

**GC3 Project Group Meeting**

**Innovation Project Group**



# Innovation Project Group Meeting

## Agenda:

- Brief history of the project group
- Review accomplishments to date
- Next steps for 2015/2016

# High-Level Goals for the GC3 Innovation Project Group

- To advance green chemistry innovation
  - In our own organizations
  - In the broader industrial and academic communities
- To accelerate the development, commercialization & adoption of safe chemicals & materials

# History of Innovation Project Group

2013 Group started

2013/2014

1. Webinar series on innovation & green chemistry
2. Published articles on green chemistry innovation
3. Developed ideas for the Green Chemistry Innovation Portal & collaborative innovation initiatives

2014/2015

Two major initiatives:

1. Green Chemistry Innovation Portal
2. Collaborative Innovation Project -- Preservatives in Personal Care and Household Products



## InnoCentive: Using Crowdsourcing to Solve Green Chemistry Challenges & Create New Market Opportunities

Alph Bingham, Founder & Board Member, InnoCentive  
Wednesday, October 23, 2013

As companies seek to develop safer chemicals and materials for use in their products and production processes, some are turning to crowdsourced open innovation "challenges" to create new markets and solve problems more quickly and cost effectively. Challenge driven innovation (CDI) enables organizations to harness diverse and creative on-demand talent when needed and is being

[Slides & Audio Archive for GC3 Innovation Webinar Series](#)



# Green Chemistry Innovation Portal

The Portal is an on-line platform for growing and connecting the green chemistry community - in industry and academia - and for solving green chemistry challenges.

2014 - Beta version, market testing

- Finalist in LAUNCH Green Chemistry Challenge



<http://www.launch.org/innovators/monica-becker>

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# Green Chemistry Innovation Portal

- Partnered with American Chemical Society's GCI
- Membership of ACS will expand scope & impact of Portal
- Benefit from synergistic GCI efforts and infrastructure



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# GC Innovation Portal: Forum

- ACS Network
  - Well-developed and supported
  - Existing audience
  - Versatile platform
- Niche for green chemistry discussion forum
  - Nexus blog writes about green chemistry
  - Discussion forums in other subjects

The screenshot shows the ACS Chemical Biology Community forum page. At the top, there is a navigation bar with links for ACS Communities, Science, Profession, Educators & Students, and Help, along with a search box. Below this is a banner for the ACS Chemical Biology Community in Science, with tabs for Overview, Content, People, and More, and buttons for Actions, About, and Share. A login prompt asks users to log in to follow, share, and participate, or to join if they are not a member. The main content area features the ACS Chemical Biology Community logo and a description: "The ACS Chemical Biology community site provides an environment that fosters greater communication between chemical biologists while keeping the community informed on the most ground-breaking research in the field." There are three main sections: "See the most recent articles from ACS Chemical Biology" with a featured article titled "PKA-Type I Selective Constrained Peptide Disruptors of AKAP Complexes" dated Mar 25, 2015; "Notice Board" with a post about Peter Dervan winning the 2014 ACS Chemical Biology lectureship; and "Discussions" with several threads including "Re: Who should win next year's Nobel Prize?", "A Guide to Writing Your Next Paper!", "Re: What article have you read recently in ACS Chemical Biology?", "Re: The place of chemical biology", and "Re: What's the most significant chemical biology paper published in 2011 and why?". On the right side, there is an "Actions" section with a "View feeds" button and a "Recent Blog Posts" section with several posts and a "More" link.

# GC Innovation Forum Goals

- Promote discussion around topics in green chemistry
- Encourage sharing of expertise, information, and ideas
- Facilitate connections and partnerships between researchers and funders



Log in to follow, share, and participate in this community. Not a member? Join Now!



The ACS Chemical Biology community site provides an environment that fosters greater communication between chemical biologists while keeping the community informed on the most ground-breaking research in the field.




See the most recent articles from ACS Chemical Biology.

