

COMMUNITY COLLEGE INNOVATION CHALLENGE



2021 CCIC *Advancing Student Innovation & Impact*

CCIC Application Idea Vetting Session

Thursday, March 18, 2021
2:00 – 3:00 pm Eastern

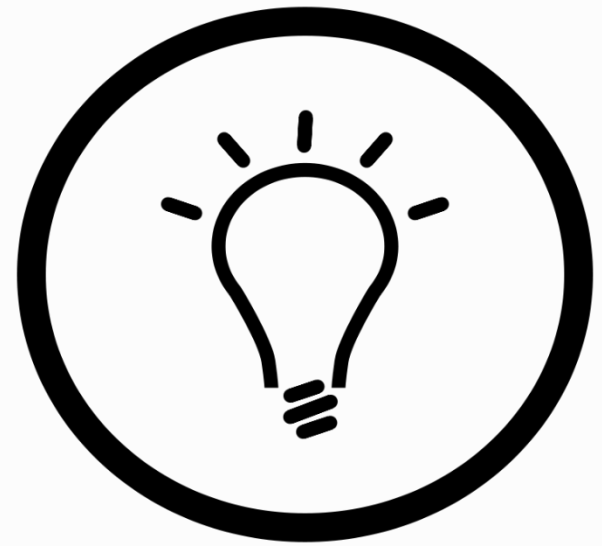


PRESENTERS

- **Ellen Hause**, Program Director for Academic & Student Affairs, American Association of Community Colleges
- **Leah Loch**, Director of Marketing & Communications, National Association for Community College Entrepreneurship (NACCE)
- **Danial Nasr Adazani**, 2017 Student Finalist Team Member, Del Mar College; Student, Texas A&M University
- **Susan Singer**, Vice President of Student Affairs and Provost, Rollins College, (Previous Division Director of Undergraduate Education at NSF)

Community College Innovation Challenge

- Agenda
 - CCIC Background & Overview
 - Virtual Innovation Boot Camp
 - What You Win / How to Apply
 - Selection of Finalist Teams
 - CCIC Timeline
 - Past CCIC Innovations
 - Presenter Perspectives on:
 - Why apply?
 - Why innovate?
 - What makes a winning idea?
 - Questions & Idea Vetting – We want to hear from you!



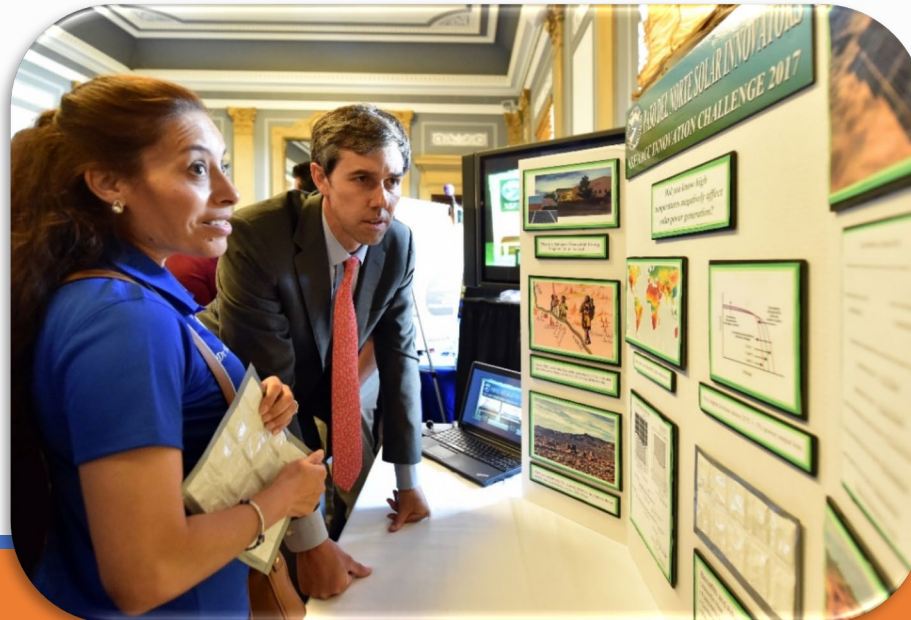
Community College Innovation Challenge

- CCIC run in partnership with AACCC & NSF
- Student teams submit STEM-based solutions to real-world problems of local to global concern
- Ten finalist teams attend Virtual Innovation Boot Camp, for technical assistance & coaching to build skills in:
 - Business of Innovation
 - Entrepreneurship
 - Strategic Communication



