Welcome

Andy Maas, Project Manager
University of Akron Research Foundation
Agenda

11:00 am  Lunch
12:00 pm – 12:05 pm  Welcome
12:05 pm – 12:25 pm  NSF I-Corps Sites Introduction & Overview
12:25 pm – 1:10 pm  Basics of Intellectual Property Application: Prior Art Searching Intellectual Property Q&A
1:10 pm – 1:25 pm  Business Model Canvas Basics
1:25 pm – 1:35 pm  Course Logistics & Budgets
1:35 pm – 1:50 pm  Team Elevator Pitches
1:50 pm – 2:00 pm  Wrap-Up
Introduction to I-Corps Sites

Andy Maas, Project Manager
University of Akron Research Foundation
National Science Foundation’s I-Corps Program

- I-Corps Sites
  - Four nationally (UCSD, UIUC, Akron, Toledo)
  - Pipeline to I-Corps Teams
  - High level market analysis to solve market pain points
  - 7-week program weekly time commitment: ~5 hour
  - $2,500 to help your team in the process

- I-Corps Teams
  - Six training locations nationally
  - Increases SBIR/STTR success
  - 8-week program, 3 full days on site, weekly time commitment: ~10-15 hours, then 2 full days on site
  - $50,000 to help your team in the process
National Science Foundation’s I-Corps Program

Make a go/no-go decision on pursuing commercialization!
# Lean Launchpad

## Key Partners
- Who are our key partners?
- Who are our key suppliers?
- Which key resources are we acquiring from partners?
- Which key activities do partners perform?

## Key Activities
- What key activities do our Value Propositions require?
- Our Distribution Channels?
- Customer Relationships?
- Revenue Streams?

## Value Propositions
- What value do we deliver to the customer?
- What are our customers' problems we are helping to solve?
- What is the bundle of products and services we are offering to each Customer Segment?
- Which customer needs are we satisfying?

## Customer Relationships
- What type of relationship does each of our Customer Segments expect to establish and maintain with them?
- How are they established?
- How are they maintained?
- How are they ended?

## Customer Segments
- For whom are we creating value?
- Who are our most important customers?

## Key Resources
- What key Resources do our Value Propositions require?
- Our Distribution Channels?
- Customer Relationships?
- Revenue Streams?

## Channels
- Through which Channels do our Customer Segments expect to be reached?
- How are we reaching them now?
- How are our Channels integrated?
- Which are our most cost-effective?
- How are we integrating them with our customers?

## Cost Structure
- What are the most important costs in our business model?
- Which key activities are most expensive?
- Which key Resources are most expensive?

## Revenue Streams
- For what value are our customers really willing to pay?
- How do they currently pay for it?
- How much does each Revenue Stream contribute to overall revenues?

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*The University of Akron | CORPS-
NSF Innovation Corps*

UA NSF I-Corps Sites Program: Week One
Course Overview

Barry Rosenbaum, Senior Fellow
University of Akron Research Foundation
Basics of Intellectual Property & UA’s Patent Process

Elyse Ball, Assistant Counsel
University of Akron Research Foundation
Types of Intellectual Property

- Patents
- Copyrights
- Trademarks
- Trade secrets
- Others
Patents

- For inventions
- Cover novel, useful and nonobvious ideas for processes, machines, manufactures, compositions of matter or improvements
- Exclusive right to prevent others from making, using, selling, offering for sale or importing the invention
- Owned by inventor or his/her assignee
- Duration – 20 years
Copyrights

- For works of art or authorship
- Cover original expression like art, music, writings, sculpture, software, designs
- Exclusive right to reproduce, perform, display, distribute copies or make derivative works
- Owned by the author or his/her assignee
- Duration – life of author plus 70 years
Trademarks

- For brands and logos
- Cover a name, symbol, picture, sound or smell associated with a company, product or concept
- Exclusive right to use in commerce
- Owned by company the mark is associated with
- Duration – indefinite
Trade Secrets

