

*The Society of Flavor Chemists, Inc.*

# SOCIETY NEWS

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## President's Message

Dear Members,

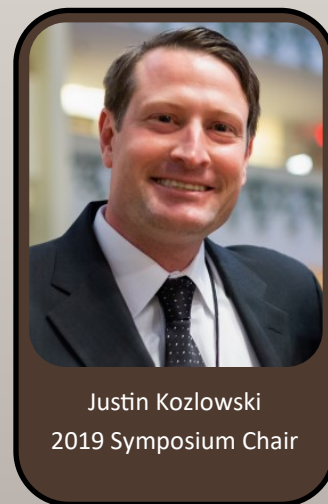
We had a flurry of events and activities these past few months. As a result this newsletter is chock-full of pictures I hope you will enjoy. We are getting ready for the start of the new year when our meetings start back up. Please see the save-the-date page for info on our upcoming meetings.

Our 65th year anniversary was marked with a very memorable symposium. This event was a success in more ways than one. We received excellent feedback and wonderful comments. I would like to take a moment here and recognize the man behind the scenes. Justin Kozlowski emerged from obscurity two years ago to step up and be the fearless 2019 Symposium Chairman. Admittedly inexperienced as he was in event planning of this kind, one would never know as he pulled volunteers together and organized an effective team to bring the results he envisioned for this event for the benefit of the Society. We realize this is no easy feat. Justin did an incredible job and we are enormously grateful for all the time and effort he poured into this two-year project.

I want to thank all of you who attended the special meeting at the symposium and participated in the voting. The proposal to change the dues statement in the by-laws is significant and I wanted it voted on by a large cross section of our membership. The support it garnered is not lost on me. The board will follow through respectfully and will provide financial information at the May 2020 meeting.

As we approach the holiday season, I would like to wish you all the happiest of holidays filled with warmth and fun memorable moments with your loved ones

*Elsa Howerth*



Justin Kozlowski  
2019 Symposium Chair

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# 2019 SYMPOSIUM HIGHLIGHTS



## 2019 Flavor Symposium

“Creating Flavors for a Changing Global Market”

October 16 & 17, 2019

Hyatt Regency, Princeton, NJ

By Sharon Tortola

*The* program began on a very chilly but dry morning with Elsa Howerth, President of the SFC, giving the opening remarks, speaking about the history of the Symposium and the agenda for the 2019 Symposium.

John Wright followed as the keynote speaker and spoke about his career as a flavorist and who he learned from.

*“If we had to choose an avatar, what would it be...a swallow soaring high on wings of inspiration or a scientific owl carefully pondering the deeper truth behind each complex challenge? Many of use empathize admittedly in widely varying degrees, with both noble images—but perhaps the best avatar of all is a magpie scooping up ideas wherever they may be found....”*



Magpies



It was a full house! Outstanding attendance by SFC members and non-members alike. It was great to see such diversity in the crowd, from juniors to seniors and everyone in between. The program offered something for everyone.

# 2019 SYMPOSIUM HIGHLIGHTS



Safety Assessments  
of Flavorings:

FEMA GRAS and  
IECFA

The keynote address was followed by several sessions on Regulatory topics including FEMA GRAS, JECFA, and flavorings with modifying properties within the IOFI guidelines. Sean Taylor PhD. from the FEMA Expert Panel spoke about FEMA GRAS and JECFA; Lorna Hopkinson and Kathleen Crossman from ADM spoke about the ever-changing landscape of flavor regulation, including Flavorings with Modifying Properties.



Stop worrying  
about the  
potholes in  
the road and  
enjoy the  
journey.

- Babs Hoffman



*Symposium summary written by Sharon Tortola. Sharon has been an active certified member since 2017 and is a new member of the Media Committee. She currently works for IFF.*

# 2019 SYMPOSIUM HIGHLIGHTS

These sessions were followed by a demonstration of sensory guidelines for FMPs provided by Rob Hastings from Almendra which included 2 tasting exercises – one involving ketchup and one involving lemon tea. These exercises showcased sensory testing methods for FMPs.



**When  
FMPs  
Function  
as  
Flavors.**



# 2019 SYMPOSIUM HIGHLIGHTS



After a lovely lunch, the program continued with a session on Gum Acacia and its uses in spray drying led by Damien Guillernet from Nexira. After break, Richard Pisano, Jr. of C&A, JD Vora from MANE, and Pia Henzi of MCI Miritz, gave spirited talks about various flavor ingredients in crisis around the globe. The final session of Day 1 was given by Yvonne Jin and Xavier O'Connell from Ingredion in which they discussed using Modified Food Starch in spray drying.



# 2019 SYMPOSIUM HIGHLIGHTS



At the special meeting, three candidates were voted in. Yuhong Chen from Mother Murphy's Lab upgraded to Certified. Jennifer Meehan from Firmenich became a new Apprentice member. Ryan McCoy from Flavor Producers upgraded to Certified.

The Certified SFC Members Special Meeting involved a spirited discussion about the proposed by-law change concerning SFC dues which in the end passed a two-thirds majority vote.



