The Hornblower

NORTHERN CALIFORNIA INSTITUTE OF FOOD TECHNOLOGISTS

HOLIDAY DINNER

Thursday, December 13, 2018 • 6:00 to 9:00 p.m.

Dublin Ranch Golf Course
5900 Signal Hill Drive, Dublin California

Please RSVP to Imelda at Marketing Designs at (650) 802-0888 or ncift@marketingdesigns.net

See page 17 for more details.

IFT 2018 Summary

by Klay Liu, UC Davis, Class of 2019

It is my great pleasure to write about my IFT annual meeting & food expo experience this year in Chicago. Thanks to the travel fund provided by NCIFT, I was able to attend the national IFT for the first time and it was incredibly beneficial and eye-opening.

My girlfriend Krista and I arrived at Chicago on July 14th. That evening, we had dinner with my mentor Leslie Herzog

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SAVE THE DATE

Suppliers' Night & Symposium 2019

Golf Tournament
May 6, 2019
The Bridges Golf Club
San Ramon, CA

Symposium & Expo
May 7, 2019
Alameda Fairgrounds
Pleasanton, CA

Dr. Florence Wu (left) recieves her Member of the Year Award from Nikko Arasteh and Brad Olson.

Member of the Year

This year's recipient of the Member of the Year Award is Dr. Florence Wu.

It is said that only a woman can juggle so many things at once and execute them all exceptionally. Such an idea embodies this year's recipient for the Member of the Year Award. Florence consistently takes on more than anyone else can imagine and produces something incredible every time. She is an extremely hard-working woman who puts her heart and soul into everything she does. When she takes on a task, you can be sure that she will go above and beyond to achieve exceptional results. She is an inspirational professional who has the incredible ability to master anything she puts her mind to, from an analytical science PhD program to successfully starting, running, and growing a business of her own.

For the past two years, on top of managing and expanding a business, and providing for and taking care of her entire family, she has been volunteering as the driving organizer of NCIFT's largest event of the year. If you are wondering when she has time to sleep… we are too! And as she

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*Information **UPDATED** as of 10/19/18

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www.ncift.org

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As noted below, special rates are available for ads to run one-time-only in any single quarterly issue. You may submit completed ad copy electronically. If you provide a rough draft, the publisher will create, design and typeset an ad for you at a very reasonable rate.

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1/2 Page	$750	Business Card	$350

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IFT 2018 Summary

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and his wife Jacqueline Beckley, both of whom sit on the Leadership Board of the Department of Food Science and Technology at UC Davis. Mr. Herzog had been kindly mentoring me since we were matched earlier this year by the UC Davis FST Leadership Board Mentoring program, but since he is located in New Jersey, we hadn't had a chance to meet. Krista and I were very lucky to finally meet Mr. Herzog and Ms. Beckley, two long-time IFT fellows with distinguished careers in the food industry. The four of us had extensive conversations about our future career paths, which were truly beneficial for me and Krista as we both plan to enter the food industry upon graduation. Especially, we learned a great deal about the power of networking and higher education in the food industry. Mr. Herzog and Ms. Beckley also gave us first-timers practical preparation of the IFT meeting & expo, which truly helped us enjoy the show over the next couple of days.

On the morning of July 15th, I attended the IFTSA (IFT Student Association) Chapter Leader Workshop as one of the two representatives of the Food Tech Club at UC Davis, along with Katrina Fernandez. Last year, no chapter leader from UC

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Nikoo Arasteh

President's Message by Nikoo Arasteh

Dear NCIFT members,

As I begin serving as NCIFT president, I would like to welcome all of you to another productive year with NCIFT and thank Brad Olson, our past president, for doing such a great job leading our activities during the past year.

Many NCIFT members and their guests celebrated the opening of 2018-2019 session at a networking event on September 20th. We will continue this session with several exciting events, and I will name a few of them, here:

- This year, for the first time NCIFT hosts a networking event at Reno, Nevada on October 24th. Northern Nevada is covered by NCIFT.
- We will hold our Holiday Dinner in Dublin on December 13th. Our keynote speaker will be the national IFT President Elect, Pam Coleman and the topic is Feeding Minds for Tomorrow's World.
- NCIFT hosts a luncheon and speech at Food Processing Expo on February 12, 2019 in Sacramento.
- Our famous Suppliers' Night and Symposium will happen on May 7th and, as usual, NCIFT annual golf event will take place a day before that.

