



INNOVATIONS

IN GREEN & SUSTAINABLE CHEMISTRY FOR PHARMA INDUSTRY

19th -20th January – 2022

Venue : Online

Background

Quality product at competitive price & meeting regulatory norms, has made India a reliable supply chain partner for the Global Pharmaceutical Industry in the past two decades. While Pharma is amongst the fastest growing sectors, it has the highest E-Factor (Environment Factor, kgs waste per kg product). This magnifies the environmental impact of this sector.

With stricter enforcement of environmental norms by regulatory bodies; increasing awareness in common man regarding right to clean environment, demand by customers (global MNCs) to meet acceptable standards of Environment, Health & Safety (EHS) compliances, there has been a realization in the Pharma Industry that – to sustain the current double digit growth rates, it is imperative to adopt Green & Sustainable Chemistry based strategies, tools and practices & reduce its environmental footprint.

Our intention is to facilitate Indian Pharma Industry adopt Green & Sustainable Chemistry as a tool to enhance Economic & Environmental Competitiveness.

Objectives

- To share sustainability related business, regulatory, supply chain dynamics happening globally in Pharma Industry.
- To share green chemistry initiatives, technologies, successful case studies & best practices adopted by global pharma companies.
- To explore green chemistry tools like green solvent selection guide, reagent selection guide & green chemistry metrics.
- To share recent innovations in Flow Chemistry, Bio-catalysis, Chemo-catalysis & its successful implementation in Pharma Industry.
- To discuss need, relevance & best practices of process safety and environmental compliance in Pharma Industry.



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Day I - 19th January 2022 (Wednesday)**Expected Participants:** Senior representatives from Pharma Industry - R&D, Process Development, Technical Services, Scale-up

- Objectives:**
1. To share various business, regulatory, supply chain dynamics happening in Pharma Industry related to sustainability.
 2. To share Green Chemistry initiatives, successful case studies, tools & best practices by large pharma companies.
 3. To discuss need & relevance of Process Safety in Pharma Industry and share best practices.
 4. To share recent innovations like Flow Chemistry & its successful implementation in Pharma Industry.
 5. In Green Chemistry, identify challenges, gaps, mindset issues and discuss learnings from experiences of India & China.

India Time	Speaker, Designation, Company	Topics
09:00 - 09:02	Mrs. Krishna B. Padia, Executive Director, Green ChemisTree Foundation	Welcome & Prayer
09:02 - 09:05	Mr. Nitesh H. Mehta, Co-founder & Director, Green ChemisTree Foundation	Welcome, Acknowledgement, Introducing Dr. P. V. Srinivas
	Session Chair: Dr. P. V. Srinivas, President & CTO, PI Industries	
09:05 - 09:35	Dr. Sudhir Nambiar, Chief Scientific Officer, Solara Active Pharma Sciences	Business Case for Joining Pharmaceutical Roundtable (PRT)
09:35 - 10:15	Dr. Philippa Payne, Sr. Research Scientist, Gilead Sciences	The ACS Green Chemistry Institute Pharmaceutical Roundtable: Catalyzing green chemistry & engineering in the pharmaceutical industry
10:15 - 10:55	Dr. David Entwistle, Head of Process E22Chemistry, Codexis	Recent developments in Biocatalysis
10:55 - 11:00	Dr. P. V. Srinivas	Concluding Remarks & Acknowledgement
11:00 - 11:20	Tea/Coffee Break & Visit Exhibition	
	Session Chair: Dr. Rakeshwar Bandichhor, VP & Head of Chemistry - API PR&D, Dr. Reddy's Laboratories	
11:20 - 12:00	Dr. Paul Richardson, Director, Analytical & Synthetic Technologies, Oncology Medicinal Chemistry, Pfizer	ACS GCIPR Tools for More Sustainable Chemistry
12:00 - 12:40	Dr. Fabrice Gallou, Distinguished Scientist, Novartis	ACS GCIPR Solvent Selection Tool and recent developments in water-based chemistry
12:40 - 13:20	Dr. Jo Sampson, Associate Principal Scientist, Team Manager, CatSci	Ketone Reductase Biocatalysis in the Synthesis of Chiral Intermediates Toward Generic Active Pharmaceutical Ingredients
13:20 - 13:25	Dr. Rakeshwar Bandichhor	Concluding Remarks & Acknowledgement

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Day I - 19th January 2022 (Wednesday)

Contd....