A momentous occasion for The Society Of Flavor Chemists! — the largest gathering of voting members at the 2019 SFC Flavor Symposium special meeting. Juniors, Seniors, Emeritus from different companies across the US and Canada made up the 75 voting members in attendance. Thank you for your participation. This was awesome!

# 2019 SYMPOSIUM HIGHLIGHTS

The cocktail hour featured a signature drink called “A Toast to Taste”, especially concocted to commemorate the 2019 symposium and our 65 year anniversary. It was developed by a group of Flavorists, which included former SFC President, Ken Kraut, to deliver many elements of flavors. The cocktail recipe contained ginger to represent eastern cultures, chili pepper to represent Latin western cultures, lemon and rum as sweet tastes, and rosemary for savory.



Cathianne Leonardi from ADM Wild gave a very entertaining dinner talk about flavor and sound and the perception of taste.

# 2019 SYMPOSIUM HIGHLIGHTS

*Day 2* of the program began on a very windy morning with back to back sessions on the use of cannabis in food and beverages and CBD regulations given by Scott Reifler of SoRSE Technology and Joanna Drake, General Counsel for FEMA. .

This was followed by Nadia Berenstein PhD. And her talk about the value of flavorists in the global market.

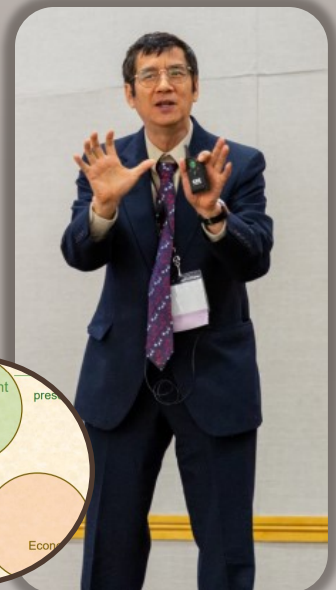


After the break, Joe Peragine from McCormick & Co. presented a lively session about the Fundamentals of Savory Flavors.



Fatty	Supp...
2,4-Decadienal	Trimethy
3-Methyl Octanoic Acid	Acetyl Th
4-Methyl Octanoic Acid	Butanethi
Acetyl Pyridine	Sulfuro
Oleic Acid	Dimeth
4-Methyl Nonanoic Acid	Acet
Nonanoic Acid	

Then Sara Risch, Director of R&D and Private Label Sales for Popz Europe and Kit Yam, Professor of the Department of Food Science at Rutgers University, spoke about the challenges of flavor retention within sustainable packaging.

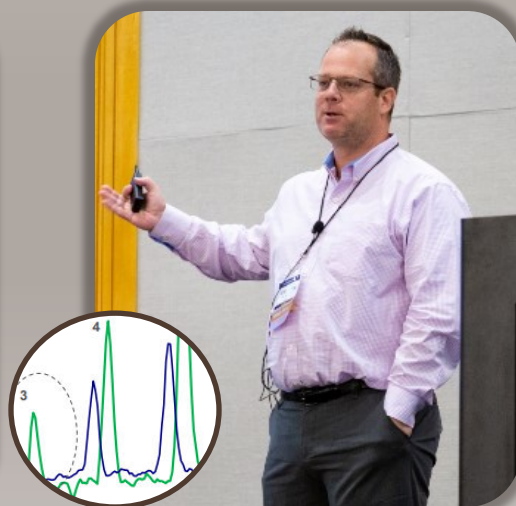


# 2019 SYMPOSIUM HIGHLIGHTS

Following a lovely lunch, a distinguished panel of Senior Flavorists answered questions from the audience regarding their careers as flavor chemists. The panel members were Mike Fasano, Alfred Goossens, Leslie Fisher, and John Wright. Dolf DeRovira, President of Flavor Dynamics, Inc. was the emcee for the panel.



The program ended with sessions on TTB flavor guidance and GC sample prep tips and the benefits of GCO analysis, given by Neil Pennington from TTB and Eric Pavlich from Agilent and Nicole Curto from GERSTEL, Inc., respectively.



# 2019 SYMPOSIUM PHOTO GALLERY



# 2019 SYMPOSIUM PHOTO GALLERY



# 2019 SYMPOSIUM PHOTO GALLERY



# 2019 SYMPOSIUM PHOTO GALLERY



## 2019 Symposium Committee

Members in attendance — Ronnie McBurnie, Leslie Fisher, Sharon Tortola, Deborah Osborne, Katie Beaver, Alpa Roman, Elsa Howerth, Aparna Oak, Shane McDonald, Mike Fasano, Paul Ricciardi, Ilya Flaks, Cristalle Keane, Joan Harvey, Jennifer Tartaglia, Cindy Cosmos, Holly Bohlke, Christine Conlay, Rob Calez, John Heller, Justin Kozlowski.

# 2019 SYMPOSIUM PHOTO GALLERY



Present & Past Presidents  
Current President—Elsa Howerth  
Past Presidents from left to right  
Kent Zeller, Alfred Goosens, Ronnie McBurnie, Mike Fasano, Dolf DeRovira, Joan Harvey, Deborah Osborne, Sam Tharpe, Gary Raab.