In addition to these events, throughout the year we will have regular gatherings of New Professionals that include networking events and industry visits. This has been a successful means of introducing new comers to the larger food science community in Northern California and beyond.

My goal is to encourage more active participation of the members in planning and execution. I would also like to invite the leaders of the food industry to enhance their interaction with NCIFT, volunteer for our board positions, share ideas and help us understand their needs. We'll try to respond to those needs the best way we can through activities such as educational and training programs, linking them with qualified employees, and so on.

We are always eager to hear from you and listen to your suggestions and concerns, as well as your innovative ideas. Please feel free to contact me at NCIFTpresident@gmail.com.

See you in the upcoming events,
Nikoo Arasteh, PhD, MBA

Carol Cooper

From the Editor's Desk by Carol Cooper

Hello All:

If you haven't noticed by now, I missed getting out the July-September issue of the Hornblower, so this will be a double issue for July – December 2018. Unfortunately, my husband of 46 years, Steve Cooper, whom many of you know, passed away suddenly. It hasn't been very easy, but with the help of many friends, including many of you in this organization, I will get through this. Thank you all.

In this issue you will see bios and pictures of your new officers for the coming year. We really mean it, when we say that if you have any comments or suggestions, please let us know. We want to be an organization that meets the needs of its members. If you are interested in serving as an officer, contact the Past President Brad Olson (bradolson@gmail.com). He is the Chair of the Nominating Committee. If you are interested in volunteering, but feel you can't make a long-term commitment, please contact Reshmi Raman (reshmiraman9@gmail.com). As Chair of the Volunteer Committee, she keeps a list of volunteers who are interested in short term commitments such as volunteering at specific events or serving as a science fair judge. And if you are ever interested in writing an article for the Hornblower, just let me know (cac95758@gmail.com).

Once again our section has been recognized as a 2017-2018 Section of Excellence! This recognition symbolizes the section's commitment to IFT, section members, and the food science and technology profession. The events held throughout the year, exemplary volunteer service, excellence in leadership and dedication to the food science and technology profession demonstrate ongoing devotion to ensuring that our section will flourish for years to come.

The IFT Outstanding Volunteer Award recognizes exceptional efforts in volunteerism. The following individuals were recognized at IFT18 for their dedication and contributions to NCIFT and IFT. Congratulations to these volunteers for their outstanding service! – **Elaine Shu Hua Chow, Erin Evers, Martin H. Potnick, Abigail Elaine Selya, Jaspreet Walia,** and **Florence Wu**.

Congratulations also go to our newest Certified Food Scientists: **Ting Meng**, (R&D Innovator, SunRidge Farms), **Brad Olson** (Manager, QA Supply, Safeway Inc), **Tanya Pereira, Dipak Pokhrel,** and **Alejandro Tomas-Callejas** (Director, Research & Development, Church Brothers Farms).

In this issue there is an article on advice to new graduates. Much of this is advice I gave a lot of my students when I was the academic advisor at UC Davis. It really works. One low-cost way to network is by attending the New Professionals events. If you are not on their mailing list, please contact Erin Evers (erine@spigroup.net).

I hope to see many of you at the annual Holiday Meeting and Student Raffle in December!

Carol Cooper, The Hornblower *Editor*
Past Chair of NCIFT, UC Davis (retired)

Brad Olson

Past President's Message by Brad Olson

Happy Fall NCIFT Members! I cannot believe how fast the past year went by!

Our section had a great year of events in 2017-2018 and for the fourth year in a row, Northern California was recognized as a Section of Excellence by IFT and appeared in the Hall of Honor at the IFT Annual Meeting and Expo in Chicago. IFT18 in Chicago was a busy time for NCIFT, with two section-sponsored events. The first, on Monday July 16th, was a meeting for UC Davis alumni co hosted by UC Davis and the Chicago UCD Alumni organization. The second, on Tuesday July 17th, was a "West Coast/Best Coast" mixer co-hosted by the Cactus section and open to all IFT sections from the west coast. Both events offered great networking and reconnection opportunities and I hope they become annual gatherings at the National Expo as our section begins to work closer with our neighboring sections and the students and faculty at UC Davis.

In September we had our Fall Opener event at Inklings Coffee in Pleasanton, where we welcomed in the new NCIFT year and celebrated the 6th anniversary of our Young Professionals group. On October 2nd, the executive committee met at Gallo in Modesto to go over our fall agenda items, and then headed down to Turlock to join the Young Professionals for a tour of Foster Farms new Innovation Center. On October 24th, we will be hosting the first of what I hope to be many future gatherings in Northern Nevada. Northern Nevada is part of the NCIFT region, but due to the distance from our main operating headquarters, we have not had a formal event there until now.