- Know-how = knowledge and information
- For know-how that has economic value and is kept secret through reasonable precautions
- Right to sue others if they use illegal or outrageous means to acquire the secret
- Owned by the secret keeper (company or individual)
- Duration – indefinite
# Summary of IP Types

<table>
<thead>
<tr>
<th></th>
<th>Patents</th>
<th>Copyrights</th>
<th>Trademarks</th>
<th>Trade Secrets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quick Description</strong></td>
<td>Inventions</td>
<td>“Art”</td>
<td>Brands/logos</td>
<td>Know-how</td>
</tr>
<tr>
<td><strong>Default Owner</strong></td>
<td>Inventor</td>
<td>Author</td>
<td>Originator</td>
<td>Originator</td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>Prevent others from making, using, selling, offering for sale or importing</td>
<td>Right to reproduce, perform, display, distribute or make derivative works</td>
<td>Right to use in commerce</td>
<td>Right to sue others if they use illegal or outrageous means to acquire</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>20 years from filing</td>
<td>Life of author plus 70 years</td>
<td>Potentially indefinite</td>
<td>Potentially indefinite</td>
</tr>
<tr>
<td><strong>Cost to File</strong></td>
<td>Several thousand dollars</td>
<td>$35</td>
<td>$350+</td>
<td>No filing</td>
</tr>
</tbody>
</table>

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UA NSF I-Corps Sites Program: Week One
Other Types of IP

- Plant Variety Protection
- Industrial Design Rights
- Moral Rights
- Geographic Indications
- Mask Works
- Data Base Rights
What is Patentable?

1. Patentable Subject Matter
2. Novel
3. Useful
4. Nonobvious
Three Classes of Patents

- Utility patents
- Design patents – purely aesthetic creations, like a Coca-Cola bottle
- Plant patents – asexually reproduced plants
Requirements of Utility Patents

U.S. Code Section 101

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
Statutory Classes

- Processes or methods
- Machines
- Manufactures
- Compositions of matter
- Improvements of the above
The following are *not* patentable:

- Laws of nature
- Products of nature
- Scientific principles or theories
- Abstract ideas
- Mathematical algorithms or formulae
- Illegal objects
- Purely aesthetic creations
- By federal law, materials for atomic weapons
The First Law of Inventing

\[ I = U + N + N' \]

\begin{align*}
I &= \text{invention} \\
U &= \text{utility} \\
N &= \text{novelty} \\
N' &= \text{nonobviousness}
\end{align*}
Requirement 1: Utility

- Statement on “how to use” the invention
- Use cannot be
  - Frivolous, e.g. expensive transgenic mouse for use as snake food
  - Illegal, e.g. computer program that can only be used as a virus
- Easy standard to meet
Requirement 2: Novelty

- No “prior art” disclosing the same invention
  - Printed publications, e.g. journal article or advertisement
  - Filed patent application
  - Public knowledge, widely known
  - Public use, e.g. a demonstration
  - Prior sale or offer for sale

- Your disclosures can serve as prior art
  - Can share inventions with others that have signed Non-Disclosure Agreements
  - “One-year rule” – U.S. patents only!
Requirement 3: Nonobviousness

- Obvious in light of any combination of prior art
- PHOSITA – person having ordinary skill in the art
  - Knows all prior art references
  - Typical educational level and skill for field
  - “Ordinary creativity”
Non-Disclosure Agreements

- Document in which signer legally agrees not to disclose specific information
- Protects against
  - Another group using your idea
  - Legal bar to foreign patent protection
  - New development during an ongoing research relationship
- Stamping a document “confidential” does not have the same effect
Summary of Patentability Requirements

THE FIRST LAW OF INVENTING

\[ I = U + N + U' \]
Filing Status

- **Disclosure**
  - Process internal to your institution
  - Does NOT award any patent protection

- **Provisional**
  - Filed to establish priority date
  - Non-provisional patent must be filed within 1 year

- **Pending**
  - Awaiting action by you or the Patent Office
  - Cannot be enforced until it issues

- **Published**
  - In the official register of a Patent Office
  - A type of pending patent
Filing Status

- **Issued**
  - Has been examined by the Patent Office and found to be patentable
  - Can be enforced in a court of law

- **Abandoned**
  - Fee was not paid, so patent protection has been lost

- **Expired**
  - Patent period is ended, usually 20 years from date of filing
Who is an Inventor?