Current Board of Directors  
Left to right  
Treasurer—Cathianne Leonardi  
Secretary—Chris Williams  
Vice President—Paul Ricciardi  
President—Elsa Howerth  
Chairman—Sam Tharpe



*Symposium photos are now available. The complete gallery of photos can be viewed on the SFC website.*

# EVENTS



Tour of  
Citrus & Allied Essences  
Ltd.  
Belcamp, MD  
Aug 15, 2019



*By Robert DeMichele*

To a flavor chemist, raw materials are what paint is to an artist. They are the tools of our trade and we know them intimately well. After 13 years in the flavor industry, I have used these raw materials on a daily basis. From absolutes, concretes, essential oils, extracts, essences, distillates, etc. to the numerous aroma chemicals, they each have their own uniqueness. I have spent time reading numerous books and articles on these materials to learn the methods and processes in order to obtain and produce them. For the first time in my career I, along with approximately 25 other industry colleagues, were afforded the opportunity to see firsthand how some of these materials are manufactured. Thanks to the Society of Flavor Chemists and Citrus and Allied, we were given the opportunity to visit their production facility in Belcamp, Maryland. Citrus and Allied was established in 1933 and has been providing essential

oils, aroma chemicals etc. to the Flavor & Fragrance industry for more than 85 years. They are well known for their citrus, mint and spice oils and service the industry worldwide.

My day began with a drive from northern NJ to their facility in Maryland. The Society of Flavor Chemists offered a roundtrip shuttle but I car-pooled with three colleagues instead. We arrived at C&A to a warm welcome and were given our name badges. We were treated to a nice breakfast before the tour began and given time to mingle and introduce ourselves to each other. Attendees were from New Jersey, Maryland, the Midwest and even Canada. As the tour began, we split off into two groups. One group toured production while the second ground evaluated products. I was part of the group that began with the production tour. As with any production facility, safety first. We adorned our safety glasses and hairnets and were off. Immediately as I walked through the entry doors, I was in sensory overload. The aroma



## C&A tour continued.....

of cassia and citrus, the sight of drums upon drums of product, the massive stills that in some cases are older than I am. There was so much to see and take in. Our tour guides for the day, Al Bauer and Richie Pisano, did an excellent job explaining everything.

We began in the essential oil room where we saw vertical stills distilling Bergamot and a number of specifically designed horizontal stills also in use. Next, we made our way to the aroma chemical area where materials such as geranyl acetate were being produced. They explained to us that they are the only manufacturer of massoia lactone in the United States and due to its tendency to be a skin sensitizer, it has to be done behind closed doors. After that, we entered what was probably my favorite area of all, the mint room. The wonderful

aroma of fresh, sweet mint permeated my nose. It is something I will not soon forget. We were then shown their molecular still and given an overview of how it functions. Next, we were led through a door into a room that housed massive storage

tanks where they stored material such as orange oil. Seeing these storage tanks really put into perspective the quantity of material that they han-

dle. Lastly, we walked through the QC department where we met staff members that explained



to us the amount of work that goes into that aspect of the process. After we finished our tour, it was time for the two groups to swap and my group's turn to evaluate products. The presentation was on novel citrus varieties. Some items included Sicilian mandarin and blood orange oils, Spanish

Clementine oil, Italian primofiore lemon oil produced from the first flowering (primo fiore) and yuzu oil. All of the products were very interesting. Finally, after both groups were done touring the plant and evaluating products, we left C&A and headed to the Maryland Golf & Country Club for a fantastic lunch.

Overall, this was an excellent experience. I really enjoyed myself and learned so much. I am sure every-

one else in attendance would echo the same opinion. I look forward to other events like this in the future. A big thank you to The Society of Flavor Chemists and to Citrus and Allied for their hospitality.



*Robert DeMichele has been an active certified member since 2013. He volunteers in the Membership Committee and currently works for Flavor & Fragrance Specialties.*

# C&A tour continued ...



# C&A tour continued ...



# MEETING NEWS



## 442nd Meeting of the Society Of Flavor Chemists, Inc. Thursday, September 12, 2019 Chicago Marriott Suites, Downer's Grove, IL

By Holly Bohlke

*WFO* had a beautiful day for the 442<sup>nd</sup> Meeting of the Society of Flavor Chemists, Inc. in Downers Grove, Illinois on September 12, 2019. The meeting was well-attended with over 100 participants! The meeting chair was Justin Kozlowski of Imbibe.

Following the delicious buffet lunch, we gathered in the meeting room for our first presentation, sponsored by the Chemical Sources Association (CSA). Luke Grocholl, Global Regulatory Manager at Millipore Sigma, presented a wonderfully insightful exploration on vanilla entitled *Vanilla: From Jungle Orchids to GMO*. He approached the subject of vanilla from a historical perspective from ancient to modern history where it is