With the holidays upon us, we have begun registration for our annual Holiday Dinner. This year's Holiday event will be held at the Dublin Ranch Golf Course on December 13th. The Holiday Dinner provides a great opportunity to network and make new connections, reunite with peers you may not have seen over the past year due to busy schedules, and support the food scientists of tomorrow through our annual holiday raffle. Our speaker at the holiday event will be **Pam Coleman**, the President-Elect of National IFT. Pam will speak to our section on Feeding Minds for Tomorrow's World. This year, we will also be celebrating a milestone anniversary for our section, which as of December, will have been in operation for 70 years! I look forward to seeing you there.

Before I close, I wanted to extend a special thanks to Nikoo, our incoming President, for her efforts this past year. She, and all of the other dedicated members of our executive board and affiliated planning committees, deserve a round of applause for taking time out of their busy schedules to help plan events, engage with our food science community, judge science fair competitions, award scholarships, find new volunteers for our elected section positions, and serve in the many critical roles that help our organization function. Serving as President-elect and President over the past two years would have been an insurmountable task without the support of these section members. I look forward to working with all our board members and section volunteers this coming year as I transition to the role of Past-President.

Best regards, *Brad Olson*
bradolson@gmail.com | (510) 502-0879

NCIFT Symposium SnapShot

by Abigail Selya

In the changing environment of food, novel products are becoming more common, but how are they getting to market? At the 2018 NCIFT Suppliers Night Symposium, expert panelists answered this question. Representatives from within the food industry, including government entities and research institutes discussed how collaboration between them can help small but enthusiastic food companies bring these products to market. Lance Kizer, VP of R&D, at Ripple Foods moderated the discussion about the journey of bringing Ripple Milk, a plant based milk alternative to market.

Tara McHugh, a Ph. D. Research Leader, and David Nicholson, the Technology Transfer Coordinator at the USDA Agricultural Research Service Center, discussed how Ripple Foods benefitted from utilizing the this Center as a resource for researching the process used in their pea protein production. They encouraged other food companies

to reach out and see how they too can benefit. The services they offer range from basic research to direct technology transfer to help introduce innovative food process technologies into the marketplace.

Once this method was inline Ripple worked with Todd Pray, Ph.D., MBA, who is the Program Head of the Advanced Biofuels & Bioproducts Process Development Unit at Lawrence Berkeley National Labs (ABPDU). ABPDU provides small companies access to scale-up equipment and consultation. The main goal of this unit is to provide resources to help ramp up the bioeconomy. They are excited about startups and novel products to bring to market.

With the research and production scale up of these proteins underway for their product, Ripple Foods turned to Mattson & Co., an independent development and food innovation company, to help guide and process their formulae. Justin Shimek, Ph.D. CEO and CTO at Mattson & Co., went into detail about the varying levels of opportunities their company can offer startups through multinational companies.

While bringing a novel product to market is not easy, some of the many resources available were made clear during this Symposium. NCIFT and I want to thank all the panelists for providing fantastic insight and information on the varying resources. The crowd was buzzing with innovative conversations following this discussion.

A big thank you to the supplier's night volunteers: Eloise Nicholson (UC-Davis Student); Matthew Poon (UC-Davis Student); Andrew Weiss (UC-Davis Student); Farrel Narendratama (UC-Davis Student); Diana Huang (QA Director, Grower Express); Elain Chow (Photography, Kagome)

IFT 2018 Summary

CONTINUED FROM PAGE 3

Davis was able to attend this workshop, but this year, Katrina and I were very grateful of the opportunity to represent UC Davis on a national level. We made connections with chapter leaders all over the world, and learned so much about IFTSA resources and opportunity available to our chapter, and how our chapter fits into local, regional, and national divisions IFTSA and IFT. We also learned to channel a volunteer's energy, to keep a volunteer engaged throughout an event, to encourage participation and to be an ambassador of the chapter. From interacting with other chapter leaders, I learned many ideas and strategies I would like to implement at the UC Davis chapter, and I now have a much better understanding of what my responsibilities could include. I found the information presented in the workshop incredibly useful for my current role as Vice President at the Food Tech Club, and there was so much I learned in the workshop that I would love to share with my fellow officers and club members.

