



September 13th – 16th, 2021
Lakeway Resort & Spa
Lakeway, TX

HCPA is pleased to provide you with an updated preliminary program for its New Horizons Conference. This advanced course for cleaning products professionals will focus on the latest technologies and the challenges of emerging trends in the field.

PROGRAM AGENDA

Monday, September 13th, 2021

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| 4:00 – 6:00 pm | Registration |
| 5:00 – 6:00 pm | Welcome Reception |
| 6:00 – 8:00 pm | Dinner and Keynote Speaker
<i>Sponsored By: State Industrial Products</i>
Remarks from Conference Chair: Rebecca Korwin, Ph.D., State Industrial Products

Innovating for a Circular Economy
Dr. Pete Christensen, PhD, Co-Founder, FLO.materials (<i>in-person</i>) |

Tuesday, September 14th, 2021

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| 8:00 – 8:30 am | Registration and Continental Breakfast
<i>Sponsored By: Spartan Chemical</i> |
| 8:30 – 12:00 pm | Sustainable Packaging
Session Chair: Michael Burdick, Phibrochem™ |

The intent of this session is to hear from industry experts that are driving sustainable packaging in their markets. These experts will share with you their goals, visions, and challenges for each segment of industry that they touch, for the new decade and beyond. We have assembled a panel of experts that

represent the raw material suppliers, manufactures, converters, and retailers. Each panelist will present their strategy for driving our industry towards a more sustainable future.

- 8:30 – 8:45 am: Overview and Introduction
- 8:45 – 9:30 am: Kaela Martins, Manager, Environmental Programs, Retail Industry Leaders Association (*virtual*)
 - **LDPE Film Packaging Sustainability in Retail:** RILA will share insights and lessons learned from the retail industry on packaging sustainability. The presentation will include a discussion of tradeoffs, supplier engagement, and how sustainable packaging solutions move through supply chain distribution centers. LDPE Film, a common packaging type used in retail packaging applications, will be the primary focus for this presentation.
- 9:30 – 10:15 am: Kevin Callahan, Chief Operating Officer, Barrier Plastics (*in-person*)
 - **Protective Packaging:** The session will take a deep dive into protective packaging and delve in the scientific foundation of packaging choices and design. Packaging design, analysis and alternative technologies will be presented.
- 10:15 – 10:30 am: Break, Break, *Sponsored by Givaudan*
- 10:30 – 11:15 am: Ken McGuire, Research Fellow, The Procter & Gamble Company (*in-person*)
 - Procter & Gamble has set ambitious sustainability goals for the future. Ken’s talk will cover their Ambition 2030 goals geared towards improving sustainable consumption, ensuring 100% of their packaging is recyclable or reusable, and reducing the use of virgin petroleum based plastics by 50%. In addition, he will discuss three different projects – from the perspective of R&D - in various stages of execution to demonstrate how the company is working to achieve these goals: Virgin Recycled Resins (being commercialized by PureCycle), Holy Grail, and EC30
- 11:15 – 12:00 pm: Christopher Layton, Director of Sustainability, Plastics Division, Eastman Chemical Company (*virtual*)
 - **No trade-offs. No compromises. Here’s how to create a recycled content reality that works:** The promise of recycling sounds pretty amazing – today’s package becomes tomorrow’s package over and over and over again. Except that we’re not currently delivering on that promise when it comes to plastics. As you likely know, our current mechanical system works very well for some plastics, but it’s not equipped to handle complex multi-layered packages, films or other innovations that have delivered countless product and consumer benefits. That means our current system struggles to create the amount of quality recycled content brands need to fulfill their recycled content goals. So, how can brands deliver on their recycled content goals, and deliver on the promise of recycling, without compromising the performance or quality of their packaging and products? Material-to-material molecular recycling is a key piece of the equation. By breaking plastics down to their molecular form, this process produces recycled content that looks like — and performs like — first-generation content. Better yet, molecular recycling enables the use of waste plastic in durable, refillable and reusable applications. Not only can molecular recycling help brands create better packaging solutions, but it also

delivers these solutions with a lower environmental impact than first-generation, non-recycled materials. In a fast-moving presentation, Chris Layton from Eastman will walk through our current recycling realities, how molecular recycling complements current recycling solutions and how it enables challenging applications in new ways.

