

# University of Rochester Eighth Annual

## ***“America’s Got Regulatory Science Talent”*** Student Competition

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**Clinical and Translational Science Institute**

**FDA Presentation**

**May 27, 2021**

## Office of the Chief Scientist

*The Office of the Chief Scientist provides strategic leadership, coordination, and expertise, supporting scientific excellence, innovation and capacity to achieve FDA's public health mission.*



# ***“America’s Got Regulatory Science Talent” Student Competition***

	Team Name	Members	FDA Regulatory Science Priority Area
1	CMTI Cardio 1	Mitchell Hoestermann, Katherine Gregory, Andrew Hirsh	5 – Harness Diverse Data through Information Sciences To Improve Health Outcomes
2	Team Organoid	Yunpeng Pang	1 – Modernize Toxicology to Enhance Product Safety 2 – Stimulate Innovation in Clinical Evaluations & Personalized Medicine to Improve Product Development and Patient Outcomes 4 – Ensure FDA Readiness to Evaluate Innovative Emerging Technologies
3	Crash Course Medication	Emma Vogan, Christian Oveson, Samantha Ring	8 – Strengthen Social and Behavioral Science to Help Consumers and Professionals Make Informed Decisions About Regulated Products
4	Selfonan	Shruti Aryal	4 – Ensure FDA Readiness to Evaluate Innovative Emerging Technologies
5	The Interoperators	Srihari Chari, Talia Cohavi, Alicia Bell, John Adib	4 – Ensure FDA Readiness to Evaluate Innovative Emerging Technologies 5 – Harness Diverse Data through Information Sciences To Improve Health Outcomes
6	SupMed	Phuc Do	5 – Harness Diverse Data through Information Sciences To Improve Health Outcomes
7	3D BioPrinting	Charles Patterson, Emily Palacio, Jared Ocasio, Nina Stash	4 – Ensure FDA Readiness to Evaluate Innovative Emerging Technologies
8	510(k) Improvement	Anil Adharapurapu	5 – Harness Diverse Data through Information Sciences To Improve Health Outcomes
9	End User Direct Reporting	Jake Gilman, Arjun Ashok, Regina Yu	7 – Facilitate Development of Medical Countermeasures to Protect Against Threats to US and Global Health and Security
10	My Health	Aliza Panjwani	8 – Strengthen Social and Behavioral Science to Help Consumers and Professionals Make Informed Decisions About Regulated Products
11	Blood Contacting Device Testing without the Bloodhound	Julia Schroth, Matt IZard	1 – Modernize Toxicology to Enhance Product Safety
12	Preparing for POC: A Proposed Infrastructure for 3D Printing in Hospitals	Alex McMullen, Aaron Craig, Megan Luzenski	4 – Ensure FDA Readiness to Evaluate Innovative Emerging Technologies

# 2021

## Advancing Regulatory Science at FDA:

FOCUS AREAS OF REGULATORY SCIENCE (FARS)



FDA Strategic Initiative	Focus Area of Regulatory Science	Regulated Product Lifecycle			
		Product Characterization, Manufacturing, and Quality	Non-Clinical Pre-market Evaluation	Clinical Pre-market Evaluation	Post-market Activities
Public Health Preparedness and Response	Medical Countermeasures and Preparedness for Emerging Infectious Diseases	✓	✓	✓	✓
	Technologies to Reduce Pathogen Contamination	✓	✓	✓	✓
	Substance Use Disorders	✓	✓	✓	✓
	Antimicrobial Resistance	✓	✓	✓	✓
	Food Safety	✓	✓		✓
	Quality of Compounded Drugs				✓
Increasing Choice and Competition through Innovation	Individualized Therapies and Precision Medicine	✓	✓	✓	✓
	Complex Innovative Trial Design			✓	
	Microbiome Research	✓	✓	✓	✓
	Novel Foods and Food Ingredients	✓	✓	✓	✓
	Regenerative Medicine	✓	✓	✓	✓
	Advanced Manufacturing	✓			✓
	Increasing Access to Generic Alternatives for Complex Drugs	✓	✓	✓	✓
	Biomarkers	✓	✓	✓	✓
	Novel Technologies to Improve Predictivity of Non-Clinical Studies and Replace, Reduce, and Refine Reliance on Animal Testing	✓	✓		
	Model-Informed Product Development	✓	✓	✓	
Unleashing the Power of Data	Product Safety Surveillance				✓
	Artificial Intelligence	✓	✓	✓	✓
	Digital Health	✓	✓	✓	✓
	Use of Real-World Evidence to Support Medical Product Development and Regulatory Decision-Making			✓	✓
Empowering Patients and Consumers	Patient and Consumer Preferences and Perspectives	✓	✓	✓	✓
	Patient-Reported Outcomes and other Clinical Outcome Assessments			✓	✓
	Empowering Patients and Consumers to Make Better-Informed Decisions				✓

# *Thanks to our judges:*

## **Khaled Bouri, PhD**

Senior Science Advisor to the Director  
Office of Critical Path Programs at FDA

## **Milton Marshall, PhD, DABT**

Director of Regulatory Affairs, Protospheric Products, Inc.  
President, Marshall and Associates

## **Mary Clare McCorry, PhD**

Advanced Regenerative Manufacturing Institute (ARMI) BioFabUSA

<https://www.urmc.rochester.edu/clinical-translational-science-institute/education/regulatory-science-training-programs.aspx>

# Education

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## Regulatory Science Training Programs

The National Institutes of Health (NIH) and Food and Drug Administration (FDA) have launched a number of Regulatory Science and Translational Science programs to enhance the translation of research into products that benefit patients, while also improving the success rate of developing safe and effective medical products. The FDA defines [Regulatory Science](#) as “the science of developing new tools, standards, and approaches to assess the safety, efficacy, quality, and performance of all FDA-regulated products.” [More information on Regulatory Science.](#)

The UR CTSI has launched a range of programs focused on advancing training, career development and research in Regulatory Science

## Advanced Certificate in Regulatory Science

The UR CTSI, in partnership with the Department of Public Health Sciences, has created an [advanced certificate in regulatory science](#) designed to produce a cadre of highly trained professionals able to contribute to the development of new medical interventions by enhancing the innovation, efficiency, and quality of the medical product development pipeline. This NYS-approved certificate covers areas of experimental therapeutics, medical product innovation, ethics, biostatistics, FDA regulatory process, intellectual property, and science, technology and health policy.

## America's Got Regulatory Science Talent Competition

This annual [student competition](#) is an interactive and innovative approach to increase student awareness and interest in Regulatory Science. Each year, winners of local competitions at the UR CTSI and the University of Maryland's Center of Excellence in

### Regulatory Science Portal

- [Education and Training](#)
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### Contact Us

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# 2021 Top Teams

**First place:**

**[Preparing for POC: A Proposed Infrastructure for 3D Printing in Hospitals](#)**

***Alex McMullen, Aaron Craig, Megan Luzenski***

**Second place:**

**[Blood Contacting Device Testing Without the Bloodhound](#)**

***Julia Schroth, Matt Izard***

**Third place (tie):**

**[Team Organoid](#)**

***Yunpeng Pang***

**[My Health](#)**

***Aliza Panjwani***



# Blood Contacting Device Testing without the “Bloodhound”

2021 America’s Got Regulatory Science Talent Student  
Competition

Julia Schroth and Matthew Izard







# A Proposed Regulatory Framework for 3D Printing Implants at Point-of-Care (PoC) Facilities

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America's Got Regulatory Science Talent Competition

Aaron Craig, Megan Luzenski, and Alex McMullen

University of Rochester, Biomedical Engineering