Mar 25, 2015

PKA-Type I Selective Constrained Peptide Disruptors of AKAP Complexes

### Notice Board

Peter Dervan is the 2014 ACS Chemical Biology lectureship  winner!

Learn about our fantastic new ACS member benefits 

### Discussions

 Re: Who should win next year's Nobel Prize?

 A Guide to Writing Your Next Paper!


 Re: What articles have you read recently in

### Actions

 [View feeds](#)

### Recent Blog Posts

 The consequences of non-competes in ACS Chemical Biology Community

 Yet another reason not to tailor your resume in ACS Chemical Biology Community



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# Planned Features

- Ability to contact moderator for real-world connections
- Events calendar
- Featured blog post
- Featured webinar
- Weekly poll
- Link to GC Innovation Map



# Feedback

- What sort of discussions would you like to have?
- Which feature are you most interested in?
- Questions for weekly poll



# GC Innovation Portal: Map

- Identify organizations active in green chemistry research
- Kumu
  - Flexible relationship visualization tool
  - Accessible and attractive

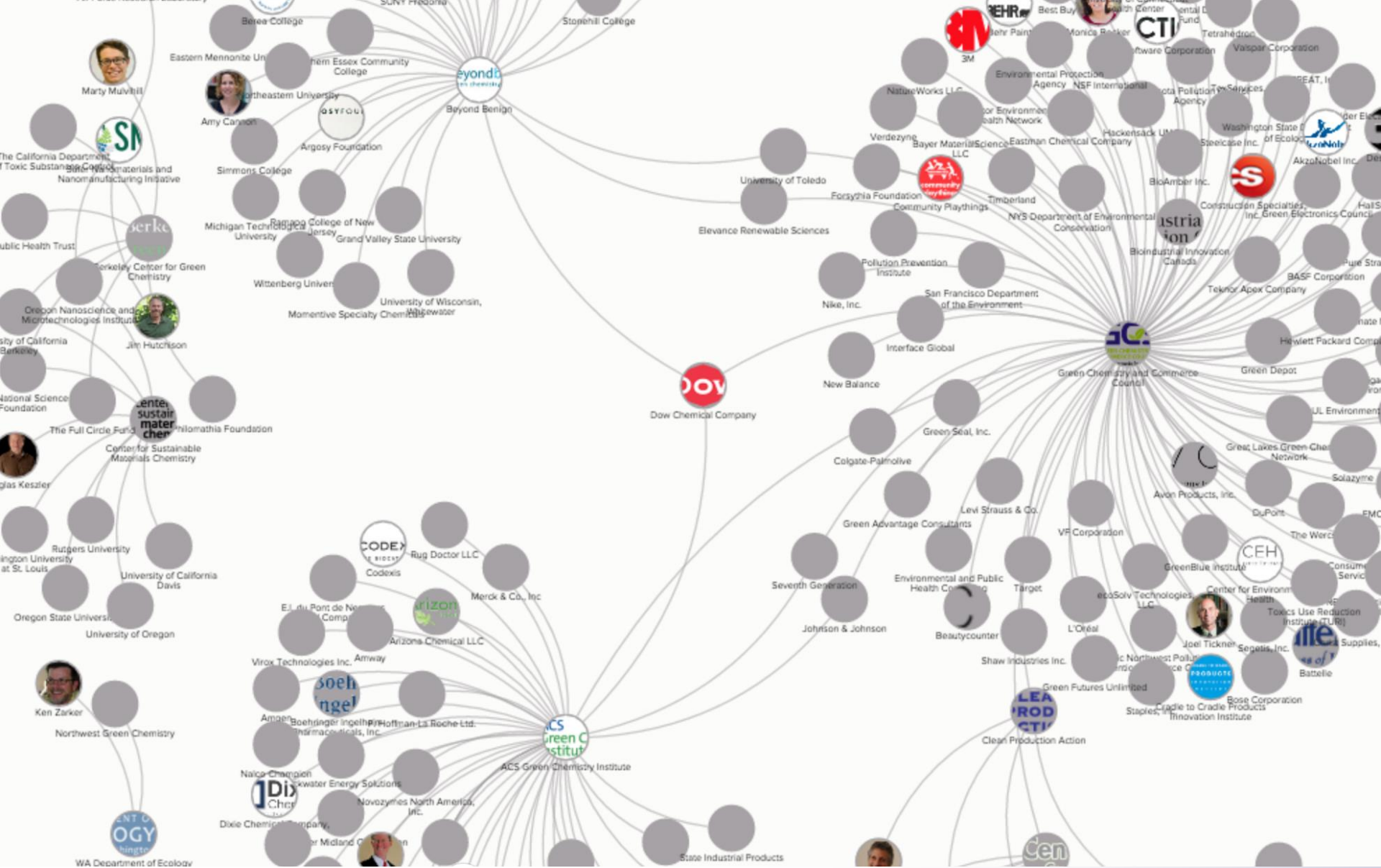


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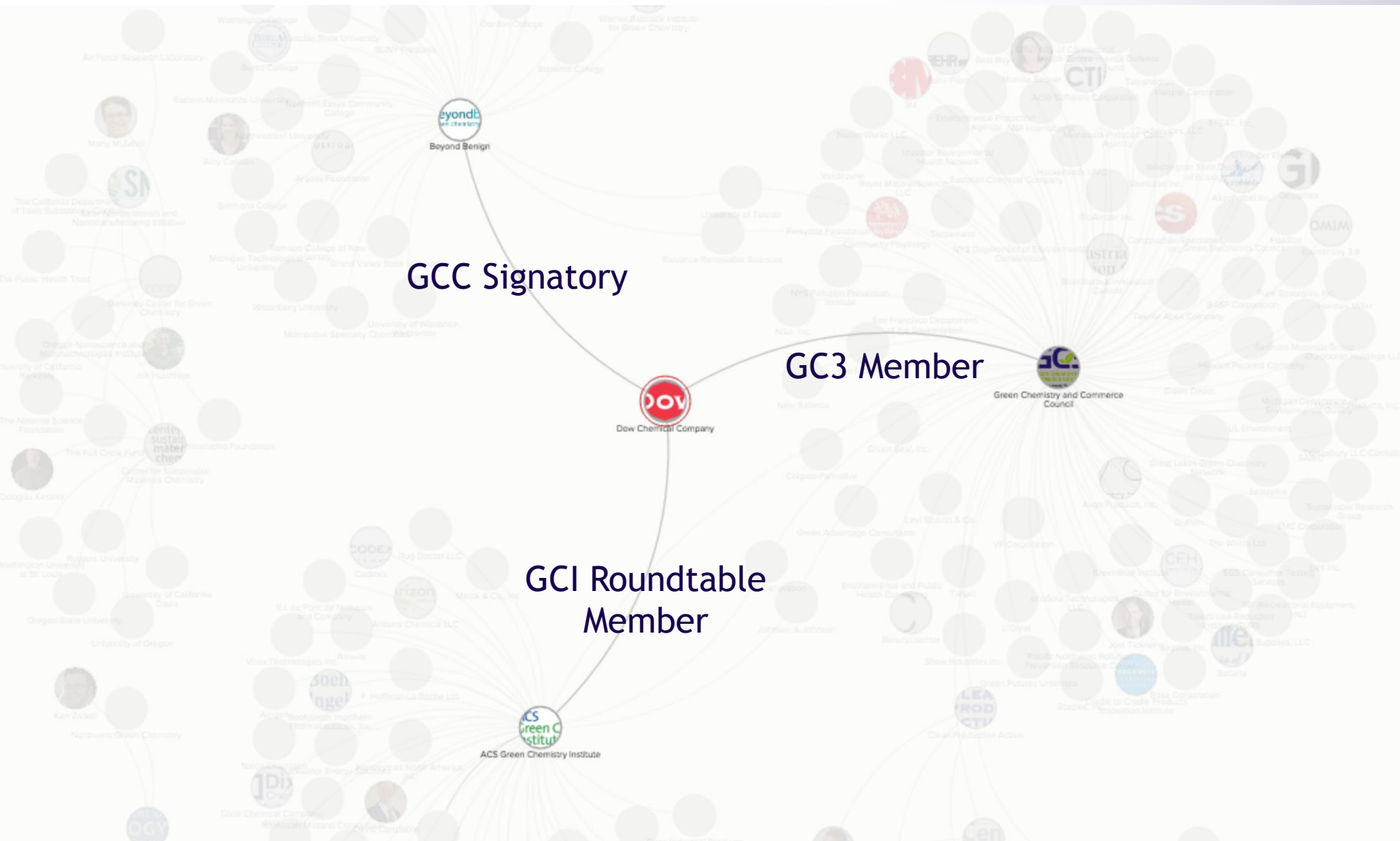
# GC Innovation Map Goals