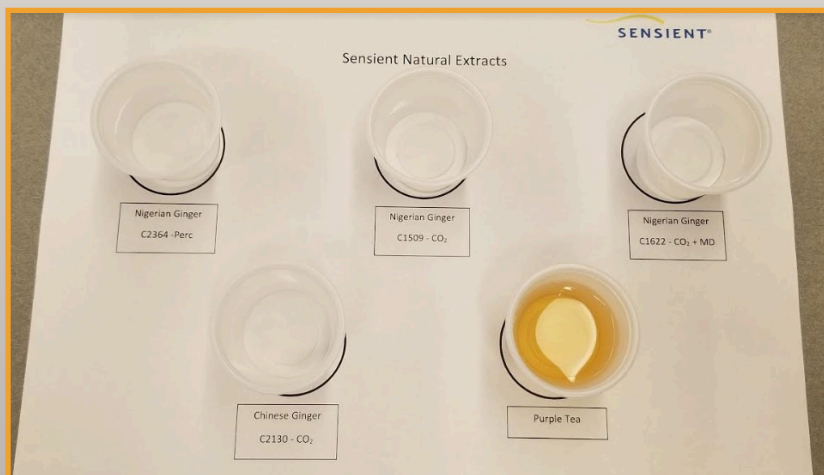
arguably the most popular flavor in the world. Originally, the small orchid native to Mexico was unable to be grown anywhere else in the world until the discovery of hand pollination by twelve-year-old Edmond Albus of the Reunion Islands. This development led to the global market that we see today for vanilla and vanillin, for which Albus never received recognition in his lifetime. Today, with advancements in technology, vanillin can be derived from many sources, including ferulic acid, lignin, clove, curcumin, and GMO biotechnology. Following the presentation, we organoleptically evaluated natural vanillin (ex. Ferulic acid), ethyl vanillin, and natural vanillyl butyl ether in dilutions. Thank you, Luke, for the wonderful presentation on vanilla!



## Chicago meeting continued.....



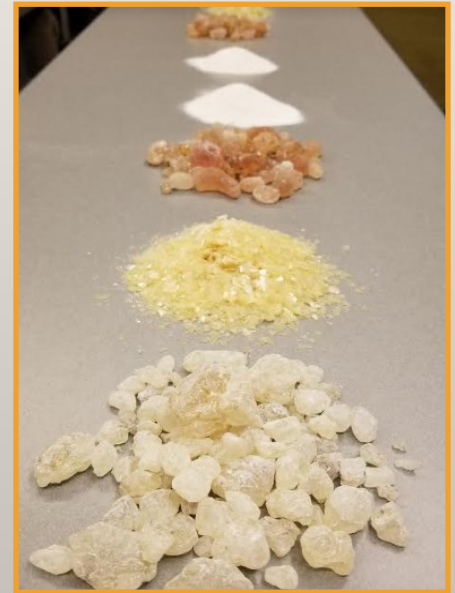
The next presentation was given by Joel Longbons, Global Extracts Manager, and Darryl Terry, Chief Master Flavorist, both from Sensient. Their presentation was entitled *Sensient Natural Extracts – Extracts at Their Purest*. They presented on Sensient’s technology for creating clean label extracts and their advanced extraction capabilities. The different types of extractions include percolation, distillation, CO<sub>2</sub>, counter-current, and subcritical water. We evaluated Nigerian Ginger extracts produced via three different methods, one via percolation, one via CO<sub>2</sub> extraction, and one via molecular distillation. They all displayed differences in flavor and aroma, with the percolation method having earthy, citrus flavors, and the CO<sub>2</sub> sample having more freshness and heat. The presentation concluded with an overview of Sensient’s functional extracts capabilities and a sampling of purple tea. Thank you, Joel and Terry, for sharing Sensient’s capabilities with us!



## Chicago meeting continued.....



The third presentation of the day was given by Bastien Berepion, PhD., of Nexira. His presentation, entitled *Nexira Tips and Tricks and How to Formulate a Stable Beverage Emulsion*, pro-



vided insight into formulating emulsions with Nexira's different types of Acacia gum. He discussed Acacia gum's capabilities as a stabilizer and emulsifier as well as Damar gum as a weighting agent and a clean label, natural alternative to ester gum. He also provided tips and tricks on how Nexira can help address challenges in emulsions and how to create stable emulsions for different flavor systems. Each attendee received a sample of raw gum Acacia exudate to gain an understanding of how it looks before it is processed into commercially viable Acacia gum. Thank you, Bastien, for sharing Nexira's capabilities with us!



The final speaker of the day was Elizabeth Humston-Fulmer, PhD., of LECO. Her presentation was entitled *Why LECO GC-MS is an Important Tool for the Flavor Industry to Develop Better Flavors*. She discussed the industry-leading technology LECO has developed for characterization and comparison of aroma chemicals for sensory and chemical analysis. LECO's technology can provide a wide range of benefits that can be utilized by flavorists when creating new flavors. For example, it can provide insight when comparing the aroma of fresh strawberries and strawberry candies. Their tool can

create a chemical breakdown of each the component present in the strawberry flavor so a flavorist can note key differences between the samples. Similarly, we saw how it can pinpoint and compare differences in perfumes, as well as create sensory data to identify chemicals which cause flavor degradation and off-notes in wines. Thank you, Elizabeth, for sharing LECO's capabilities with us! ❖❖❖

*Holly Bohlke has been an active certified member since 2018 and is a new member of the Media Committee. She currently works for Imbibe.*

# Chicago meeting continued.....

We concluded the day with the SFC business meeting and introduced five new members into the SFC who successfully passed their exams. We concluded the day with happy hour and cocktails. Thank you to everyone who helped make this meeting a success!



