Starting Something That Matters

Big Bang! Workshop
Joe DiNunzio
## Big Bang! Sponsors

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- School of Medicine
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- Blackstone
- LaunchPad
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### Overall
- AgStart
- HM • Clause
- Inventopia
- UC Davis College of Engineering

*Pam Marrone & Mick Rogers*
Think. Do. Discover.
Speaker Series

A conversation with author, advocate, and corporate leader, Jim Fielding

November 7 | 5-6:30 p.m.
UC Davis Conference Center
Join Our Network!

Explore our Linktree

Join us on LinkedIn
#STARTING_SOMETHING_THAT_MATTERS
Join by Web

1. Go to PollEv.com
2. Enter ucdavis
3. Respond to activity

Join by App
What innovation has had the biggest impact on your life?

Nobody has responded yet.

Hang tight! Responses are coming in.
Why would someone want to start a new venture?

Nobody has responded yet.

Hang tight! Responses are coming in.
What value (single word) is at the heart of the reason to start a new venture?

Nobody has responded yet.

Hang tight! Responses are coming in.
The best idea in the world.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 BC</td>
<td>Chinese remedies include fungi for treatment of infections (similar remedies in India, America, Europe)</td>
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<tr>
<td>1870’s</td>
<td>European scientists including Lister, Tyndall, Pasteur, Joubert find penicillin molds inhibit bacterial growth.</td>
</tr>
<tr>
<td>1897</td>
<td>French doctoral student Ernest Duschenes discovers <em>Penicillium glaucum</em> kills e. coli bacteria and typhoid bacilli.</td>
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<tr>
<td>1927</td>
<td>Clodomiro Twight, Costa Rican doctor, publishes his use of penicillium on patients with staphylococcus.</td>
</tr>
<tr>
<td>1939</td>
<td>Howard Florey and team at Oxford begins investigating therapeutic potential of penicillin.</td>
</tr>
<tr>
<td>1941</td>
<td>Oxford’s first human trials prove penicillin’s value. By year’s end, commercial development begins in U.S.</td>
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</tbody>
</table>
Fig. 1. Penicillin production in the United States. Triangles represent monthly production in billions of Oxford units, circles represent monthly production in billions, and legends relate these to Florey’s visit and to the events which followed.
Why did Florey succeed when others did not?
It’s not about the idea
2

The network is the innovation
The idea of penicillin was as an antibiotic.

The reality of penicillin was a new configuration of ideas, people, organizations, technologies, policies, and other resources that enabled and constituted penicillin.
It’s about commitment
Can we make it?
Is it stable enough to study?
Will it work (is it non-toxic and effective)?
Can we make enough to test?
Can someone (profitably) produce it at scale?
Will someone else synthesize it?
“[I felt like] a carpet bag salesman trying to promote a crazy idea for some ulterior motive.”

— Howard Florey

I’ve never spent so much of my time trying to convince people to do the right thing for themselves.”

— Steve Jobs
But it’s worth it.
#AGGIE_INNOVATORS
Origin Materials: John Bissell, Ryan Smith

Case Study: Narrative

- Undergraduates John Bissell & Ryan Smith sought to disrupt the PET market with a non-petroleum-based bioplastic.
- Leveraged an undergraduate project, an environmental grant, and faculty relationships to develop initial technology and plan.
- Invested in building their network, acquired key knowledge & capabilities, and followed escalating commitment to go from POC to scale plant.
Origin Materials: John Bissell, Ryan Smith

Case Study: Lessons Learned

- Manage uncertainty and build commitment throughout
- Embrace a Network Growth Mindset to acquire needed / missing capabilities
- Use progressive validation from lab (basic science) to pilot (manufacturability) to plan (pathway to scale)

originmaterials.com
Case Study: Narrative

- Faculty and student researchers discovered the relationship between mother’s milk / HMO’s, the bacterium B. Infantis, and infant health.
- Faced numerous challenges to move from research to an efficacy proof point to a viable business enterprise.
- Driven by vision and mission of wanting to “save babies.”
Case Study: Lessons Learned

- Hard things are hard
- Passion and purpose provide inspiration and focus in challenging times
- Moving from research to product to business requires milestone-driven stages with appropriate new personnel / capabilities

infinanthealth.com
Undergraduate DeVan leveraged deep industry knowledge to solve a key unmet need in the construction industry.

Partnered with fellow alum Pedersen to develop and evolve technology, recruit core capabilities, test and evolve product.

Developed core values and guiding principles to inform key decisions in strategy and personnel.
Case Study: Lessons Learned

- Develop a clear vision and path for the company.
- Make market-informed and market-focused decisions.
- Use guiding principles to focus on how best to build the team and serve customers.
Case Study: Narrative

- Twin undergraduate brothers personally dissatisfied with options in the “nutritional convenience” food space.
- From their apartment kitchen, formulated a healthy instant ramen recipe and decided to produce and market it.
- Used Kickstarter to validate and launch their product, guided by a set of core product and management values.
Vite Ramen: Tim Zhang, Tom Zhang

Case Study: Lessons Learned

- Leverage personal experience and observation to identify an opportunity.
- Progressively build commitment by identifying and testing key assumptions.
- Demonstrate agility in the face of new information / adversity.

viteramen.com
#YOUR_HERO’S_JOURNEY
What are you planning to start?

Nobody has responded yet.

Hang tight! Responses are coming in.
Why are you pursuing your idea?

Nobody has responded yet.

Hang tight! Responses are coming in.
What (one word) captures your thoughts on moving forward?

Nobody has responded yet.

Hang tight! Responses are coming in.
Path Forward: Questions

- What are your goal(s)?
- What is your process for moving ahead?
- Whose counsel will you seek?
- What capabilities do you need to build / acquire?
- How will you grow your network?

*Time to get started!!!*
Questions!
SUPPLEMENT: NETWORK GROWTH MINDSET
Carol Dweck: Mindset

Fixed Mindset:
Talent is a fixed trait.

Growth Mindset:
Talent is a malleable quality; a potential that can be developed.

Learn more: Carol Dweck at Google Video  "Not yet" Video
## Mindset “Rules”

<table>
<thead>
<tr>
<th>Fixed Mindset Rules</th>
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<tbody>
<tr>
<td>1. Look talented at all costs.</td>
</tr>
<tr>
<td>2. It should come naturally.</td>
</tr>
<tr>
<td>3. Hide mistakes and deficiencies.</td>
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<table>
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<th>Growth Mindset Rules</th>
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<tr>
<td>1. Learn at all costs.</td>
</tr>
<tr>
<td>2. Work hard: effort is key.</td>
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<td>3. Capitalize on mistakes; confront deficiencies.</td>
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Individual Growth Mindset

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<td>How can I get good at this?</td>
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Individual
## Network Growth Mindset

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<td>Am I good at this (or not)?</td>
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<tr>
<td>Is my network good at this?</td>
<td>How can I get a network that is good at this?</td>
<td></td>
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</table>
You

You are here
You are Your Network
Network Development

- Understand the key connections and relationships that are important to help your professional development – now and in the future

- Identify specific steps you can (and will!) take to expand, strengthen, and extend your network, and make the time and effort to invest in them

- Apply a growth mindset not only to your individual development efforts but to building and evolving your network