Community College Innovation Challenge

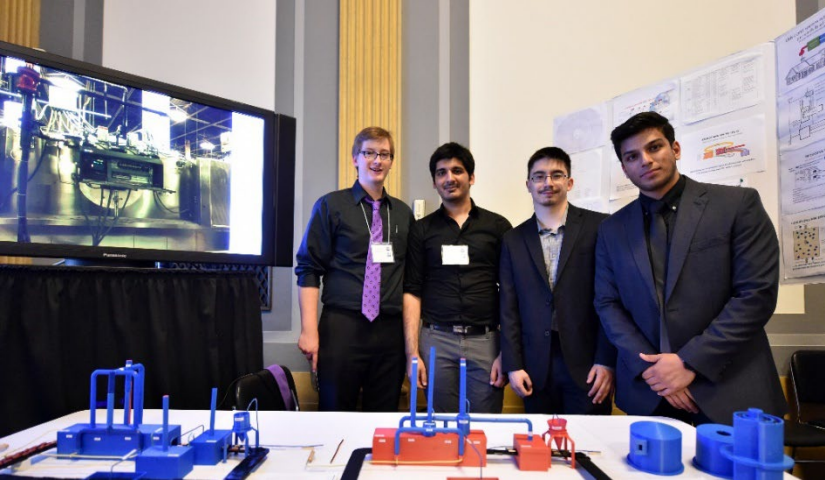
- Teams interact with entrepreneurs, experts, & industry professionals.
- The Boot Camp culminates in two capstone events:
 - Student Innovation Showcase & engagement opportunity with key Congressional and STEM stakeholders
 - Pitch competition in front of industry panel of judges



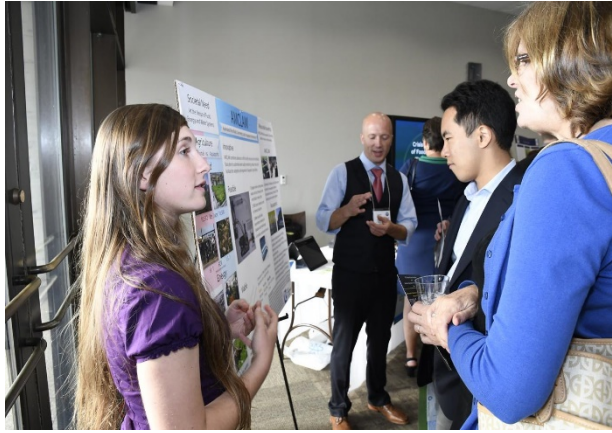
Community College Innovation Challenge

- Winners receive:
 - National recognition and a plaque to each finalist team for their leadership in STEM innovation
 - Certificates from NSF and AACC
 - Cash awards made to **each** 1st, 2nd, and 3rd place team member
 - First place: \$3,000
 - Second place: \$2,000
 - Third place: \$1,000





Stakeholder Engagement



HOW TO APPLY

- Teams of 2-4 students with a faculty/administrator mentor
- Develop STEM solution to real-world problem
- Submit a written entry and 90-second video addressing:
 - The problem – relevant background, context of problem
 - The solution – describe the solution, the science/technology that informs it, how it is different & innovative, identify challenges & barriers
 - The impact and benefits – how impact and benefits would be measured, potential societal impact
 - Video to tell compelling story and how team's solution is innovative and unique in addressing problem
- www.aaccinnovationchallenge.com

Community College Innovation Challenge



Entries will be evaluated based on innovation and impact, feasibility, and clarity of communication



10 finalist teams selected to advance to Virtual Innovation Boot Camp taking place June 14-17, 2021 between noon and 5:00 p.m. Eastern



Finalist team members are required to attend the Virtual Innovation Boot Camp

2021 CCIC TIMELINE

April 20	Submissions due
Early May	10 finalist teams notified
May 7	Welcome & Orientation to the Virtual Innovation Boot Camp Webinar at 1:00 p.m. ET
May 11	The Customer Discovery Journey in STEM Innovation Webinar at 1:00 p.m. ET
June 14-17	Virtual Innovation Boot Camp Student Innovation Showcase & Pitch Presentation
June 17	First, Second, and Third Place Winning Teams announced at the end of the Virtual Innovation Boot Camp



Past CCIC Innovations



Combating Antibiotic Resistant Bacteria with EnteroSword™

Danial Nasr Azadani, John R. Ramirez, Reaveyn Pray, Julianne Grose, and J. Robert Harberlin
 Department of Natural Sciences, Del Mar College, Corpus Christi, TX

Resistance
 Occurs naturally and develops with the use of antibiotics. A concern for all countries. 1 in every 100 US citizens will die due to antibiotic resistant infections and 1 in 25 will contract a Hospital Associated Infection (HAI) 23,000 deaths per year.

Increasing threat
 In US - over 2 million infections per year and rising. Options for treatment are dwindling as more people become infected. Hospital Acquired Infections (HAI) result in an annual cost of over \$9 billion.

How EnteroSword™ Fights for us by Killing Bacteria

Bacteriophage (phage)
 A virus that targets only bacteria. Globally phages outnumber bacteria 10-to-1. Phage infect a bacterium and use it as a 'host' to produce many more phage that are released when the bacterial host bursts (lysis). These progeny phage go on to infect and kill many more bacteria.