- Inventors – legal definition
  - Must contribute to invention – conception of a concrete idea of what the invention is
  - **Not** reduction to practice – everything that follows invention; anything that could be accomplished by a PHOSITA

- Not the same as a co-author

- Can share royalties with contributors even if they are not co-inventors
Parts of a Patent Application

- **Cover page**
- **Specification**
  - Description of how to make or use invention
  - “Embodiments” – examples of how the invention can be made or used
- **Claims**
  - Set the boundaries of what constitutes your invention
Foreign Patents

International Patent Cooperation Treaty

- No such thing as an international patent
- Patent Cooperation Treaty (PCT) – 143 countries
  - First step only
  - Must file national phase for each country within 30 months

Distinctive features of U.S. patent law

- Switch from first-to-invent to first-inventor-to-file system – same as other countries
- One-year rule
The Bayh-Dole Act (1980)

Universities own inventions made with federal research money in their labs

- Promotes commercialization of research
- Encourages university-industry collaboration
Results of Bayh-Dole

- 4,284 new licenses
- 657 new commercial products
- 651 new companies
- $1 billion in licensing revenue
- Examples – Gatorade®, synthetic penicillin, laser surgery, Alegra®, avian flu vaccine

UA’s Patent Process

**Disclosure**
- Disclosure of Invention Form lists key info needed by TTO
  - Description of invention
  - Inventors
  - Dates of invention and disclosure

**Provisional**
- Must work with TTO to provide
  - Detailed description of invention
  - Finalized list of inventors
  - Sample claims

**Non-Provisional**
- Decision to file is based on
  - Development of technology
  - Interested licensees or sponsors
  - Overall commercial potential
A Few Notes about UA’s Process

- Filing a Disclosure of Invention does not automatically provide protection
- Provide a double-check by putting key filing dates in your calendar
- Your involvement is critical!
Conducting a Prior Art Search
Patentability v. Freedom to Operate

- Patentable – your invention meets the requirements of usefulness, novelty and non-obviousness

- Freedom to operate – your ability to use your patent is not prevented by:
  - Another patent
  - Government regulations
  - Contracts
Sources of Prior Art

- Printed publications
- Patents and patent applications
- Public knowledge
- Public use
- Prior sale or offer for sale
How to Perform a Patentability Search

The Goal:

1. Identify patents and publications that cover inventions **SIMILAR** to what you are seeking to patent

2. Specifically identify how your invention is **DIFFERENT** than inventions that exist to date
Tips to Find Similar Patents

1. Search Google Patents for keywords that describe your invention
2. Identify patent titles and abstracts that seem relevant
3. Focus your search by using the “Referenced By” and “Patent Citations” links within relevant patents
Sample Patentability Search

**Hypothetical:** Dann builds a golf training device in his basement that rests in his armpit and attaches to a putter.

**Issue:** Can Dann obtain a patent on his device?
Sample Patentability Search

Search various **keywords** within Google Patents and scroll to find relevant inventions!
Sample Patentability Search

Golf putting aid and brace member therefor
US 6533676 B1

ABSTRACT

An improved golf putter is provided with an upper brace member portion extending above the grip of the putter. The upper brace member portion has a lower arm brace, an upper arm brace and an anchor that are all oriented to follow the underside of a golfer's forward arm from the wrists to the armpit to brace the golfer's arm in a triangulated position in order that the golfer may utilize a pendular stroke.