# Chicago meeting continued.....



# More on the Chicago meeting.....



# EVENTS



## 2019 Flavorcon

“Where Delicious Innovation Begins”

November 11 & 12, 2019

Duke Energy Convention Center, Cincinnati, OH

*By Amy Yap*

Palpable excitement filled the air as flavor industry professionals gathered to discover the latest developments at the fifth Flavorcon held November 11-12, 2019 in Cincinnati, Ohio. Presentations highlighted pertinent topics including flavor components in wine and fragrance, flavoring challenging applications, and the changing regulatory landscape for functional food products. Attendees sampled new ingredients and technologies in the expo hall and networked with their colleagues at the events at Q Laboratories and Rhinegeist Brewery.

The flavoring of applications such as non-dairy cheeses, plant based proteins, and the regulatory challenges of functional foods were highlighted by Praveen Upreti, Sudarshan Nadathur, Nadji Rekhif, Jon Fernandez, Sean Arnold, and Tony Moore. Participants tasted samples and pairings while Elizabeth McCall from Woodford Reserve and Travis Houston from Rhinegeist Brewery discussed flavor compounds, their development, and roles in bourbon and beer.



*Presentations highlighted innovation and inspiration in the flavor industry.*



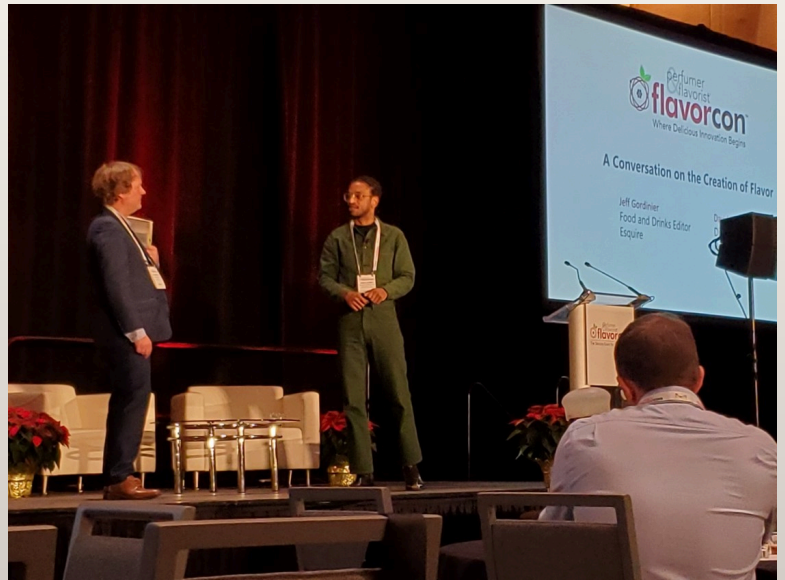
*Attendees heading into the expo hall*



*On the expo floor, 68 exhibitors demonstrating products and services relating to flavor, from ingredients to manufacturing equipment and logistics.*

## Flavorcon continued.....

The culinary world serves as a source for innovation as demonstrated in the presentation delivered by NOMA's David Zilber and Esquire's food & drink editor Jeff Gordinier. Zilber is the head of the fermentation lab at one of the world's most sought after restaurants. Starting by foraging for locally available ingredients, employing a variety of fermentation techniques, and sheer work ethic, Zilber and his team push flavors to the edge. Their objective is to discover new taste intensities that elicit sheer awe. Zilber's talk encourages us to look at the ingredients and processes available to us, and how the two can be applied in novel ways to create synergistic and compelling products



*NOMA's David Zilber and Esquire's food & drink editor Jeff Gordinier discuss culinary developments in fermentation*



*John Wright discussing the characterizing components of wine varieties*

John Wright's presentation highlights the chemicals present in different wine varieties and which arise through that aging and fermentation process. Wright discussed the history of wine and how the 1976 judgements in Paris provided a paradigm shift in the world of wine from the importance of terroir to the importance of the winemaker's expertise. While we sampled wines fermented from different grapes, Wright walked through the important chemicals for the flavor profile ranging from unfermented wine grapes (damascenone and geraniol), difference in varieties (methyl cinnamate in Grenache, rotundone in Shiraz, 4-mercapto-4 methyl pentane -2-one in Sauvignon Blanc), fermentation (ethanol esters, cross esterification esters, methyl thiopropanal), oak age (phenols, vanillin, whiskey lactone), and bottle aging (ethyl lactate, diethyl succinate, 5-hydroxy methyl furfural).

## Flavorcon continued.....

In her presentation, Marie Wright emphasized how the feelings and experiences perfumery creates translates into dynamic flavors. The transference is possible because both flavors and fragrances have a head (initial volatile olfactory impact), a heart (characterizing taste or the unfolding of the fragrance core), and a base (the lasting impression). While current trends perfumes include whiskey, rose', elderflower, and rotundone, Wright focused upon the impact of essential oils in fragrance and their use in flavors.



