GC3

INNOVATORS ROUNDTABLE

HOSTED BY P&G FABRIC CARE

MAY 7-9, 2019 • CINCINNATI, OH
GC3: A Year in Review

Joel A. Tickner, ScD
Executive Director
May 8, 2019
Welcome to Cincinnati

https://twitter.com/i/status/1125439937300520960
What brought you here? And what do you want to get out of the roundtable?

- Go to Sli.do (or slido.com)
- Enter event #U571
# New Members Since May 2018

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<th>Akron Ascent Innovations</th>
<th>EmulGreen</th>
<th>Nature Coatings</th>
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<tr>
<td>Angus Chemical Company</td>
<td>Evolved By Nature</td>
<td>Performance BioFilaments Inc</td>
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<td>Boston Common Asset Management</td>
<td>Genecis Bioindustries Inc.</td>
<td>Pyran</td>
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<td>Chinova Bioworks Inc.</td>
<td>Gradient</td>
<td>Sephora</td>
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<td>Clariant</td>
<td>Iron Shell LLC</td>
<td>Smarting Sorting</td>
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<td>Colorifix Limited</td>
<td>Magnomer</td>
<td>Stichting ZDHC Foundation</td>
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<td>Croda Inc.</td>
<td>Material Alchemy</td>
<td>Visolis</td>
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<td>Defunkify</td>
<td>Meijer</td>
<td>VivaVax Inc</td>
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<td>Emerald Kalama Chemical LLC</td>
<td>MilliporeSigma</td>
<td>Yordas Group</td>
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**GC3: Bridging the Supply Chain to Accelerate Green Chemistry Innovation**

- Green chemistry ideas & technology options
- Green chemistry market/policy requirements & desires

* Established companies & startups
# Accelerating the Commercialization of Green Chemistry: Major GC3 Platforms and Projects

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<th>Platforms</th>
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<td>GC3 Retailer Leadership Council</td>
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<td>Collaborative Technology</td>
<td>GC3 Start Up Network</td>
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<td>Supply Chain Engagement</td>
<td>GC3 Collaborative Innovation</td>
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<td>GC3 Sustainable Chemistry Alliance</td>
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Next Steps

Build on our unique niche, recognition, foundations, and core strengths to position GC3 as a thought leader, influencer, and connector with deep knowledge of the green chemistry innovation ecosystem.
New Strategic Initiatives

• Member development at the C-Suite level
• Building the foundations for a GC3 Europe
• Initiating a GC3 Supplier Working Group
• Building a home for the field of alternatives assessment – Association for the Advancement of Alternatives Assessment (A4)
Leveraging Strategic Partnerships

And many others…
Connecting to emerging global themes driving action

https://www.un.org/sustainabledevelopment
https://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram
Much has changed since we started in 2005

- Policy and market drivers
- Proactive sectoral and value chain engagement
- Focus on solutions
- Green chemistry is slowly becoming mainstream…but we have a long way to go
“When we innovate, we’ve got to be prepared to be called nuts... First they ignore the innovators and hope they’ll go away; then they laugh at you and hope the humiliation will drive you away; then they fight and attempt to stop the new idea; and then they join together and change happens. We all need to join together to drive change.”

- Roger McFadden, VP of Innovation, Canberra Corp.
2018

“We must innovate or die.”

- Chemical Industry Executive
On opportunity to transform the GC3 to scale our impact...

• GC3 is situated to capitalize on the significant increase in demands for sustainable chemicals and products in the marketplace
• GC3 has been successful in shifting discussion on chemicals challenges from “avoiding bads” to innovation to solve technology needs
• GC3 is in a unique position to catalyze action and collaborations that fill gaps in scalable green chemistry solutions across sectors
• GC3’s recognition as a highly respected convener of the full value chain allows it to apply its to effectively leverage drivers for green chemistry
Strategic Organizational Planning to Expand the Impact of the GC3

1. Develop and execute a 3-5 year organizational plan
2. Institutionalize lessons from successful programs and develop processes to extend impact and support their replication
3. Strengthen GC3 “trustmark” and brand in the green chemistry space
4. Develop sustainable revenue streams to support growth
5. Guide GC3 Programming to be focused on key trends and opportunities
Join us in shaping this journey......
Logistics

- Agenda
- Reception
- Logistics
- GC3 Advisory Board/Team
- Evaluations
Roundtable Desired Outcomes

• Gain insights to enhance impacts and effectiveness of green chemistry projects
• Catalyze new partnerships among GC3 members
• Learn about the latest innovations in green chemistry design and commercialization
• Build connections between green chemistry and other important sustainability efforts
• Empower GC3 members as green chemistry change agents
GC3 Advisory Board

Tammy Ayers  
Steelcase

Bob Buck  
The Chemours Company

Mike Elder  
Novozymes

Paul Ellis  
Kingfisher

James Ewell  
GreenBlue Institute

Tess Fennelly  
Remooble

Eunice Heath  
Dow

Al Innes  
State of Minnesota

Bob Israel  
Sherwin-Williams Company

Roger McFadden  
Canberra Corp.

Darcy Prather  
Kalion, Inc.

Homer Swei  
Johnson & Johnson
GC3 Team

- Joel Tickner, Executive Director
- Michele Jalbert, Chief Operating Officer & Co-Director, GC3 SCA
- Jennifer Landry, Business Manager
- Stephanie Malicki, Project Assistant
- Rachel Simon, Supplier Engagement Lead and Manager, A4
- Sally Edwards, Director of Retail Engagement
- Monica Becker, Director of Collaborative Innovation
- Julie Manley, Startup Network Coordinator
- Michael Parr, Co-Director, GC3 SCA
Ground Rules

• Respectful, honest dialogue and listening
• Please keep electronic device use to a minimum (or outside)
• Chatham House Rule: Participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed
Anti-Trust Statement

• The GC3 is committed to facilitating a robust, open and honest exchange of ideas and information among its participants on subjects relevant to this agenda. It is also committed to compliance with all applicable laws, including antitrust and competition laws.