In the afternoon of July 15th, I attended multiple events including the Dairy Foods Oral Competition, First Timer Session, Awards Celebration and a Davis meetup. The Awards Celebration was especially inspiring as I saw acclaimed individuals and groups being recognized at IFT's highest stage. Especially, it's great to see some UC Davis faculties being awarded, such as Professor Linda Harris winning IFT fellow and Professor Zhongli Pan's team winning the Research and Development Award. The celebration made me feel closer than ever to the giants in the food science world, and hopefully one day I will be on this stage as well, honored by my future professional accomplishments. The celebration also encouraged me to make better use of the incredible resources at UC Davis to further equip my mind and advance my career in my last year of undergraduate education.

On the morning of July 16th, Krista and I first had the great pleasure to hear Mr. Dennis Dimick's amazing presentation on the impact of human ingenuity and the earth's sustainability. The spectacular photographs he provided made his arguments so powerful that it's difficult to not think about what we can do for a sustainable environment with what we know.

As the Expo opened, Krista and I were first simply overwhelmed by the size of the Expo floor. Our senses were quickly bombarded – there were just so many unique and novel food products to try out. Slowly regaining our composure, we visited the booths that we planned to, including many universities that were advertising their food science graduate programs, food companies that were from my hometown Qingdao, and other food companies we were particularly interested in. We also attended "Cooking Up Science" hosted by American Egg Board that showed the culinary functionalities and uses of egg components. The Expo was really an experience like nothing else – we were glad to familiarize ourselves with the Expo and broaden our horizons, and I think the take home message that can prepare us for future experiences at the Expo is to understand what everybody came here for.

On a tight schedule, Krista and I had to leave Chicago on the evening of July 16th. Overall, our time at IFT was highly enlightening and helpful for our career developments. I am very lucky to have NCIFT providing me the travel fund, which made my trip much more enjoyable. Next year I would definitely love to join IFT again in New Orleans!

Member of the Year

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does with everything else in her life, she has shown exceptional dedication to the NCIFT organization and ensuring that the success of Suppliers' Night continues to grow and expand for years to come. Through her tenure, she has increased marketing opportunities for participating exhibitors, continued to grow the attendee base, and laid the groundwork for additional means of funding to keep the organization and its events running strong for the future.

And yet, despite her many undertakings and accomplishments, when anyone needs her assistance she is always there to help. She has consistently shown exceptional support for everyone in her life, taking them under her wing and making their goals her own.

Welcome New Members

Dan Baker
Director of Contract Manufacturing,
The Republic of Tea

Eric Beiter
Process Engineer, Advance International

Samuel Bertram
CEO & Co-founder, OnePointOne

Jagruti Bhikha
Managing Partner, Sai Ventures

Tina Bui
Miyokos Kitchen

Wendy Butterworth
Account Executive, FONA International

Ashley Cao
Sales Manager, Cornucopia Ingredients Inc

Wayne Carptener
Managing Director, Lake Pacific Partners

Lisa Chambers
Arcadia Biosciences

Mahesh Chapagain
Food Safety, Quality & Regulatory Coordinator
Leslie's Organics (Coconut Secret)

Mike Chapter
Armanino Foods

Romi Cimet
Torani

Chris Cornyn
Inovation Officer, Before Brands

Guy Debbas
G. Debbas Chocolatier Llc

Ajwinder Dhesi
Gallo Winery

Noufoh Djeri
Foster Farms

Natasha Dsouza
Sr. Manager, Research, Development & Innovation, Earthbound Farm

Jen Pierre Fabro
R&D Food Technologist
Protein Research

Xi Feng
San Jose State University

Jim Flatt
Co-founder & CEO
Brightseed Inc

Maddison Gurrola
Product Development Technician, Mattson

Kevin Hack
Manager – Export Dept
Connell Bros Co Ltd

Kazuhiro Hasegawa
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Owner, Food Science New England

Swati Kalgaonkar
Senior Manager- Nutrition Research
Almond Board of California

Harjyoti Kalita
Corporate Lab Manager
Hilmar Cheese Co

Troy Kazarian
Regional Sales Manager
York Sutch & Associates

David Kessler

Pranil Kharel
QC Supervisor / SQF Practioner
DS Smith

Karen King

Amy Klein
Head, Product Development, Before Brands Inc.