0 Hours
 2.5 Billion Bacteria

6 Hours
 2.5 Billion Bacteria

12 Hours
 0.5 Billion Bacteria

18 Hours
 NONE

Enterococcus faecalis bacteria grow as a dense 'lawn' on a culture plate (far left plate appears cloudy). The phage attack the bacteria in course of infection until the lawn disappears and all the bacteria are dead - the far right plate is clear.

3 EnteroSword™ the Product

Common antibiotic resistance: Operating rooms, Lab settings, Medical procedures, Patients (HAI).

EnteroSword™ is a hygienic spray that contains several phage, making it unlikely that bacteria will gain resistance. It is also a new method to kill bacteria in a medical setting.

4 How EnteroSword™ is Made

- We collect samples - Tains from drainage pipe tunnel and sewage.
- Isolation of Phage - Provide optimal environment for phage growth in lab.
- Characterization - Use computer software to analyze phage traits.
- Validation - Bioreactor growth of phage.
- Storage - at least 1 year at 4°C.
- Distribution - Targeted to medical community.

Longevity
 We designed our product to have a shelf life of 1 year at 4°C.

Adaptability
 Our product is highly concentrated, contains will be able to dilute to varying concentrations use in a variety of environments.

5 The Business of EnteroSword™
 EnteroSword™: An opportunity for students.

- Patentable isolation and production process.
- EnteroSword™ is economical as it is constant.
- Estimated scientific generation shows its impact.
- One after the other.

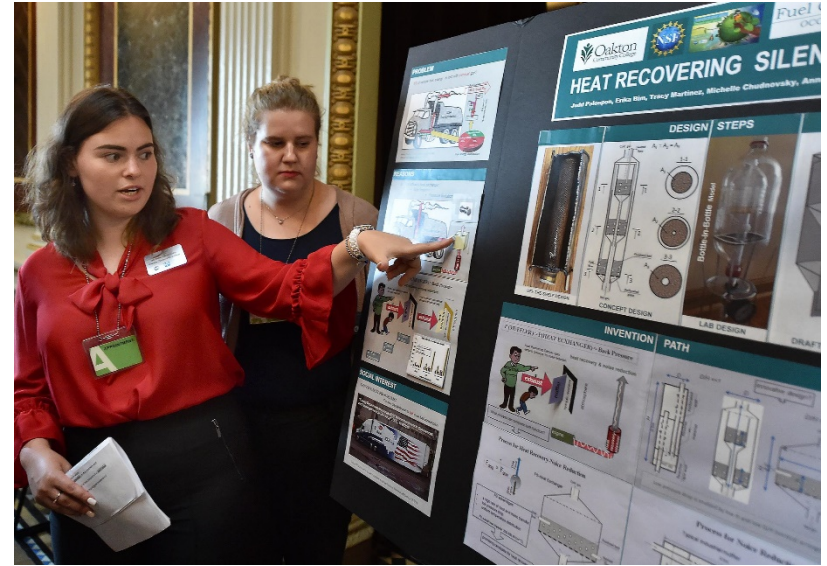
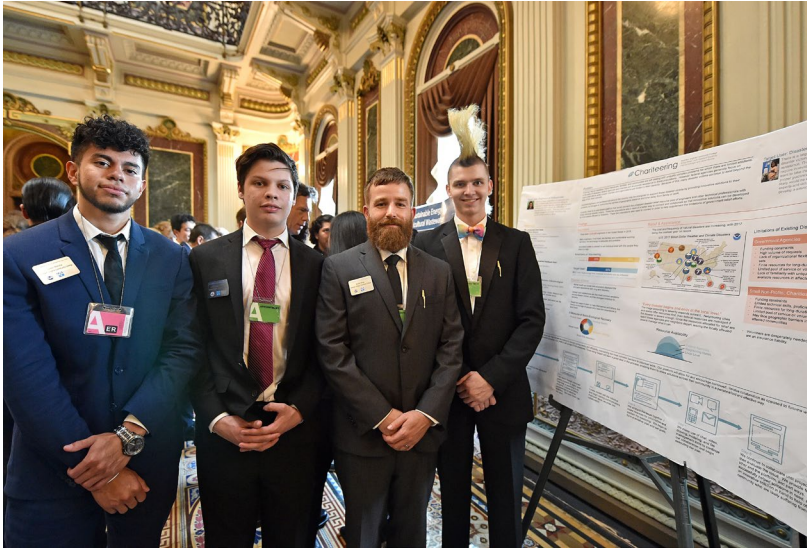
Student Perspective – Why Apply?



Why Innovate?



What Makes a Winning Idea?



Questions & Idea Vetting
Let's hear from you...



Deadline to Apply: April 20, 2021

www.aaccinnovationchallenge.com

For questions, contact: ccic@aacc.nche.edu