12:00 – 1:30 pm

Lunch

Sponsored By: Phibrochem

1:30 – 5:00 pm

Probiotics

Session Chair: Alex Perez, Reckitt

This session will cover how probiotics are used in industrial and domestic cleaning scenarios as well as discuss how this sector has evolved and how it will continue to evolve.

- 1:30 – 1:45 pm: Overview & Introduction
- 1:45 – 2:30 pm: Ken Roach, Technology Fellow, Diversey, Inc. (*virtual*)
 - **Bio-Augmented Cleaning, Superior Results with Water and Time Savings:** During this session, Ken will review why we should want to use bio-augmented cleaning, cover the benefits available through the use of bio-augmented cleaning including several before and after photos, discuss benefits available through bio-augmented cleaning, and last, review where this technology is used, could be used and where it is not suitable.
- 2:30 – 3:15 pm: John Harp, Senior Scientist, Novozymes, (*virtual*)
 - **Cleaning with microbes: the way nature does it:** Microbes, our invisible neighbors, have been discovered on every surface that humans have sampled, and each microbe plays a critical role that humanity has benefited from immensely. Unfortunately, fear of this invisible world, has instilled a mindset of ‘disinfect and sterilize everything first then ask questions later’. It is fair to say that this mindset is not without validation, due to the COVID-19 global pandemic and other microbial related healthcare incidents. However, as we become more aware of the delicate interplay between microbes and humans, data suggests that health-related issues can arise when this relationship is disrupted or altered. We are learning that disinfection or the use of kill-based cleaning chemistry is not always the solution. There is a time and a place for targeted hygiene. As we increase our knowledge of these learnings, it is time to think differently about our cleaning products and start thinking about ways to clean effectively, but not at the expense of our well-being. The future of cleaning is one where sustainable solutions work with the microbes in our lives instead of against them. After all, microbes have been involved in cleaning our planet for a very long time. At Novozymes, we believe that biology can deliver effective and innovative cleaning solutions, we just need to discover them and unlock their potential. This is no simple task because formulating effective microbe containing cleaning products must balance chemical efficacy, with that of microbial efficacy. However, when the proper combination of chemistry is achieved, the potential for delivering a safe dose

of safe microbes that can remain behind after wiping and reside in areas where traditional chemistries will not have an effect, increases. Here we show that it is indeed possible to formulate with microbes in mind and that it is possible to have a stable and efficacious product. Further, we show that microbes can respond to natural soils found in the built environment and even act as a surface shield waiting for the right time to respond. Microbes have lived alongside us for a very long time, and they are powerful and useful. It is time for us to open our doors to these invisible neighbors and see just how powerful they can be.

- 3:15 – 3:30 pm: Break
- 3:30 – 4:15 pm: Megan Thoemmes, UC San Diego School of Medicine (*in-person*)
 - **Biocontrol in hospitals: application of *Bacillus*-based probiotic cleaners to reduce the abundance of antibiotic-resistant pathogens on surfaces.** Hospital occupants are frequently exposed to, and subsequently colonized by, antibiotic-resistant bacteria through contact with contaminated surfaces (i.e., fomite transmission) or through physical contact between individuals (i.e., person-to-person transmission). This risk of exposure is likely to have increased with the overuse of antibiotics, which has led to the widespread persistence of antibiotic resistance genes (ARGs). As healthcare acquired infections are now a leading cause of disease and mortality worldwide, resulting in nearly 100,000 deaths per year in the United States alone, it is highly important to reconsider how we manage our healthcare environments and ultimately reduce exposure risk to these pathogenic microbes. One promising approach is the use of *Bacillus*-based probiotic cleaners. Recent research has suggested that probiotic cleaners reduce the abundance of ARGs and competitively exclude pathogens on surfaces in hospitals at rates of 90 - 99% more effectively than existing chemical cleaners, and additional work from our lab has shown that *Bacillus* bacteria are able to produce chemicals with antimicrobial properties on surfaces. However, we lack rigorous testing of these products in the lab and in diverse hospital settings, including between units of differing patient care types and among areas that are used primarily used by healthcare workers, as they are a reservoir of antibiotic-resistant pathogens and a common vector of bacteria from themselves to patients. Due to this, we aim to 1) determine the growth potential of multidrug-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa* isolates in surface co-cultures with a *Bacillus*-based probiotic cleaner (Novozymes, USA), and 2) evaluate ARG and pathogen abundance in nurses' stations and staff breakrooms before, during, and after probiotic cleaner application in 10 different units at Rady Children's Hospital - San Diego.
- 4:15 – 5:00 pm: Seiichi Murasaki, Branch Chief, Microbial Pesticides Branch, EPA (*virtual*)