IMAGES (12)

After finding a relevant patent, focus your search by clicking the “Patent Citations” and “Referenced By” links

External Links: USPTO, USPTO Assignment, Espacenet
Sample Patentability Search

**PATENT CITATIONS**

<table>
<thead>
<tr>
<th>Cited Patent</th>
<th>Filing date</th>
<th>Publication date</th>
<th>Applicant</th>
<th>Title</th>
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<tbody>
<tr>
<td>US4880240</td>
<td>Sep 22, 1988</td>
<td>Nov 14, 1989</td>
<td>Lewis John F</td>
<td>Putting practice device</td>
</tr>
<tr>
<td>US5308071</td>
<td>Dec 9, 1992</td>
<td>May 3, 1994</td>
<td>Lewis John F</td>
<td>Apparatus for improving a golfer's putting stroke</td>
</tr>
<tr>
<td>US5328185</td>
<td>Jan 29, 1993</td>
<td>Jul 12, 1994</td>
<td>Finnigan Harry J</td>
<td>Golf putter</td>
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<tr>
<td>US5465971 *</td>
<td>Nov 7, 1994</td>
<td>Nov 14, 1995</td>
<td>Tischler; Edward A.</td>
<td>Putting training device</td>
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<tr>
<td>US5520392</td>
<td>Mar 16, 1995</td>
<td>May 28, 1996</td>
<td>Foresi; Anthony</td>
<td>Golf training device for teaching pendulum-type putting swing</td>
</tr>
<tr>
<td>US5613970 *</td>
<td>May 10, 1996</td>
<td>Jul 22, 1997</td>
<td>Harrison; Alden J.</td>
<td>Elongated golf club putter</td>
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<tr>
<td>US5662203 *</td>
<td>Dec 8, 1994</td>
<td>Mar 31, 1998</td>
<td>Middleton; Nicholas</td>
<td>Golf club</td>
</tr>
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</table>

* Cited by examiner

**NON-PATENT CITATIONS**


**REFERENCED BY**

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<th>Citing Patent</th>
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<th>Publication date</th>
<th>Applicant</th>
<th>Title</th>
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<tr>
<td>US6659880 *</td>
<td>Jan 10, 2003</td>
<td>Dec 9, 2003</td>
<td>Fu-Hu Hsieh</td>
<td>Linear putter device of a golf club</td>
</tr>
<tr>
<td>US6939243 *</td>
<td>Dec 12, 2003</td>
<td>Sep 6, 2005</td>
<td>The Perfect Link, Inc.</td>
<td>Golf putting and chipping training devices</td>
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</table>
Sample Patentability Search

Golf training device for teaching pendulum-type putting swing
US 5520392 A

ABSTRACT

A lightweight, convenient training device includes a rigid, elongated member having first and second ends, and a clamping mechanism used to adjustably then rigidly secure the member at its first end to a golf club, including a putter, preferably to the shaft at a point just below the hand grip. So positioned, the second end of the member may then be comfortably positioned in the user's armpit to stabilize the swing, with the adjustability of the clamping mechanism ensuring compliance with various grip styles and lie angles. In the preferred embodiment, the elongated member includes a bend near the first end to prevent adjusting the elongated member along two degrees of freedom with respect to the grip alignment therewith to ease transportation, and a stop may be optionally provided so relative to the club for use.