• To avoid any possible problems, communications and exchanges of information at or attendant to any GC3-related proceeding should directly relate to the issues on the agenda.

• There should be no discussions or exchanges of information regarding (1) what price any participant has or may charge for its products or services; (2) strategic business plans or (3) whether or not to do business with any person or entity.

• Please let Joel Tickner or Michele Jalbert know immediately if you have a concern or question about a possible violation of this policy.
Join the Conversation on Social Media

Twitter
Tag: @The_GC3

Instagram
Follow: thegc3

Hashtag: #GC3RT
WIFI ACCESS

Please use network code, no password:

REDSWIFI
Retail Leadership Council (RLC)

Established in 2013 to promote safer chemicals, materials and products across retail supply chains.

Focus:

• Share challenges and best practices
• Engage in customer/buyer /supplier education
• Share resources
  (https://greenchemistryandcommerce.org/resources/retailer-tools/retailer-tools/)
Engagement of Chemical Suppliers 2014-2016

- Goal setting and continuous improvement
- Communication
- Transparency
- Information on new chemicals and safer alternatives
- Green chemistry education

http://greenchemistryandcommerce.org/projects/retail
RLC 2016-2019

• Implement Joint Statement and discuss internally and with supply chains

• Continue building understanding of challenges and collaborative opportunities

• Provide clearer, collective signals to brands and chemical suppliers of innovation and transparency needs

• Better link to GC3 Collaborative Innovation projects
GC3 Preservatives Collaborative Innovation Challenge

GC3 Preservative Challenge Sponsors

CPG Companies
- Babyganics
- Beautycounter
- Beiersdorf
- Colgate-Palmolive
- J&J

Retailers
- Target
- Walmart
- Preservative Suppliers
- Dow
- Lonza

INNOCENTIVE

GC3 Challenge: Developing New Preservatives for Personal Care & Household Products

**TAGS:** Chemistry, Environment, Life Sciences, Physical Sciences, Public Good

**AWARD:** $175,000 USD

**ACTIVE SOLVERS:** 48

**DEADLINE:** Aug 24 2017 23:59 EDT

**SOURCE:** InnoCentive

Preservatives are substances that are added to products to prevent them from spoiling. These chemicals work by retarding microbial growth and preventing product degradation. In addition to being used in foods, preservatives are added to household and personal care products. Due to concerns about the safety of some preservatives that have been in wide use, and the impact of repeated contact with these chemicals on human health, the Seekers desire new and effective preservatives or preservative boosters with improved environmental health and safety profiles for use in personal care and household products.

- Broad spectrum activity: gram-positive & gram-negative bacteria, yeast & mold
- In formulation, at use levels, meet preservative challenge test acceptance criteria (e.g., USP 51, ETA M-3, or similar)
- Low number of ingredients needed to get broad spectrum activity (ideally 1 - 5 ingredients)
- Not likely to build microbial resistance
- pH 5 - 10, best is pH 2 - 7
- Shelf life of 3 years
- Stable from 25 to 50°C
- UV stable for 3 months in package
Expanding Collaborative Innovation Efforts

• **Factors for success, based on our experience:**
  – Significant pain point
  – Critical mass of companies with common interest in new technologies or adoption challenges
  – Pre-competitive space for companies to work in
  – Alignment with other GC3 efforts, e.g., RLC
  – Opportunity to partner with strategic organizations/leverage additional resources

• **Drawing on lessons learned:**
  – Significant value across value chain
  – An amplified demand signal for technology scouting efforts
  – Pooling knowhow and resources for better results
  – Derisking of new technologies
  – Pushing the innovation accelerator
Evolving Collaborative Innovation Efforts

• Past projects:
  – Plasticizers for wire & cable
  – Preservatives for personal care and household products

• Current projects:
  – Surfactants, through a partnership with Nouryon & Unilever
  – Plasticizers in articles

• Coming up:
  – Cyclic silicones (Siloxanes - D4, D5, D6) for hair and skincare
  – Solvents?
Goals:

• Support green and bio-based chemistry start-ups
• Introduce large strategics to new chemical technologies, partnership and investment opportunities

Creating an innovation ecosystem for green chemistry technologies
Members of the GC3 Startup Network Include:
Main Activities:

- Technology Showcases
- Strategic Connections Program
- Webinars, learning, and networking opportunities
- New partnerships
GC3 2019
Startup Pitch Competition

Application Process
Internal & External Review
Semi-Finalist Selection
Pitch Competition

Investment Potential Panel
GC3 Innovators Roundtable
May 8, 2019

3 Winners
Launched in 2018, led by ten politically influential GC3 member companies across the value chain – currently growing the SCA

Diverse business-driven advocacy voice for policies to support sustainable chemistry

Built website and social media presence, developed comprehensive lobbying and communications plan for 2019

Hosted dozens of hill and agency briefings and met with half of all congressional offices,

Successfully lobbied with other stakeholders for key changes that increase access to USDA funding programs for bio-based chemicals,

Leading efforts to build support for bipartisan/bicameral Sustainable Chemistry R&D Act
GC3 SCA Lobbying Priorities for 2019-2020

• Incentives and support for accelerated R&D
• Incentives and support for accelerated demonstration, adoption, and scale-up
• Education of policy makers
• Through
  – Establishing sustainable chemistry grant program
  – Robust appropriations
  – Sustainable Chemistry R&D Act and emerging legislation
Thank you!