5:00 – 6:00 pm Reception

Wednesday, September 15th, 2021

9:00 – 9:45 am Continental Breakfast
Sponsored By: BioScience Laboratories, LLC

9:45 – 11:45 am Big Data / Internet of Things

This session will highlight leading applications of digital technology designed for applications in the cleaning industry. The speakers will present commercial offerings in this space and demonstrate the unique value these technologies have delivered to their customers.

- 9:45 – 10:00 am: Overview and Introduction
- 10:00 – 10:45 am: Cheryl Littau, Corporate Scientist, Ecolab (*in-person*)
 - **Big Data Coupled with Immediate Individual Feedback: How an Electronic Hand Hygiene Compliance Monitoring System Yields Powerful Insights and Behavior Change:** Improvement of Hand Hygiene (HH) compliance in healthcare is a common and fundamental goal to improve patient outcomes. Sustained achievement of that goal has proven difficult because traditional methods of measurement (direct observation of human performance by other humans), collation of the data, and feedback to individual users are time consuming, labor intensive, and don't often provide "real time" feedback. Use of an electronic hand hygiene compliance monitoring system (eHHCMS) increases the amount of data available to evaluate staff behavior >100 fold versus even the most ambitious traditional "direct observation monitoring" programs. Automated data generation is combined with contextual information (where, when, who, what), and system set up (implementation) is critical to generating meaningful data. Knowing soap/sanitizer was dispensed 20,000 times/day at a hospital is just a fun fact. But knowing how that activity is distributed--across job function/shift/unit/etc.--gives the ability to gain insight into not only compliance, but also workflow issues, dispenser placement, etc. We also can't forget the need for immediate feedback to end users: we want to change behavior, not just learn that mistakes were made in the past...even the recent past. Collecting the data is only the first step. Understanding what the data can tell us, and what information is critical to the users, is an ongoing journey, and requires close collaboration between the people who can mine the data and the people who need the insights to improve performance. As we saw clearly during 2020, new needs arise for existing data, and ongoing dialog and collaboration can bring powerful new insights from the same data set.
- 10:45 – 11:00 am: Break, *Sponsored by Givaudan*
- 11:00 – 11:45 am: Yoav Hoshen, Co-founder, SVP Sales & Business Development, impacX (formerly Water.io) (*virtual*)

11:45 am – 5:30 pm	Open Time
5:30 – 6:30 pm	Reception
6:30 – 8:30 pm	Divergent Thinking Workshop Session Chair: Maggie Gottardi, Manager R&D, State Industrial Products (<i>virtual</i>)

The divergent thinking workshop will cover both divergent and convergent thinking processes in relation to innovation and brainstorming. The focus will be on divergent thinking, explaining the benefits, strategies, and why it fosters innovation. We will also discuss negative thinking patterns that hinder innovation, such as discounting, leading language, de-validation, and groupthink. The workshop will include several divergent thinking exercises.

Thursday, September 16th, 2021

8:00 – 8:30 am Continental Breakfast

8:30 – 11:15 am Designing Products with the Consumer in Mind
Session Chair: Mark Ventura, Church & Dwight

This session will explore the innovative, design thinking approach to creating products with the consumer in mind throughout the product development journey juxtaposed with a presentation on using high-throughput data to generate ideas for new products. It will also explore consumer trends in the cleaning industry and provide a glimpse into emerging product categories of the future.

- 8:30 – 8:45 am: Overview and Introduction
- 8:45 – 9:30 am: Alexandra Gonzalez, CEO & Co-Founder, Savvy Marketers (*virtual*)
- 9:30 – 10:15 am: Cory Fites, Associate Design Director, Strategy & Innovation, The Clorox Company (*in-person*)
 - **The “Evolved” Consumer Experience:** The world has changed and with it consumer values and priorities. Come look at what’s on the horizon as user expectations dramatically shift and begin breaking down what this new landscape means for you.
- 10:15 – 10:30 am: Break
- 10:30 – 11:15 am: Filip Huffmann, Head of Home Care Research, Euromonitor (*virtual*)

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