IMAGES (4)
How to Perform a Patentability Search

- Remember: Any reference can serve as a bar to obtaining a patent.
- If your invention is not described in a patent, you still must search additional publications (e.g., scholarly journals) to determine if your invention is patentable!
## Sample IP Form

**UA NSF I-Corps Sites Team:** F13-009 – Osteoporosis Flowthrough Analysis  
**Entrepreneurial Lead:** Jonathan King  
**Mentor:** Dominic Frisina  
**Academic Lead:** Marnie Saunders

### Provisional Application Status
- [x] Provisional Application
- [ ] Non-Provisional Application
- [ ] International Application
- [ ] Office Action

<table>
<thead>
<tr>
<th>Document Title:</th>
<th>Application of surface biopassivated disposable PDMS/Glass chips to run a heterogeneous competitive human serum</th>
</tr>
</thead>
</table>
| Author:         | Vincent Linder, et al  
**Citation:** Electrophoresis 2002, 23, 740–749  
**Brief description and how your invention differs:** This device differs from ours in the sense that it detects a different antibody and disease in a different fluid from ours. It also is made of PDMS on a glass slide while our main microfluidics are located between two pieces of PDMS. This device also differs in the fact that it is driven by electrokinesis while ours is driven by pressure differences.

<table>
<thead>
<tr>
<th>Document Title:</th>
<th>Direct Assessment of Relative Concentrations of Variants…</th>
</tr>
</thead>
</table>
| Author:         | Naser  
**Citation:** WO2002008722A2  
**Brief description and how your invention differs:** Naser discloses and claims a method and device for measuring the ratio of variants of an epitope on an analyte molecule using immunochemical methods. Naser specifically discusses its use in detecting osteoporosis in connection with CTX and NTX. More detailed analysis of this reference is necessary.
Question & Answer
Business Model Canvas Basics

Andy Maas, Project Manager
University of Akron Research Foundation
Business Model Canvas Basics

1. Using the business model canvas
2. Value proposition
3. Customer segments
# Business Model Canvas

## Key Partners
- Who are our Key Partners?
- Who are our key suppliers?
- Which key resources are we applying from partners?
- Which key Activities do partners perform?

## Key Activities
- What key Activities do our Value Propositions require?
- Our Distribution Channels?
- Our Customer Relationships?
- Our Revenue Streams?

## Value Propositions
- What value do we deliver to the customer?
- What are our customers problems or challenges you are helping to solve?
- What factors of our products or services are we selling?
- Which customer needs are we satisfying?

## Customer Relationships
- What type of relationship does each of our Customer Segments expect to establish and maintain with them?
- Which ones are we satisfied with?
- How do they interact with the rest of our business model?
- How costly are they?

## Customer Segments
- For whom are we creating value?
- Who are our most important customers?

## Key Resources
- What key Resources do our Value Propositions require?
- Our Distribution Channels?
- Our Customer Relationships?
- Our Revenue Streams?

## Channels
- Through which Channels do our Customer Segments want to be reached?
- How are we reaching them now?
- How are our Channels integrated?
- Which ones work best?
- Which ones are most cost-efficient?
- How are we integrating them with customer outcomes?

## Revenue Streams
- For what value are our customers really willing to pay?
- How do they currently pay?
- How much does each Revenue Stream contribute to overall revenue?

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**The University of Akron**

**CORPS NSF Innovation Corps**

UA NSF I-Corps Sites Program: Week Two
## Business Model Canvas

<table>
<thead>
<tr>
<th>Value Propositions</th>
<th>Customer Relationships</th>
<th>Customer Segments</th>
</tr>
</thead>
</table>

### Value Propositions
- What value do we deliver to the customer?
- Which one of our customer’s problems are we helping to solve?
- What bundles of products and services are we offering to each customer segment?
- What customer needs are we satisfying?

### Customer Relationships
- What type of relationship does each of our customer segments expect us to establish and maintain with them?
- Which ones have we established?
- How will we integrate with the rest of our business?
- How will we segment our customer base?

### Customer Segments
- For whom are we creating value?
- Who are our most important customers?

### Channels
- Through which channels do our customer segments want to be reached?
- How are we reaching them now?
- How are our channels integrated?
- Which ones work best?
- Which ones are most cost-effective?
- How are we integrating them with customer routines?