- Increase visibility of green chemistry world to “outsiders”
- Identify research groups involved in related research
- Assist companies in solving technical problems
- Expand community



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**GCC Signatory**

**GC3 Member**

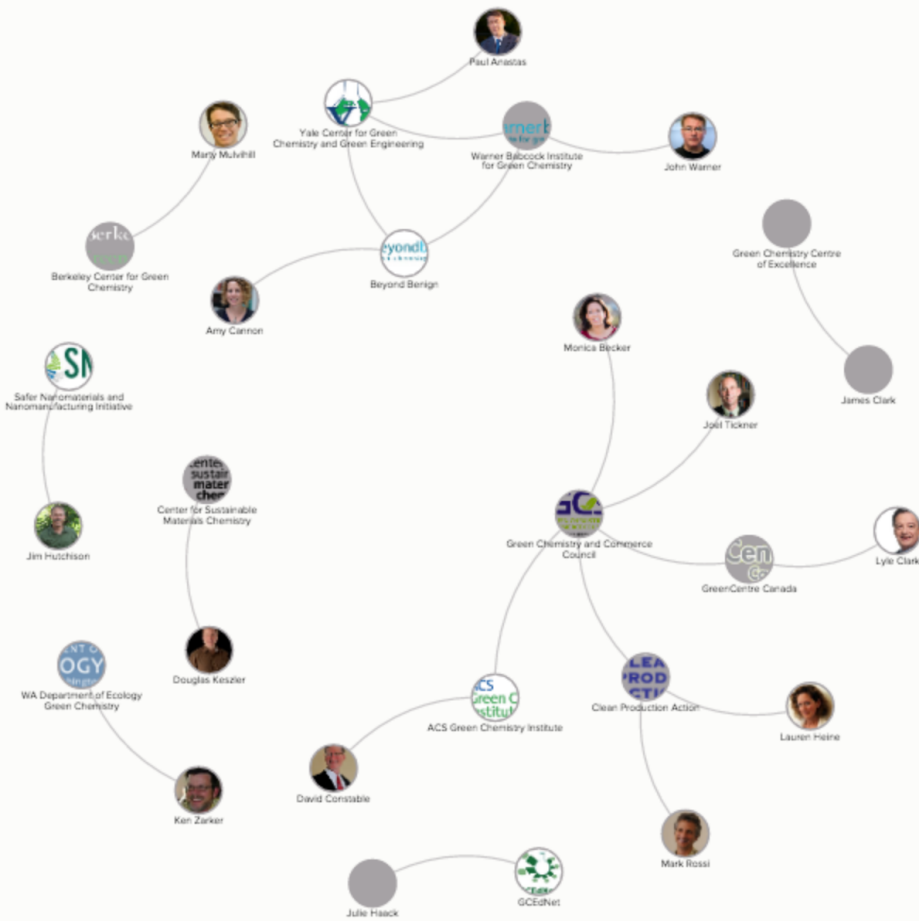
**GCI Roundtable Member**



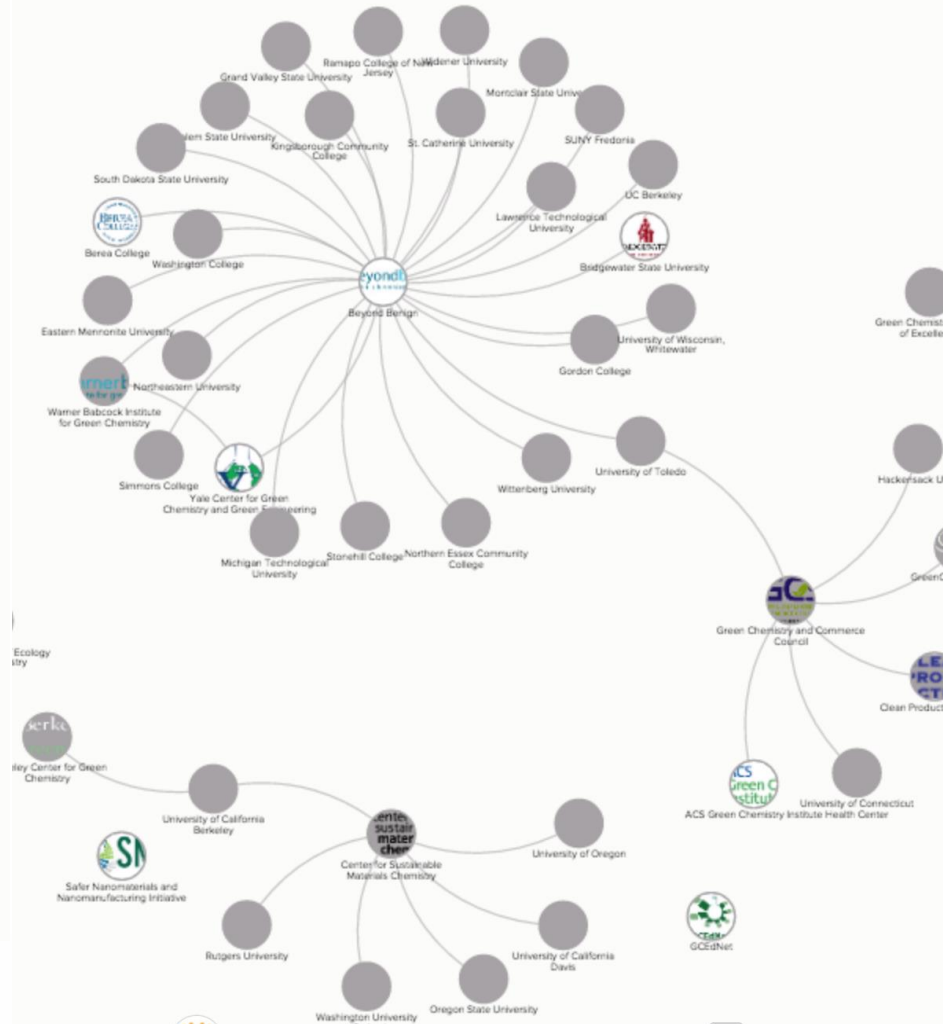
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# People



# Academic Institutions





# Planned Features

- Ability to view by sector
- Visible relationships of companies dedicated to green chemistry
- Links to company/organization websites
- Brief description of research capabilities
- Can e-mail GC3 to add organization to map

# Feedback

- What types of information would you like to see?
- Useful “perspectives”—academic, etc.