Mark Klopp

Klaus Kreuzner
Director of Sales, WTI

Harshal Kshirsagar
Vicee President, Product Development, Clara Foods

William Kusch
Manager, Terviva

Ginger Lee

Stephanie Lind
SVP Global Sales, Impossible Foods

Ryan Macdonald

Sarita Mahajani

Erik Malmstrom
Strategic Advisor
Farmers Business Network

Cat McBride
McBride Public Relations

Michael Merritt
R&D Group Manager
The Clorox Company

Mona Michael
United Foods International

Noriko Misawa
Director, Consumer Insights & Innovation, Kagome, Inc.

David Ngo
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Reshmi Raman
Food Safety Expert
Brioche Pasquier

Vamsi Rani
Terviva

Juan Rosales
Product Package Mgr,
Dole Packaged Foods

Jenevie Sharon Samaniego

Joseph Schumaker
Co-founder & CEO, foodspace+co

Diana Schumaker
Account Director, Griffith Foods

Terry Sebastian
Operating Partner
Lake Pacific Partners

Randa Shammet
Food Scientist, Raybern Foods

Catherine Smith
E. & J. Gallo Winery

Bridget Smith
Ripple Foods

Elizabeth Specht
Senior Scientist
The Good Food Institute

Darrel Swift
Director of Quality and Compliance
Shaklee

Ruben Tadmor
Chief Operating Officer
Cambridge Glycoscience

Kimberlyn The
Miyokos

Amy Thorpe
Project Manager, Traina Foods

Kurt S. Thorsen
VP Sales,
Sconza Chocolate Company

Margot Tripier
Director of Accounts
Pure Ground Ingredients

Ariana Tway
Pdrocess Technology Associate
E. & J. Gallo Winery

William Voss
Managing Director
Lake Pacific Partners

Chase Warner
Farmers Business Network

Paige Watson
Associate Engineeer
E. & J. Gallo Winery

Olivia M. Weihe
Before Brands, Inc.

Alex Wendling
President, Custom Flavors

Kathryn Willis
Associate Scientist, Abbott

Celia Zhao
Food Technologist, Covance

New Student Members

Alvin Buana
Terry Dewane
Katrina Fernandez
Alex Firestone
Asma Hasan
Jacqueline Honorio
Berta Lascuevas Laguna
Zhuotong Liao
Steele Lorenz
Alessandra Marcone
Lovie Matthews
Saeed Oladi
Vy Phung
Elizabeth Rodriguez
Danielle Rosen
Susannah Smith
Alex Strauch
Gabriela John Swamy
Eldo Titan
Francisco Valdes
Shuya Zhang

Your 2018-2019 Ncift Officers

PRESIDENT
Nikko Arasteh

Nikoo Arasteh has been a member of IFT since 1995, when she served as a graduate student representative in the British Columbia section. Nikoo holds a PhD in Food, Nutrition and Health from the University of British Columbia, a Master's degree in Food Science & Technology from University of Tehran and an MBA focused on Industrial Management. She has authored refereed research papers and a college text book. After several years serving in food industry research and development and teaching Food Science in university, Nikoo moved to pharmaceutical industry and held roles in quality assurance. She, currently, serves as QA Director at Jaguar Health.

Arasteh

nikoo@yournextep.com

PAST PRESIDENT
Brad Olson

Brad has been active in NCIFT for the past 15 years. He began his work on the Executive Board while at UC Davis where he served as a Food Tech Club NCIFT Student Representative. Since graduation, he has served as Member-at-Large (twice), Student Awards Committee Member, Nominations Committee Member, Nominating Committee Chair, By-Laws Committee Member, Operations Manual Committee Chair, Executive Secretary, President-Elect, and President. He will now be transitioning to the role of Past-President, where he will continue in the role of Operations Manual Committee Chair, and serve once again as the Nominating Committee Chair. When not volunteering with NCIFT, Brad works as a Manager at Albertsons Companies Culinary Kitchens and Technical Center in Dublin, CA.

Olson

bradolson@gmail.com

PRESIDENT ELECT
Pallavi Fancy

Pallavi Fancy is the Quality Assurance Regulatory Manager at AAK in Martinez, delivering value-adding vegetable oils and fats solutions for food and non-food applications. She has 20 years experience in the food and beverage industry in a variety of leadership roles and technical platforms. Previously she held positions with American Sugar Refining (C&H Sugar), Fresh Leaf Farms Diageo, Harmony Foods, General Mills and Mars. She received her BS degree in food biochemistry from UC Davis and has completed graduate coursework for the Executive Masters' in Technology Management at the University of Pennsylvania and recently took Professional Development courses in Stanford University's Continued Studies program.

