

Cornell University

DEBUT

Biomedical Engineering Project Team

Sponsorship
Packet

2019-2020

Who Are We



We are an engineering project team of undergraduate students across several majors who come together to develop innovative solutions for current biomedical problems and concerns. After two years of in-depth research and development, our project is submitted to VentureWell's Design by Biomedical Undergraduate Teams (DEBUT) competition, where it is judged based on innovation, feasibility, marketability, and patentability.

15+
majors

10+
states

4+
colleges

3+
countries

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Biomedical Engineering Project Team



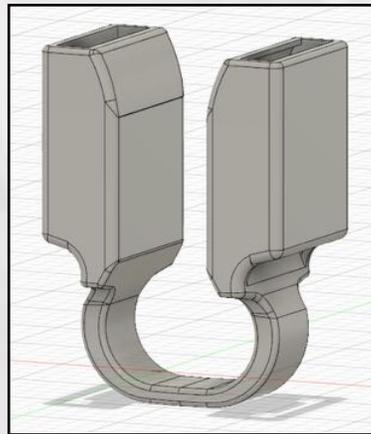
DEBUT is the abbreviation of Design by Biomedical Undergraduate Teams challenge, a competition that recognizes undergraduate excellence in biomedical design and innovation. DEBUT challenges teams of students in undergraduate biomedical education to solve real-world problems in healthcare. Strong DEBUT submissions will demonstrate a mastery of analytical and design skills and capabilities; the ability to manage the product development process; the ability to work effectively in teams; and technical communication skills. The submitted project is judged on the significance of the problem being addressed, the impact of proposed solution on potential users and clinical care, the innovative design, a working prototype, the market potential, the economic feasibility, and patentability. More than twenty universities compete in the DEBUT challenge annually for up to \$20,000, including Columbia and Johns Hopkins universities.

What is DEBUT?

2019

An Innovative Way to Treat Allergic Rhinitis

SeptuClip, an intranasal drug delivery device, offers an alternative to traditional allergy medications. Using inhalation-facilitated transport, this device provides all-day, continuous symptom relief. Disposable and convenient, the prototype simply clips into the nasal septum to provide locally targeted symptom relief, thus minimizing drug loss from exhalation.



Analysts

R & D

Research and Development Analyst

Research & Development analysts are the primary individuals working on project brainstorming and development. They focus on analyzing gaps in biomedical innovation and technology to generate ideas during each project cycle. After selecting a project idea, R&D analysts work with CAD (and other computer-aided design programs) before moving on to working in a variety of available lab spaces (including the rapid-prototyping lab and the machine shop) to develop and test the project.

Econ

Economic Analyst

Economic analysts work alongside R&D analysts to bring each project to life. Economic analysts are responsible for conducting patent searches to assess the uniqueness of the project and researching regulations on similar devices to evaluate the eventual regulatory pathways. Econ analysts also generate a general market impact analysis and specific per-unit cost analysis to determine overall manufacturing costs. They also take point on writing and editing the final competition submission report.

Ops

Operations Analyst

Operations analysts work on overall team operations to ensure the efficiency and continued operations of our team. They work primarily on negotiating and maintaining the budget, including fundraising, to finance projects and ensure sufficient funds to purchase all materials. Ops analysts also work on professional, corporate, and on-campus outreach, including recruitment and sponsorship efforts.

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YEAR 1 (PHASE I)

Early Fall

Recruit new members and begin brainstorming problems and solutions

Late Fall

Assess solutions for feasibility and narrow down to a few top ideas

Early Spring

Refine top ideas and develop detailed plans for constructing and testing prototypes

Late Spring

Select the final project and begin making preparations to begin Phase II lab work immediately upon return from summer break

Summer Break

End Year 1

↳ Begin Phase II

YEAR 2 (PHASE II)

Early Fall

Organize testing procedures, data collection, and other facets of the project that are necessary to determine if product works as expected

Late Fall

Work in lab to prototype the product and reach out to groups and professionals who can provide feedback

Early Spring

Finish modifying the idea and product and organize the report to begin preparing the final submission

Late Spring

Work with faculty advisor and team members to fine-tune the presentation of the idea and find areas for future innovation

End Year 2

↳ Submit Project!