*Marie Wright connecting the essential oils we love in flavors to their presence in fragrances*

Essential oils such as Buchu (diosphenol, menthe-8-thiol-3-one) and Davana (davanone, linalool) are usually employed in blackcurrant, tropical fruits, and banana flavors. Other oils such as Vetiver (vetivone), Boronia (beta ionone, methyl jasmonate) and Mandarin Pettigrain (methyl n methyl anthranilate), provide striking, authentic impact in whiskey, berry, and citrus flavors. Wright shows how perfumes can inspire authentic flavors through employing the complexity and beauty provide by essential oils to create a memorable taste experience for customers.

The recurrent theme at Flavorcon is that innovation and inspiration are all around us, we simply need to take the time to pause and let it take hold. Innovation is alive and well especially in the areas of cocktail development, flavor modulation, and plant protein & functional food applications. Inspiration is waiting for us to find it, whether it be in a bite of homemade kimchi or a relaxing glass of wine or a spritz of your favorite fragrance, it's out there. At the intersection where innovation meets inspiration, we are able to create flavors that are delicious and memorable. ❖❖❖

*Amy Yap is a recent apprentice member and is a new member of the Media Committee. She currently works for Givaudan.*

# MEMBER NEWS

Candidates elected on Sept 12, 2019 *Congratulations!*



From left to right: Kathryn Sparks, Alison Freedman, Anastasia Tabachnikov, Deirdre Forrester, Tomiko Stroud, President Elsa Howerth.

*Welcome.  
Kathryn!*



## Kathryn Sparks — Apprentice

Originally from Michigan, I moved to Chicago to attend Loyola University of Chicago where she took her Pre-Med course load and received my Bachelor of Science in Biology with a Psychology major. I have lived in Chicago ever since. I enjoy traveling, and hope to do more—along with trips to Michigan to visit my large family, which includes ten nieces and nephews. I recently left the country for the first time to visit Great Britain. I enjoy both playing and coaching sports. A regular of the Imbibe Sports Teams, I am currently assistant coach for my nephew's basketball team. My hobbies include reading and playing drums. I love animals and have a cat and dog.

*Well done,  
Alison!*



### Alison Freedman — Upgrade to Certified

I graduated from Virginia Tech in 2011 with a BS in Food Science and Technology and have been working in the industry since. I am a die-hard Hokie fan. I am very passionate about working in the flavor industry. I find inspiration in cooking, traveling, music, French art, and fashion.

*Welcome.  
Anastasia!*



### Anastasia Tabachnikov — Apprentice

I have been a part of the flavor industry for over six years, starting as a Savory Lab Technician at Bell Flavors and Fragrances. I was a double major in Chemistry and Psychology for my Baccalaureate. Originally, I wanted to have a career in Pharmaceuticals, however, after starting out in the flavor industry, I decided that becoming a Flavor Chemist was more desirable and the career path I wanted to pursue. During these six years, I've gotten married, purchased and remodeled a home and had a son. In between work and raising my son, I enjoy spending time with my family and friends, reading and traveling.

*Well done,  
Deirdre!*



### Deirdre Forrester — Upgrade to Certified

After joining Pepsico in 2011, I am thrilled to have found a career that combines my love of cooking and baking healthier options without compromising flavor and taste. I have found my niche where I can combine the art of creativity and balance of science in flavor creation, expanding outside of my family's taste buds and to that of the consumer. My husband, Alec, my high school sweetheart of 16 years and I welcomed our first child February 2017 who is my number one taste tester.

*Well done,  
Tomiko!*



### Tomiko Stroud — Upgrade to Certified

A native of New York city, I love to apply my knowledge of flavors in all the different cultures of food at my fingertips. I have my BS in Chemistry from University at Buffalo, NY and my MS in Chemistry from Long Island University-Brooklyn campus. Currently, I am a senior scientist at Pepsico where I was introduced to the flavor industry. Other hobbies include DIY home improvements, spinning, reading, football, basketball, traveling.

# MEMBER NEWS

## Candidates elected on Oct 16, 2019 *Congratulations!*



From left to right:

Yuhong Chen, Jennifer Meehan, Ryan McCoy with President Elsa Howerth.

*Well done,  
Yuhong*



### Yuhong Chen—Upgrade to Certified

I have been in the flavor industry for more than 13 years. I love to create flavors and I also love to match flavors because I can learn more from matching projects. I am passionate about cooking, gardening, traveling, and singing. I love what I do and plan to stay in this industry forever.

*Welcome,  
Jennifer!*



### Jennifer Meehan—Apprentice

After studying Chemistry and Fine Arts in college, I was thrilled to start my career in an industry that really values both disciplines. Flavor creations is the perfect fusion of art and science. Other passions of mine include painting, cuddling with my dog, watching old horror movies, and playing for the Firmenich Fusion softball team! Lately, my most important and rewarding job is being “Aunt Nen” to my niece and nephew, Addy and Everett.

*Well done,  
Ryan!*



### Ryan McCoy—Apprentice

I have a background in culinary arts which I used to put myself through school. I was originally leaning towards a pharmaceuticals path before being exposed to the flavor industry by a chef and friend from my time in restaurants. I am still an avid home cook and adventurous eater. I enjoy disc golfing, gardening, and home brewing. I have been married to my wife Sarah for six years and we have two boys. Oliver is four years old and Henry is three years old.