India Time	Speaker, Designation, Company	Topics
13:25 - 14:25	Lunch Break & Visit Exhibition	
	Session Chair: Dr. Sudhir Nambiar, Chief Scientific Office, Solara Active Pharma Sciences	
14:25 - 15:05	Dr. Vicky Lange, Senior Scientist, Chemical Engineer Continuous Development & Manufacture, Pfizer	Driving API Carbon Footprint Reduction while increasing Agility and Addressing Supply Risk Through Continuous Processing
15:05 - 15:10	Dr. Sudhir Nambiar	Concluding Remarks & Acknowledgement, Inviting Panel Members
15:10 - 15:50	<p>Moderator: Dr. Sudhir Nambiar, Chief Scientific Officer, Solara Active Pharma Sciences Ltd.</p> <p>Panel Members:</p> <p>Dr. Louis Dorazio, Senior Principal Scientist, New Modalities, Chemical Development, AstraZeneca</p> <p>Dr. Alan Steven, Chief Scientist, CatSci</p> <p>Dr. Rakesh Ganorkar, Vice President - R&T, Hikal Ltd.</p> <p>Dr. Dhileep Krishnamurty, Member of Scientific Advisory Board, TCG Green Chem and Member of Advisory Board, Green Chemistry Journal</p>	Panel Discussion: "Emerging Technoloies that facilitate Green Chemistry"
15:50 - 15:55	Dr. Sudhir Nambiar	Concluding Remarks for Panel Discussion and Acknowledgement
15:55 - 16:00	Mr. Nitesh H. Mehta, Co-founder & Director, Green ChemisTree Foundation	Acknowledgement & Completion



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Day II - 20th January 2022 (Thursday)**Expected Participants:** Senior representatives from Pharma Companies - Production, Technical Services, Scale-up, EHS

- Objectives:**
1. To learn about PSCI, its objectives and its initiatives to support Pharma Supply Chain meet customer's expectations.
 2. To learn, in the domain of Process Safety Management, about Explosion Protection.
 3. In the domain of PiE (Pharma in Effluent) - learn about environmental concentrations for API loss in effluents.
 4. To learn different dimensions of Environmental Compliance.