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[Image of Business Model Canvas]

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[Logo of The University of Akron and CORPS NSF Innovation Corps]
A Few Notes

Customers

- Do not care about the technology – they care about product features that create a value proposition
- Do not exist to buy your product – you exist for your customers
Value Proposition

- What value do we deliver to the customer?
- Which one of our customers’ problems are we helping to solve?
- What bundles of products and services are we offering to each customer segment?
- Which customer needs are we satisfying?
Value Proposition Characteristics

- Newness
- Performance
- Customization
- “Getting the job done”
- Design
- Brand/status
- Cost reduction
- Risk reduction
- Accessibility
- Convenience/usability
Customer Segments

- For whom are we creating value?
- Who are our most important customers?
- Which customers are likely to buy first?
- What does an archetypical customer look like?
Customer Segment Characteristics

- Mass market
- Niche market
- Segmented
- Diversified
- Multi-sided platform
Course Logistics
Andy Maas, Project Manager
University of Akron Research Foundation
Important Dates & Assignments

- **In Class Meetings:** March 14, April 4, April 11
- **Meetings With Your Team:** March 21, April 18
- **Presentation Week:** April 25

**Deliverables:**
- All forms will be emailed out to all participants (also available on [www.uakron.edu/icorps](http://www.uakron.edu/icorps)) – please complete digitally and submit through email
  - Email Subject Line must include team number (SP14-0##)
- Submit to [NSFICorpsSites@uakron.edu](mailto:NSFICorpsSites@uakron.edu) by 5:00 pm on the Thursday before the next class session or team meeting

- **Budget:** Must be approved by the AL, EL, and Mentor (not intended to pay stipends, but for prototyping, testing, or travel to meet with customers/users)
I-Corps Sites Budget Form

- Must not exceed $2,500
- For prototyping, testing, or travel to meet with customers
  - Not intended to pay stipends
  - Up to 20% can be reallocated without approval
- Provides NSF lineage to allow ALs to apply to I-Corps Teams ($50,000)
## I-Corps Sites Budget Form

**Project Budget**

<table>
<thead>
<tr>
<th>Operating Funds</th>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Purchased</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td>$</td>
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<tr>
<td>Travel</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>

**Total Project Budget** $
## Sample Budget Form

### Project Budget

<table>
<thead>
<tr>
<th>Operating Funds</th>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personnel &amp; Fringe</strong></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td><strong>Supplies</strong></td>
<td></td>
<td>$</td>
</tr>
</tbody>
</table>
| **Purchased Services**  | Identified a CUDA Programmer to help complete the 1D coding of the FFT and begin the 2D coding.  
- 50 hours of programming at $30/hr                                                                                              | $1500  |
| **Travel**              |  
- NVidia GPU Technology Conference March 24-27 in San Jose, CA for Dale Mugler  
- This conference would be a great place to meet more CUDA programmers and other people who are using GPUs for scientific programming. These people should have their own, current FFT results that we would be able to compare with our own results.  
- Additionally, it would be very beneficial for us to talk to NVidia because our algorithm would be a good fit as their default algorithm for NVidia’s CUDA FFT. | $1000  |
| **Other**               |                                                                                                                                                                                                            | $      |

### Total Project Budget  
$2500
I-Corps Sites Budget Process

1. Budget developed, approved and signed by AL, EL, and Mentor
2. Reviewed and approved by I-Corps Administrator and ORA
3. ORA creates account with funding allocation from budget
4. Expenses reimbursed or paid up-front through varying systems
5. Final budget report completed when all funds are expended (within 6 months)
Elevator Pitches
I-Corps Sites Entrepreneurial Leads
Team I
High Performance Transparent Electrode

- Yu Zhu — Academic Lead
- Tianda He — Entrepreneurial Lead
- Victoria Scarborough — Mentor
Team 2
Virtual Physical Examination for Health Care Providers

- Ajay Mahajan — Academic Lead
- James V. Cireddu — Entrepreneurial Lead
- Lorne Novick — Mentor
Team 3
Glaucoma Detection System

