery to Product

UW Madison

WARF
Mark E. Cook

Chair, D2P Advisory Board
Professor of Animal Sciences

Focuses on nutritional regulation of immune function
Founder of several companies, including Isomark, LLC.
Holds patents related to immunity, body mass and composition.
D2P Shepherding

$1B to UW

Lost

Innovations & Inventions

D2P "Scouts"

Weinert Center OTM

Angel / Venture Capital

EC

Legal

Connections

OCR

UW / ACE

Merlin Mentors

D2P Incubation

WARF License

WI Co License

Grad School

Research Support

Econ Devel

Start-Up

Angelo / Venture Capital

Success Accelerated

Developed by Brian Fox, Mark Cook, Joan Susko-Parrish
An Example of Use of Funds for Economic Development

**Development - 2 years**

- **Innovator**: $120 K
- **Research Support**: $100 K
- **Consulting**: $12 K
- **Research Space**: $5.4 K

**New Disclosures**

- **Potentials**: Investors
- **Identification**: Innovation
- **Commitment**: $64 K

**D2P Connections**

- **Marketing**
- **Legal**
- **Business**
- **Connection**

**D2P**

- **WARF Patent Portfolio**
- **D2P Innovation Portfolio**

**Potential Investors**

- **Business Education**: $20 K
- **Program Assistant**: $9.6 K
- **D2P + School of Business**: $7 K

**NuCo Launch**

- **University Research Park**
- **External Entrepreneurial Resources**

Developed by Brian Fox, Mark Cook, Joan Susko-Parrish
D2P Goal

• Enable UW-Madison/WARF to:
  – Create and grow IP
  • That benefits the world
    – Is valued by society
  » Creates new WI jobs
D2P’s Mission

I. Cultivate entrepreneurship

II. Secure intellectual property

III. Accelerate transfer of campus innovations

IV. Create a sense of urgency in tech transfer

V. Leverage internal and external resources

VI. Expand investment capital and entrepreneurial talent

VII. Improve UW-Madison/WARF’s 80+ year collaboration through a new joint venture
D2P expert team will:

• Champion innovation and IP protection
• Serve as “go-to” contact for technology commercialization
• Connect innovators to commercialization resources
• Act as trusted advisor to UW innovators
D2P Structure

Target Areas – High Potential Technologies
- Physical Sciences/Engineering
- Agriculture
- Medical Devices
- Comp. Science/Info Tech
- Pharma
- Other Target areas

Discovery to Product
D2P Leadership Understands

- Faculty want to be faculty
- Support is needed to mature an idea
- Advancement of technology must be seamless
- Additional activity must advantage the research laboratory
The D2P Approach

- Targeted technologies
- Collaborative engagement model
- Maximize leverage of existing resources
- Trusted advisor to guide the way
- “House Calls”
- Mentors-in-Residence
- Accounting skills to support pro-forma financials
- Public/Private partnership
Campus exit

- Executable business plan
- Channel through regulatory
- Path to revenue
- Assembled leadership team and board
- Immediate access to capital
- Attractive to venture funding
$2.4 Million provided to “IGNITE” new companies through D2P

Funds provided through the System Incentive Grant program. (Thank you!)
IMPACT on Wisconsin

• Economic development for the State of Wisconsin
  – New companies
  – New jobs
  – Better prepared workforce
  – Increased venture funding