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Grants

The ACS GCI Pharmaceutical Roundtable has identified key synthetic chemistry and process research challenges whose solutions would result in more efficient pharmaceutical process development and production. To spur research in these areas, the Roundtable created and maintains a research grant program, whose impact over the years has been recently documented. The Roundtable also advocates for targeted green chemistry and engineering support to academic and government labs from international and U.S. federal funding agencies.

Research Grants

Over \$3.5 million dollars (US) have been funded by the ACS GCI Pharmaceutical Roundtable since their grant program began in 2007. Each Spring, new Request for Proposals (RFPs) are issued for different key research challenges faced by the pharmaceutical industry.

2023 Request for Proposals (RFPs) is now open!

Proposals are accepted by public and private institutions of higher education worldwide. Follow the guidelines in the RFP of interest (links below) and submit your application via your grant office in our application portal.

Apply here: <https://gci.acs.org> (will be updated shortly)

Application Deadline: May 15, 2023, 5 p.m. EDT

Notification of Selection: September 1, 2023

Expected Research Start Date: October 2023

KEY RESEARCH AREA GRANTS

The Roundtable has identified the following topics as key interest areas in 2023; successful proposals for each grant will receive \$80,000 for a 12-month research commitment.

- **Greener Peptide Synthesis and/or Purification**

This grant will focus on developing novel approaches to improve the environmental impact of peptide synthesis or purifications (e.g., less solvent/reagent waste, greener solvents, and reagents, etc.). The R&D will support the Roundtable's initiative to enhance the greenness of peptide and peptide conjugate synthesis.

- **Greener Oligonucleotide Synthesis for Improving Sustainability**

This grant will focus on improving the sustainability of oligonucleotide manufacturing by addressing one or

more of the environmental challenges facing the current process. The R&D will assist the Roundtable's Greener Oligonucleotide focus team.

- **Electrochemistry in Flow**

This grant will focus on overcoming practical barriers to the application and scale-up of electrochemistry in flow. The R&D will assist the Roundtable's Continuous Processing/Flow Chemistry initiative.

- **Photochemistry in Flow**

This grant will focus on overcoming practical barriers to the application and scale-up of photochemistry in flow. The R&D will assist the Roundtable's Continuous Processing/Flow Chemistry initiative.

IGNITION GRANT PROGRAM

Ignition Grants provide \$40,000 for a 6-month research commitment; proposals can be on any new green chemistry/engineering research direction of relevance to the pharmaceutical industry.

- **Ignition Grants for Green Chemistry and Engineering Research**

Four awards are available, providing 'ignition' funding for novel and innovative ideas that have the potential to provide sustainable solutions to chemistry and engineering problems relevant to the pharmaceutical industry from discovery to manufacturing. The goal is to provide researchers with initial funding to obtain preliminary results that may then be used by the researchers to help apply for funding from traditional funding agencies.

Awarded Grants

2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
2011	2010	2009	2008	2007						

2022

Yang Hai, University of California Santa Barbara, \$50,000

“Application of a PLP-dependent Mannich cyclase for biocatalytic synthesis of heterocyclic quaternary α -amino acids”

C. Oliver Kappe, University of Graz, Austria, \$50,000

“Simplified PAT Strategies for Calibration-Free Real-Time Data Gathering and Utilization in Automated Flow Chemistry Platforms”

Christopher Sandford, Dartmouth College, \$50,000

“Bifunctional Organocatalysts for Sustainable Peptide Bond Formation”

Nicholas Snow, Seton Hall University, \$50,000

“‘Greening’ Pharmaceutical Analysis Using Gas Chromatography”

Jack Norton and Aaron Moment, Columbia University, \$50,000

“Selective reduction of aromatic rings in advanced scaffolds in flow reactors with non-noble metal catalysis under mild conditions”

Masad J. Damha, McGill University, \$50,000

“Oligonucleotide synthesis by resonant acoustic mixing (RAM)”

Jesús Fernández Lucas, Universidad Europea de Madrid, Spain, \$25,000

“Enzymatic synthesis of C-nucleosides”

Yu Zhao, National University of Singapore, \$25,000

“Electrocatalytic Functionalization of Commodity Alcohols to Produce Valuable Amines and Amides”