India Time	Speaker, Designation, Company	Topic of Presentation
10:30 - 10:32	Mrs. Krishna B. Padia, Executive Director, Green ChemisTree Foundation	Welcome & Prayer
10:32 - 10:35	Mr. Nitesh H. Mehta, Co-founder & Director, Green ChemisTree Foundation	Welcome, Acknowledgement, Introducing Mr. Krishna Kumar Bhattacharjee
10:35 - 10:40	Session Chair: Mr. KrishnaKumar Bhattacharjee, Business Partner - Supplier Risk Management, Ethics Risk & Compliance, Novartis	
10:40 - 11:10	Mr. Manjit Singh, Associate Director, Sustainability, Centrient Pharmaceuticals	Introduction to PSCI
11:10 - 12:25	Mr. Shuquan Chen, Supplier Operations EHS Manager, Pfizer	Prevention of Dust and Flammable Vapor Explosion
12:25 - 12:30	Mr. KrishnaKumar Bhattacharjee	Concluding Remarks & Acknowledgement
12:32 - 13:30	Lunch Break & Visit to Exhibition	
13:30 - 13:35	Chair Person: Mr. Manjit Singh, Associate Director, Sustainability, Centrient Pharmaceuticals Ltd.	
13:35 - 14:35	Ms. Elizabeth Girardi-Schoen, Global Environmental Sustainability Leader, Pfizer Mr. Jason Rushing, PE, Principal Engineer and PiE Subject Matter Expert, Arcadis Mr. Nolan Chase, EIT, Consultant and PiE Specialist, Arcadis	Establishing Predicted Environmental Concentrations for API Loss from Pharma Manufacturing
14:35 - 14:55	Mr. Manjit Singh, Associate Director, Sustainability, Centrient Pharmaceuticals Ltd.	Q&A for Mr. Manjit Singh (on behalf of the presenters from Arcadis & Pfizer)
14:55 - 15:00	Mr. Manjit Singh	Concluding Remarks & Acknowledgement
15:00 - 15:30	Tea/Coffee Break & Visit to Exhibition	
15:30 - 15:35	Chair Person: Ms. Ranjana Ganguly, India EHS Leader, Pfizer	
15:35 - 16:35	Ms. Zelia Kranich, Sustainable Sourcing Director, Merck	Environmental Compliance in Pharma Industry
16:35 - 16:40	Ms. Ranjana Ganguly	Concluding Remarks & Acknowledgement
16:40 - 16:45	Mr. Nitesh H. Mehta, Co-founder & Director, Green ChemisTree Foundation	Acknowledgement & Completion



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About Pharmaceutical Roundtable

The ACS GCI Pharmaceutical Roundtable is the leading organization dedicated to catalysing the integration of green chemistry and engineering in the pharmaceutical industry. Established in 2005 by the American Chemical Society's Green Chemistry Institute, the Roundtable's activities are driven by the shared belief that green chemistry and engineering is imperative for business and environmental sustainability.

Members



About PSCI

The PSCI was formed as a non-profit business membership organization in 2006 and is legally established in the United States.

PSCI's vision is for excellence in safety, environmental, and social outcomes for the whole of the global pharmaceutical and healthcare supply chain. PSCI's purpose is to bring together members to define, establish, and promote responsible supply chain practices, human rights, environmental sustainability, and responsible business.

Partial list of "Full Members"



About Green ChemisTree Foundation

Green ChemisTree Foundation (GCF) is a registered not-for-profit organization committed to accelerating implementation of Green & Sustainable Chemistry across the global chemical industry. We engage with various stakeholders of chemical industry (including industry, government & regulatory bodies, industrial associations, solution providers, academia, students, media, etc) through diverse initiatives.



For Further Details

Green ChemisTree Foundation

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To register & pay online, please choose from below relevant Categories:

Category 1 - Industry Professionals:

Day 1	Day 2	Both Days
5000 INR/Per Delegate 19th Jan 2022	5000 INR/Per Delegate 20th Jan 2022	10000 INR/Per Delegate 19th & 20th Jan 2022

Note: 3 or more Participants (for both days) from the same organization will be eligible for 20% discount.

Category 2 - Academia/Research Institutes/Students:

Day 1	Day 2	Both Days
2500 INR/Per Delegate 19th Jan 2022	2500 INR/Per Delegate 20th Jan 2022	5000 INR/Per Delegate 19th & 20th Jan 2022

Taxes are applicable as follows: Above fees is excluding taxes
Maharashtra – CGST - 9% Other than Maharashtra – IGST - 18%
SGST - 9%

For registration kindly visit : <https://ahydev.industrialgreenchem.com/pharma-registration/>



To register offline:

- (i) Please download the below form, fill the relevant details
Link to download: <https://ahydev.industrialgreenchem.com/pharma-event-offline-registration/>
- (ii) Email us filled-up form on connect@industrialgreenchem.com, amardeep.gagat@industrialgreenchem.com
- (iii) You will receive proforma invoice for payment
- (iv) To confirm registration, make the payment & share with us payment details