- Rouzbeh Amini — Academic Lead
- Anup Dev Pant — Entrepreneurial Lead
- Fehmida Kapadia — Mentor
Team 4
Membrane Separator for Lithium Battery

- Mukerrem Cakmak — Academic Lead
- Fanhui Jiang — Entrepreneurial Lead
- Michael Adding — Entrepreneurial Lead
- Barry Rosenbaum — Mentor
Team 5

OXAID: Oxygenated Hydrogels for Wound Healing

- Nic Leipzig — Academic Lead
- Pritam Patil — Entrepreneurial Lead
- Megan Jeffords — Entrepreneurial Lead
- Drew Barnholtz — Mentor
Team 6
Vorticity Confinement to Better Predict Aerodynamic Drag

- Alex Povitsky — Academic Lead
- Kristopher Pierson — Entrepreneurial Lead
- Van Duc Ngo — Entrepreneurial Lead
- Brent Hartman — Mentor
Team 7
Singing Accuracy App

- Bryan Nichols — Academic Lead
- James Adams — Entrepreneurial Lead
- Patrick Hofford — Mentor
Team 8
Fluorescence Goggles for Medical Interventions

- Yang Liu — Academic Lead
- Christopher Mela — Entrepreneurial Lead
- Alex Naragon — Entrepreneurial Lead
- Elliot Reed — Mentor
Team 9
Synthesis of Polymers from Plant-Based Oils

- Coleen Pugh — Academic Lead
- Brinda Mehta — Entrepreneurial Lead
- Clifton Young — Entrepreneurial Lead
- Paula Watt — Mentor
Team 10
Peptolink Performance Polymers

- **Li Jia** — Academic Lead
- **Kai Li** — Entrepreneurial Lead
- **Susan Dollinger** — Mentor
Team 11

Instructional App to Track Student Performance

- Douglas Hicks — Academic Lead
- Dhvanit Poduval — Entrepreneurial Lead
- Annal Vyas — Mentor
Team 12
Permanent Magnet Assist
Synchronous Reluctance Motor

- Seungdeog Choi – Academic Lead
- Sai Sudheer Reddy Bonthu – Entrepreneurial Lead
- Garrett Dowd – Entrepreneurial Lead
- Howard Hubert – Mentor
Team 13
Real-Time Toxic Water Containment Sensor

- Chelsea Monty — Academic Lead
- Bradford Vielhaber — Entrepreneurial Lead
- Wil Hemker — Mentor
Team 14
Hypoallergenic Natural Rubber Latex

- Katrina Cornish — Academic Lead
-Jessica Lauren Slutzky — Entrepreneurial Lead
- Allyson Dewell — Entrepreneurial Lead
- Bob Chalfant — Mentor
Team 15
High-Throughput Microalgae Screening

- Peter Ling — Academic Lead
- Siam Racharaks — Entrepreneurial Lead
- Shauna Brummet — Mentor
Team 16
Rapid Identification of Microbes in Soil

- Warren Dick — Academic Lead
- Aditi Sengupta — Entrepreneurial Lead
- Shauna Brummet — Mentor
Important Dates & Assignments

- **In Class Meetings:** March 14, April 4, April 11
- **Meetings With Your Team:** March 21, April 18
- **Presentation Week:** April 25

**Deliverables:**
- All forms will be emailed out to all participants (also available on [www.uakron.edu/icorps](http://www.uakron.edu/icorps)) – please complete digitally and submit through email
  - Email Subject Line must include team number (F13-0##)
- Submit to [NSFICorpsSites@uakron.edu](mailto:NSFICorpsSites@uakron.edu) by 5:00 pm on the Thursday before the next class session or team meeting

**Budget:** Must be approved by the AL, EL, and Mentor (not intended to pay stipends, but for prototyping, testing, or travel to meet with customers/users)