# Innovation Portal Timeline

- Spring 2015
  - Creation of ACS Network forum page
  - Populate forum page with content
  - Stage 1 of map development - obvious green chemistry organizations
- Summer 2015
  - Beta testing of forum features
  - Stage 2 of map development
- Fall 2015
  - Portal launch and marketing push



# Collaborative Innovation Project: Preservatives in Personal Care & Household Products



# Collaborative Innovation Project: Preservatives in Personal Care and Household Products

## Project Goals

1. To accelerate commercialization of new, safe, preservative systems for personal care products and household products.
2. To create new models of pre-competitive collaboration whereby companies with common needs for new safe chemicals, materials, or other technologies, can work together to accelerate the development and scale-up of these technologies.



# Why Preservatives?

- A number of preservatives have come under intense scrutiny due to consumer and government concerns
- Regulatory, consumer, NGO, and retailer pressure to eliminate the use of specific, effective preservatives is reducing the palette of preservatives available to formulators
- Formulators are concerned that too few effective preservatives are currently being used in products, which can lead to overexposure to a small number of preservatives in multiple products and cause sensitization and allergic reactions
- Product manufacturers are under pressure to identify new, safe, and effective preservatives

# Current Project Group Members

**Aubrey Organics**

**Colgate-Palmolive**

**Method**

**Aveda**

**Henkel**

**Procter & Gamble**

**BabyGanics**

**Johnson & Johnson**

**Seventh Generation**

**Beautycounter**

**L'Oreal**

**Unilever**



# Collaborative Work

## Finalizing:

A need statement and criteria for new preservatives sought

## On-going:

Collaboration and sharing of information on performance and safety testing of novel preservatives

## In discussion:

Collaboration on R&D, scaling to bring new, promising preservatives to market.



# Need Statement & Criteria for New Preservatives

## Objectives:

1. To interest, motivate, guide the R&D/supplier community to start and/or accelerate work to develop and scale-up new preservatives
2. To have a foundational set of criteria to guide potential, future collaborative testing and R&D

# Need Statement & Criteria for New Preservatives

<b>Stage 1 Criteria</b>					
	<b>GENERAL CRITERIA</b> (For Personal Care, Household, and Natural/Organic Products)	<b>ADDITIONAL WANTS</b>			
<b>1. Performance</b>		<b>Stage 2 Criteria</b>			
<b>Activity</b>	Broad spectrum activity against positive & gram-negative yeast & mold		<b>Minimum</b>	<b>Optimum</b>	<b>Applies to:</b>
	In formulation, at use level, meets preservative challenge criteria (e.g., USP 59 similar)	<b>3. Health &amp; Safety</b>			
	Low number of ingredients to get broad spectrum activity (3 ingredients)	<b>a. Human Health</b>			
<b>pH Activity</b>	pH 5 – 8	<b>Genotoxicity</b>	Not genotoxic	Not genotoxic	Preservative
<b>Shelf Life in Formulated Product</b>	Shelf life of 1 year	<b>Eye &amp; skin irritation</b>	For household products: Slight irritant under usage conditions (diluted) may be acceptable.	Non-irritant under usage conditions (diluted)	Formulated Product
	Can withstand free		For personal care products: Non-irritant under usage conditions (diluted)		
			Undiluted preservative could be irritant.		

# Need Statement and Criteria for New Preservatives

## Dissemination:

- GC3 channels: Website, Webinar, Roundtable, Newsletter, Other conference presentations
- Companies in our group share & discuss doc with their suppliers
- Through other organizations:
  - Relevant trade assn's and professional societies
  - Articles in trade publications, Greenbiz.com, etc
- Research community
  - American Chemical Society (ACS) and ACS' Green Chemistry Institute
  - Green Chemistry Innovation Portal
  - Individual research groups



# Collaborative Work

## On-going:

Collaboration and sharing of information on performance and safety testing of novel preservatives

## In discussion:

Collaboration on R&D, scaling to bring new, promising preservatives to market.

E.g.,

- Challenge competition
- RFP for R&D

**Questions?  
Ideas?**

# For more information

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