Building Biotech Startups:
You too can be an entrepreneur

Jun Axup, PhD
Scientific Director & Partner

INDIE BIO
Entrepreneurship
BIOTECH STATUS QUO

• VC TAKES OWNERSHIP IN FIRST ROUND
• DRAG-N-DROP EXEC TEAM
• THERAPEUTICS PLAYBOOK
A UNIQUE OPPORTUNITY IN HISTORY IS NOW

“POSTDOCALYPSE”
DRIVEN BY GLUT OF TALENTED POST-DOCS WITHOUT GREAT JOB OPPORTUNITIES

FASTER SCIENCE
DRIVEN BY BIOINFORMATICS, DNA SEQUENCING/WRITING AND MOORE’S LAW

CHEAPER SCIENCE
DRIVEN BY LOWER COST EXPERIMENTS & CROS

Worldwide PhDs Granted Annually

Number of biotechnology patents filed under PCT, 1977-2009
PRE-SEED INVESTMENT GAP

Total $ Available

SBIR - Academia
250k

Series Seed
2-3M

Series A
5m-40m

BIOTECH FUNDING GAP
INDIEBIO HELPS SCIENTISTS BECOME ENTREPRENEURS.

WE DO THIS THROUGH A FOUR MONTH ACCELERATOR PROGRAM.

WE GIVE COMPANIES MENTORSHIP AND CASH FOR EQUITY.
REJECTED CONVENTIONAL THOUGHT:

1. FUNDING BIOTECH MUST BE EXPENSIVE
2. SCIENTISTS ARE NOT ENTREPRENEURS
3. BIOLOGY = THERAPEUTICS
THEORY TO PRACTICE
REPEATABLE AND SCALABLE PROGRAM FOR DESIGNING SCIENCE
FINDING WINNERS AND CREATING WINNERS

THE INDIEBIO ECOSYSTEM

Just entry into program a de-risking event

We pre-match incoming teams to syndicates of investors and corporate customers to create winners before the program starts

More than 100 investors on our cap-tables

Series A
VCs and Corporate customers

IndieBio Accelerator Program

PhDs, Post-docs, scientists, entrepreneurs

Referrals from Alumni, Mentors, Academic, Gov't and Industry
INDIEBIO LAB SPACE

- 7000 Sq Ft
- BSL 1 and 2
- World class equipment
- Full time staff to help maintain stock and equipment
DEMO DAY

- 800 live audience, 400 investors
- Livestreamed by TechCrunch to thousands of viewers online
- Industry level event
81 COMPANIES FUNDED TO DATE
50% of the all companies come to IndieBio with just an idea
87% of those leave the program with a viable prototype or business

Shift in Company Development Stage:
EARLY RESULTS

$120+ million raised
$600+ million market cap
400+ biotech jobs created
70% receive funding
Qualitative Measures

The People Behind these numbers

- 30+ countries represented
- Over 40% of our companies have female founders
- Founders range from 18 - 65 years young
- 90%+ of the teams have at least one Phd or Post-doc
- The **IndieBio network** of hundreds of mentors across industry, research, design, venture capital, and entrepreneurship
Biology as Technology
WALL BETWEEN ACADEMIA & INDUSTRY
<table>
<thead>
<tr>
<th>PROFESSOR</th>
<th>STARTUP</th>
<th>INDUSTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Independence</td>
<td>Scientific Independence</td>
<td>Little Independence</td>
</tr>
<tr>
<td>Lead Group</td>
<td>Lead Group</td>
<td>Under Management</td>
</tr>
<tr>
<td>Little Peer Interaction</td>
<td>Lots of Peer Interaction</td>
<td>Lots of Peer Interaction</td>
</tr>
<tr>
<td>Competitive Grants</td>
<td>Funded by Investors</td>
<td>Funded by Business</td>
</tr>
<tr>
<td>See Impact</td>
<td>See Impact</td>
<td>Difficult to See Impact</td>
</tr>
<tr>
<td>$ -&gt; $$</td>
<td>$ -&gt; $$ $$ $$</td>
<td>$$</td>
</tr>
<tr>
<td>Bad Work-Life</td>
<td>Bad Work-Life</td>
<td>Good Work-Life</td>
</tr>
</tbody>
</table>
### Transferable Skills
- Build & test hypotheses
- Problem solving/critical thinking
- Versatile & quick-learning
- Resourceful
- Persistence

### Startup Skills
- Leadership & teamwork
- Persuasion & selling
- Communication
- Product-driven thinking
- Passion

**Can Be Learned**
Oral Gene Therapy for FAP
How to Build a VC-backed Biotech Company
VENTURE-BACKED

Need capital to develop/scale product
Trading ownership of company for $
Promise of making large profits

NOT VENTURE-BACKED

Already have product/service
Retain ownership of company
Already can make profit
4 QUESTIONS:

1. What is the technical insight that gives you unfair advantage?
2. How is the insight made into a product?
3. How does the product form a sustainable business?
4. How can this business touch the lives of >1 billion people?
TEAM: Scientist + Hustler

Leadership & teamwork
Communication
Shared Values
Culture & Norms
Passion
BUILDING A PRODUCT:

1. Start with the problem, not the solution
2. Understand the customer
3. Build minimal viable product & ship
4. Iterate with customer feedback
5. Repeat
BUILDING A BUSINESS:

- **Assessment Kit**
  - $89 (60% margin)

- **Health Tracking App & Database**

- **Next Gen Probiotics**

- **Bacterial STRAINS**

- **Pet Food**

*AnimalBiome*
GROWING A BUSINESS:
5 LESSONS FROM DESIGNING SCIENCE
1. FOCUS ON THE PROBLEM NOT YOUR SOLUTION
2. LEARN FROM YOUR CUSTOMER
3. PRODUCT-DRIVEN DISCOVERY
4. DELIVER VALUE TO THE RIGHT PLAYER
5. PRODUCTIZING SCIENCE
How to Start

1) Have an Idea
2) Do Your Homework
3) Build an A+++ Team
4) Build a Product Prototype
5) Soul-Searching