Account Details for Payment Transfer:

Company:	Green ChemisTree Foundation	Account No.:	30932621346
Bank & Branch:	State Bank of India, Goregaon East Branch, Mumbai	Swift Code:	SBININBB518
		IFSC Code:	SBIN0001975
		GST No.:	GSTIN - 27AADCG5698Q1ZM

<p>Knowledge/Resource Partners</p>  <p>ACS Green Chemistry Institute[®] Pharmaceutical Roundtable</p>  <p>PSCI PHARMACEUTICAL SUPPLY CHAIN INITIATIVE Building responsible supply chains</p>	<p>Sustainability Partner</p>  <p>NEWREKA Green Chemistry for Value</p>	<p>Green Chemistry Partner</p>  <p>Inspired by Science</p>
<p>Industry Partners</p>   <p>LAURUS Labs Knowledge . Innovation . Excellence</p>  <p>Bristol Myers Squibb</p>	<p>Supporters</p>  <p>Maharashtra Pollution Control Board</p>  <p>Telangana State</p>  <p>BDMAI BULK DRUG INDUSTRY ASSOCIATION OF INDIA</p>  <p>pharmexcil PHARMACEUTICALS EXPORT PROMOTION COUNCIL OF INDIA (Set up by Ministry of Commerce & Industry, Govt. of India)</p>  <p>ISC₃ International Sustainable Chemistry Collaborative Centre</p>	<p>Media Partners</p>  <p>Chemical Weekly</p>  <p>Indian CHEMICAL News</p>  <p>iP Indian Pharma Post</p>



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Dr. Alan Steven
Principal Scientist,
CatSci.



Dr. David Entwistle
Head of Process
E22Chemistry,
Codexis



Dr. Dhileep Krishnamurthy
Member of Scientific
Advisory Board,
TCG Green Chem,
Member of Advisory Board,
Green Chemistry Journal



**Ms. Elizabeth
Girardi-Schoen,**
Global Environmental
Sustainability Leader,
Pfizer



Dr. Fabrice Gallou,
Distinguished Scientist,
Novartis



Mr. Jason Rushing, PE,
Principal Engineer
and PiE Subject
Matter Expert, Arcadis

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Dr. Jo Sampson
Associate Principal
Scientist,
Team Manager, **CatSci**.



Mr. KrishnaKumar
Bhattacharjee,
Business Partner -
Supplier Risk Management,
Ethics Risk & Compliance,
Novartis



Dr. Louis Dorazio
Senior Principal Scientist,
New Modalities,
Chemical Development,
AstraZeneca.



Mr. Manjit Singh
Associate Director,
Sustainability,
Centrient Pharmaceuticals.



Mr. Nitesh H. Mehta
Co-founder & Director,
Green ChemisTree
Foundation



Mr. Nolan Chase,
EIT , Consultant and
PiE Specialist,
Arcadis



Dr. Paul Richardson,
Director, Analytical &
Synthetic Technologies,
Oncology Medicinal
Chemistry, **Pfizer**



Dr. Philippa Payne,
Sr. Research Scientist,
Gilead Sciences

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Dr. Rakesh Ganorkar,
Vice President - R&T,
Hikal Ltd.



Dr. Rakeshwar Bandichhor,
VP & Head of Chemistry -
API PR&D,
Dr. Reddy's Laboratories



Mr. Shuquan Chen,
Supplier Operations
EHS Manager,
Pfizer



Dr. P. V. Srinivas,
President & CTO,
PI Industries



Ms. Ranjana Ganguly,
India EHS Leader,
Pfizer



Dr. Sudhir Nambiar
Chief Scientific Officer,
**Solara Active
Pharma Sciences**



Dr. Vicky Lange,
Senior Scientist,
Chemical Engineer
Continous Development
& Manufacture,
Pfizer



Ms. Zelia Kranich
Sustainable
Sourcing Director,
MSD