# ARTICLE

## A Future Without The “Black Box”?

By Shane T McDonald

Sometime in the 1970s, the FDA defined “natural flavors”. I am sure you are all very familiar with it. In essence, it gave flavor companies the ability to put all sorts of flavoring materials: extracts, chemicals, reactions, ferments, enzymic digests, etc., and lump them together as “natural flavor”. It was like a black box. The flavor houses create a proprietary formulation, and don’t have to disclose what is in it. The customers can also use “natural flavor” on their label. If anybody questions it, they can say “I don’t know what is in it, just that it meets the regulations for natural flavor”.

Nowadays, there are groups who are opposed to this declaration, whether from fear of big companies, or distrust of the government, or skeptical of science, or just obsessed with the possibility of beaver butts in their food;

they want “full disclosure”. What if you are allergic to citrus, or scared to see ethyl 2-methyl butyrate in your apple-flavor candy? The fear of what is unknown in the tiny fraction of natural flavor in a food is much greater than legitimate concern of the other 99+% of what they are stuffing in their mouths.

So, what if the designation of “natural flavor” were to disappear? What would happen and what would the flavor houses do?

Some CPG companies are already disclosing the ingredients in the fragrances. SC Johnson now has a list of all approved fragrance ingredients and now discloses most of the ingredients, with “just a bit held back for confidentiality”. Of

course, most fragrances are much more complicated than flavors, and aren’t ingested. The “natural flavor” designation allows for flavor houses to have intellectual property with their flavors, making them much more difficult to duplicate. This has allowed the flavor industry to get much higher margins than other food ingredient companies. It also lets them use ingredients without answering a lot of questions like “is benzaldehyde safe?” and “why are their chemicals in my food?”.

We already have a list of ingredients allowed for use in flavors courtesy of FEMA and the FDA. But dis-

closing the specific ones that you used in your creation would certainly make it easier for competitors to match your flavor. There goes your margins.

Since virtually all flavor chemicals are toxic at some level, expect a lot of con-

sumer advocacy groups to pick apart your formulas for the next trendy health scare.

These two items will severely restrict creativity. Making it easier for your competitor to match your flavor makes it less likely flavor houses will want to spend a lot of creative energy (and pay for flavorists) for new flavorings.

So, what can the industry do?

Well, even with complete labeling, I don’t think a lot of people will care in many applications. I would presume the full list would not be on the package itself, but you would have to refer to a website to get all of the ingredients. Many people won’t bother, especially in food categories not as exposed to label conscious consumers. Many snacks already

*“I don’t know what is in it, just that it meets the regulations for natural flavor.”*

## A Future Without The “Black Box”? -continued...

*The fear of what is unknown in the tiny fraction of natural flavor in a food is much greater than legitimate concern of the other 99+% of what they are stuffing their mouths.*

have lengthy ingredient lists, and their customers must not care too much. We are still selling artificial flavors. There is also the problem with long-standing flavored products. Try making circus peanuts without isoamyl acetate. The customer may well decide the label isn't going to hurt them.

With that, the balance of power would shift to the new start-up biotech companies and the larger flavor houses that will be able to use their products (or just buy the companies).

It will be interesting if and when the flavor industry loses the protection of “natural flavors” and how the successful ones will adapt. Do you or your company have a strategy in place? ❖❖❖

We can try to wrap up our customers with guarantees. If we create a new flavor for you, you have to buy from us for the next five years. Or, flavor houses could just use decoy ingredients in tiny amounts that wouldn't affect the flavor but would muddle efforts to duplicate them.

In some cases, the real label will be misleading. Reaction flavors contain amino acids, reducing sugars, and other ingredients that don't taste anything like a chicken unless you heat them.

Natural extracts confer complexity of flavor without a lot of unfriendly-sounding ingredients. It's what flavorist used to use before flavor chemicals were available. It is certainly more difficult to make many flavors without chemicals, and it could make for some interesting supply chain difficulties. There are already frequent shortages of certain natural flavor extracts, and we are now competing against aromatherapy. But the real fun can be with fermentations. We could conceivably make a ferment that cranks out 2-isobutyl-3-methoxypyrazine (“bell pepper pyrazine”), but the label would just say “fermented pepper”. With the tools of plant and microbial genetics, we could produce the flavor chemicals that we have been using the entire time, but now with a more innocuous-sounding appellation.

*Shane McDonald is a regular contributor to the SFC newsletter. He is a gifted essay writer and touches on current and relevant topics. He has been an active certified member since 2008 and was the Media Committee Chairman for five years. He currently works for Kalsec.*

*If you would like to submit an article or two to share with our membership and /or if you have inquiries or comments relating to this newsletter, please contact*

*Elsa Howerth at [Media@flavorchemist.org](mailto:Media@flavorchemist.org).*

# SAVE THE DATE

The following are hotel arrangements for the upcoming 2020 SFC meetings. Reservations can be made now ahead of the meeting. Be sure to book your hotel reservations and register for the meetings before the cut-off dates.

