Successful Training for Industry Careers

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Outline

- Preparing for Industry
- History of PICO
- How to setup a Consulting Group at your Institution
  - Structure
  - The PICO Experience
  - New clients acquisition
  - Application process
  - Finances
  - Legal considerations
  - Challenges
- Alumni and survey data
- Hands on consulting trial
PhD Skills

Critical Thinker  Agile
Professionalism  Empathy
Attention to Detail  Forward
Accountable  Commitment  Leadership
Operational  Efficient
Independent Thinker  Strategic  Excellence
Pursuit of Quality
Info  Positive Work Ethic
Problem Solver
Inclusivity  Awareness  Asymmetrical Thinker
Flexibility
Communication
Collaborative  Influence
Team-Building  Listener
Nice  Results Driven
Comfortable with Ambiguity  Continuous Improvement Mindset
Curious  Innovative Thinkers
Adaptability
Creative
Business Savvy  Medical Knowledge
Egoless  Strong  Global
Interpersonal
Commercialization Process

Discovery Research
- Target Identification
- Compound synthesis
- High throughput screening/robotics
- Structure Activity Relationships
- Biometrics
- Disease models
- ... omics
- Assay design
- Lead optimization

Business Disciplines
- Patenting
- Process development
- Formulation
- Prototyping
- Pharmacokinetics
- Toxicology
- Manufacturing
- Quality systems
- Compliance
- Project mgmt.
- Trial design
- IRB Management
- Site management and training
- Scientific writing
- Regulatory submissions
- Project mgmt.
- Production
- Quality mgmt.
- Supply chain
- Lab information systems
- Training
- Project mgmt.
- Regulatory
- Marketing & sales
- Technical support
- Scientific writing
- Scientific liaison
- Medical economics
- Business development
- Patents
- Licensing
- Planning
- General mgmt.
- Venture Capital
- Consulting
- Entrepreneurship
Pharma/Biotech Industry Careers
Learning Approaches

Passive
- Watch videos
- Read articles or books
- Attend seminars by industry scientists
- Do informational interviews

Active
- Attend skills workshop
- Job shadow
- Take a business course
- Get certified
- Internship/consulting experience
Lena Watanabe, postdoc on a mission

- Jan 2011 Fred Provorny, New Tech Enterprise
- April 2011 NU Business for Scientists
- May 2011 MCW Tech Transfer Internship
- May 2011 Idea of consulting with Milwaukee area companies
- May 2011 Meeting with biotech CEO
- June 2011 Draft flyers and applications
- July 2011 Recruit postdoc participants
- July 2011 Enlist two companies for pilot
- Aug 2011 Initial meetings with companies
PICO History

- **Initial pilot**
  - 2 companies with ties to MCW
  - 4 hand selected postdocs
  - 5-10 hrs/wk
  - Contract for meeting specific milestones
  - Nondisclosure agreements

- **Burroughs Wellcome Fund Grant**
  - Funded as of July 12, 2012
  - Expansion to 16 postdocs
  - Monthly meetings for peer learning
  - Invited speakers – finance, marketing, etc
  - Travel to bioscience business meetings (BIO, AUTM)
  - Access to competitive intelligence platform
PICO Experience (hrs/mo)

- Consulting: 20 hrs
- Educational Workshop: 2 hrs
- Business Meeting: 2 hrs
- Networking: 1 hr
Consulting: Process

Vet Project (1-2hrs) → Introductions (1-2hrs) → 1st Meeting (1-2hrs)

Follow Up Survey (e-mail) ← Final Deliverable (1-2hrs) ← Project Execution (2-3mos)
## Consulting: Projects

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<td>Business plan</td>
<td>Co. or product valuation</td>
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<td>Regulatory affairs</td>
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<td>Competitive intelligence</td>
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Educational Workshops

- Topics reflect needs
- All can plan
- Budget (or no)

IP/licensing Consulting
SBIR
Business plans
Project Management
Regulatory affairs
Venture capital
DiSC
Market Analysis
Business Meeting
Networking

• Partner with local industry advocacy groups
  • BIOnet event
  • Technology office
• Attend conferences (AUTM, BIO, BIOForward)

Our business card
New Client Acquisition

• >40 companies
• Meet at networking events
PICO structure

Manager & Faculty Advisor → Senior Consultant → Junior Consultant
Application & Onboarding

- Set parameters
  - **PDs**: Min # of yrs as PD?
  - **GS**: GPA min, outline approved, shadowing only, 3/4th yr
  - Get PI’s approval
- Get buy in (chairs, faculty, councils)
- Be critical (application/interview)
- Orientation
- Training & support
  - Shared folder with resources
  - Learn from each other
Biggest Challenges

• Faculty buy-in (survey)
• Group continuity/turn over
• Finding clients
• Recruiting speakers
• Finances (funding, fees?)
PICO alumni employed nationally
PICO alumni survey (n=25)

Was your PI OK with you joining PICO?

- Yes
- No

*QUOTES:*
- PI was open to the idea of additional career advancement opportunities.
- Concerned about it taking time away from lab work.

Did PICO distract you from your research?

- Yes
- No

*QUOTES:*
- At times it was tough...good practice for the world outside of academia, which is fast paced & deadline driven.
- Actually it was the other way around. The engagement in my work improved...it lessened my bench burnout.
PICO alumni survey (n=25)

Did PICO make a positive contribution to your professional development

**QUOTES:**
- I would not be in the job I am today without PICO.
- Forced me to get outside of my comfort zone.
- PICO was 100% responsible for me finding my current career path.

Will you encourage other postdocs to join PICO?

**QUOTES:**
- The skills developed in PICO are applicable to every professional career.
- With academic researchers, it is especially important to get out of the lab and learn how scientific discoveries are developed into products.
Consulting case study

- Strong magnetic fields used to form images of the body.
- **Problems:**
  - Requires several ton magnet
  - Not transportable
  - Expensive ($1.5M)
  - Produces high magnetic fields
  - Use confined to large hospitals or mobile trailers

Traditional MRI - Magnetic Resonance Imaging
Helmet MRI, LLC has hired you:

• Who is their market?

• Which market should they enter 1st? Why?

• What resources would you use to gather information?
Case Study

• Who is their market?
  • Resource-poor environments
  • Battlefield hospitals
  • Rural locations
  • Sports events
  • Natural disasters
  • Bedside
  • Doctor’s office
  • Ambulance
  • ICU

• Which market should they enter 1st? Why?
  • Who can/will buy your product?
  • Value propositions?

• What resources would you use to gather information?
  • Conduct surveys
  • Google patents-website
Many consulting groups!

Industry Exploration Program (IEP) is brought to you by MassBioEd

Let’s get together at the next networking break: 10-10:30, Terrace Room