Timeline

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Biomedical Engineering Project Team

Phase I



Cole Leinbach
Phase I-A Project Manager



Aashna Kaur
Phase I-A Assistant Project Manager



Rebecca Holstein
Phase I-B Project Manager



Nina Velasco
Phase I-B Assistant Project Manager



The Phase I team focuses on the brainstorming segment of the project process. It takes the project from a collection of potential problems to a single, refined plan of action to be executed during Phase II.

We begin by choosing a number of broad problem areas with the intention of narrowing them down as the process unfolds. These problem areas may correspond with any biomedical subfield as long as there is some potential unmet need. Working from these problem areas, we identify specific problems and possible solutions. These preliminary solutions are put through a rigorous and highly collaborative review process to determine their feasibility for our team as well as their potential as a biomedical product. Throughout this process, each team member has the opportunity to serve as a lead author on at least one of the feasibility reports we use to select several outstanding ideas to advance forward.

We select our top three ideas and develop concrete plans for each potential project. Designs, lists of needed materials, in-depth scientific and market research, and construction and testing protocols are generated and finalized. At the end of the process, the Phase I team selects a single project to begin development during Phase II the following year. The work done during Phase I is a true representation of the collaborative and creative capability that DEBUT both attracts and develops.



Phase I

Phase II



Alex Wurm
Phase II Project Manager



Simar Kohli
Phase II Assistant Project Manager



Rishabh Sarup
Report Coordinator



William Zhuang
Lab Coordinator



Abdullah Ridwan
Logistics Coordinator



Hannah Goldstein
Video Coordinator



Rianna Thomas
Video Coordinator

The Phase II team is focused on prototyping, documenting, and collecting data on our project for submission to the DEBUT competition. Having spent the previous year brainstorming ideas, conducting patent searches and market research, and planning out our lab procedures, we immediately begin working in lab once we regroup after summer break.

The Project Manager and Assistant Project Manager primarily coordinate the Phase II Team's affairs within the DEBUT umbrella and ensure all operations are running smoothly. The team's Lab Coordinator ensures all safety protocols are standardized and enforced and also oversees lab use and inventory. The team's Report Coordinator orchestrates the compilation of all of our data into concise report sections for our final submission. The team's Video Coordinator records all important in-lab and other activity within the Phase II team to provide insights into our work for the rest of the team and for VentureWell. The team's Logistics Coordinator facilitates relationships with on-campus resources as well as field experts and acts as a liaison to the operations team to update supply requests and the team's website.

The focus of our work is applying our various technical background to develop robust models, analyze complex data, and synthesize an impactful, marketable product within the realm of Biomedical Engineering. This process culminates in a final submission to the VentureWell competition and a celebration for two years of hard work in the books!

Phase II

Operations



Sydney Eisenberg
Operations Director

The Operations team serves many functions across the entire team, including financial, professional, and structural responsibilities. This team is the primary administrator for the team's yearly budget and other finances, negotiating funding with school officials at the beginning of each fiscal year. This team then allocates funds for new projects and maintains and manages that budget for the remainder of the academic year. The Operations team also assists in coordinating logistics for recruitment, fundraising events, sponsorship, and other team obligations.

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Susie Song
Senior Team Lead



Brandon Schran
Junior Team Lead

Contact Us



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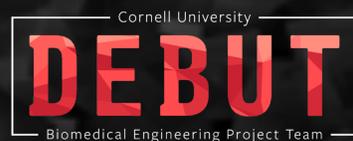


<https://www.linkedin.com/company/cornell-debut/>



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Team Leads



Sponsorship

BECOME A SPONSOR

Help bring together a team of incredible minds to develop novel biomedical innovations!

All donations will be recognized on our website with the donor name, but large donations will be considered sponsors with the following benefits:



PLATINUM

\$1,000.00 +

(or equivalent in-kind donation)

Sponsorship recognition in team competition video ♦ Receive team photograph and apparel package ♦ All Gold benefits



SILVER

\$250.00 +

(or equivalent in-kind donation)

Small sponsor logo on team apparel ♦ Sponsor spotlight on all team social media ♦ All Bronze benefits

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BENEFITS OF SPONSORSHIP

Benefits include media coverage, tax deductions, and more!

Additional benefits include access to the Cornell Engineering community and opportunities for further research and product development.

GOLD

\$750.00 +

(or equivalent in-kind donation)



Large company or sponsor logo on team apparel ♦ Receive a copy of the team resume book ♦ All Silver benefits

BRONZE

\$100.00 +

(or equivalent in-kind donation)



Prominent recognition on team website
♦ Sponsor name on team apparel

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