## January 23, 2020

- DoubleTree Suites by Hilton Anaheim Resort– Convention Center
- 2085 S. Harbor Boulevard, Anaheim, CA 92802
- Call for reservations (800) 222-8733. Mention Society of Flavor Chemists for the group rate of \$139/night or book directly [here](#) **Cut-off date for the group rate is January 1, 2020.**

## February 20, 2020

- Hilton Newark Liberty International Airport
- 1120 Spring Street, Elizabeth, NJ 07201
- Call for reservations (908) 351-3900
- Additional booking information to follow soon.

## March 5, 2020

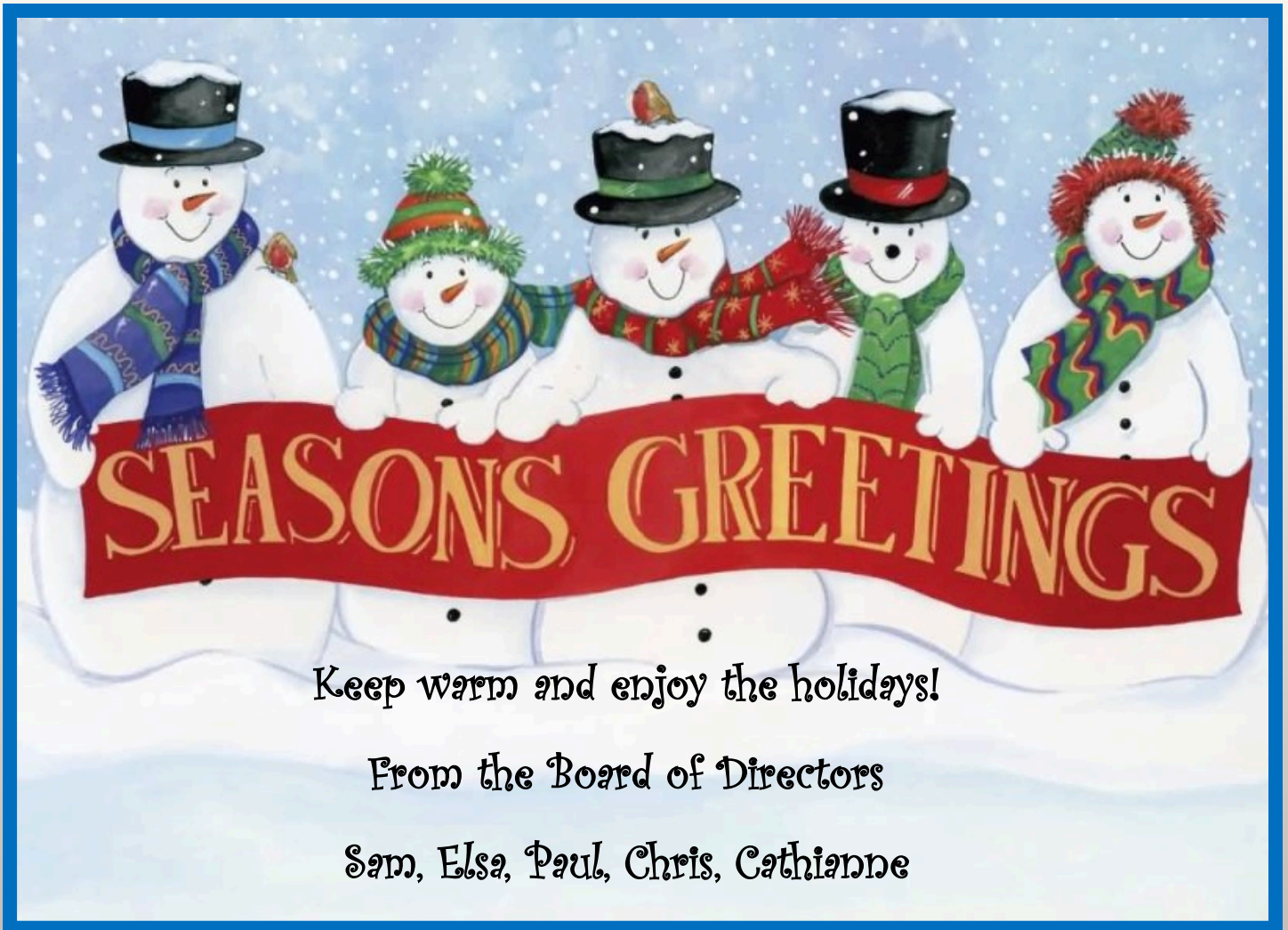
- SFC / CSA / NAFFS Joint Meeting
- Delta Hotels by Marriott Anaheim Garden Grove, CA. Additional booking information to follow soon.

## April 2, 2020

- Hilton Cincinnati Netherland Plaza
- 35 West Fifth Street, Cincinnati, OH 45202
- Call for reservations (513) 421-9100. Mention Society of Flavor Chemists for the group rate of \$161/night or book directly [here](#) **Cut-off date for the group rate is March 11, 2020.**

## May 7, 2020

- Newark Liberty International Airport Marriott
- Additional booking information to follow soon.



*Hope you had a good year. Let's ring in the new year!*