Fancy

EXECUTIVE SECRETARY
Abigail Selya

Abigail is extremely passionate about food. She enjoys traveling the world, experiencing new flavors, learning about food traditions, and trends. Abigail graduated from UC Davis with a Food Science Degree and currently works as a Food Technologist at Mattson. She is excited to be returning as your Secretary for her second year.

Selya

abigailselya@gmail.com

MEMBERSHIP SECRETARY
Erin Evers

Erin Evers is a Certified Food Scientist. With a passion for food and food science combined with a solid product development background, Erin is a unique technical sales manager for the SPI Group sales team. Her background includes a B.S. in Food Science from UC Davis, plus 15 years in product development R&D on a wide range of applications including frozen appetizers, snacks, and desserts. Erin works with customers to achieve success by applying her food science knowledge and working through technical challenges. She is solidly committed to and an active member of the IFT community. This is her second year as Membership Secretary. Lately you can find her around Northern California working with New Professionals.

Evers

ErinE@spigroup.net

TREASURER
Jaspreet S. Walia

Jaspreet S Walia is a Microbiology manager at Certified Laboratories, in Turlock CA. He helped start and is running Certified Laboratories' program in Central Valley since 2007. He has been in the industry since 1993, starting his career with Diary & Food Labs. His favorite part of having worked in the food industry is working with the clients and helping them maintain food safety worldwide!

Walia

jWalia@Certified-Laboratories.com

DIRECTORS-AT-LARGE

Brian Chau

Any time is Chau Time, as long as Brian Chau is here: food scientist, fungal fanatic, and charismatic chemist at your service. Brian graduated from UC Davis with a degree in Food Chemistry. He is a product developer with 4 years of food industry experience. When he has free time, he might be found foraging for mushrooms, writing articles for the Hornblower, or producing content for his food podcast, Chau Time. If you see him at a networking event, you might catch him discussing food chemistry or coming up with fungal puns.

Chau

brian@chau-time.com

Elaine Chau

Elaine Chow is currently a Regulatory Affairs Specialist at Kagome Inc. She has over 4.5 years of cross-functional food industry experience in vast categories of consumer packaged goods and food service products utilizing domestic and international food regulations. She graduated from UC Davis with a B.S degree in Food

Chau

Science (microbiology emphasis). During her undergraduate years, she held officer positions in the Food Tech Club. For NCIFT, her past roles were being a member of the Nominating Committee and Grant Committee, along with being the volunteer photographer. Her hobbies are photography, hiking, running, yoga and she especially loves fusion cuisine!

Elaineshuchow@gmail.com

Anjali Ganpule

Anjali is a Food Scientist at Torani, a flavored syrup company selling to retail and food service channels. She has been a part of NCIFT for the past four years. As a member she has enjoyed visiting manufacturing locations of many well-known food companies, networking (and of course eating) with her peers and visiting her alma mater, UC Davis (2014). She is very excited to be the Director at Large and can't wait to see how she can help NCIFT be even better!

Ganpule

aganpule@torani.com

Eric Le Barbé

Eric Le Barbé has been an active member of NCIFT since 2001 when he was a student at UC Davis. While an undergraduate student, he served as a Student Representative to NCIFT, and since graduation he has served as member-at-large and secretary of the former Central Valley section. Eric holds a Bachelor in Food Science & Technology with a minor in education from UC Davis and a Master's degree in Food Science with a sensory emphasis from Kansas State University. Eric is currently working as a Senior Sensory analyst for E.&J. Gallo Winery in Modesto where he leads the wine descriptive panel operations as well as teaching cross-functional sensory classes at the winery. Eric is looking forward to getting more involved again with NCIFT. In his spare time, Eric enjoys yoga, travelling, and cooking. Eric also volunteers when needed as a cook with Modesto Family Promise, an organization that helps homeless families on their journey to secure stable housing.

Le Barbé

eric.lebarbe@ejgallo.com

Craig Rothe

Craig Rothe is currently a Regional Manager for Elite Spice, Inc. with responsibility for Northern California, and other Western states. He has functioned as President, Chair-Elect and Secretary for the NCIFT for the past several years and also served as Membership Secretary for the Ohio Valley IFT. Craig has been in the food and beverage industry for over 30 years in a variety of positions with Fortune 50 companies. He has been an adjunct professor with a college in the Midwest, and has held various volunteer positions with a variety of organizations. He earned his MBA in Texas and lives with his wife Carol in the North Bay. He enjoys reading, cycling, hiking, golf and guitar and traveling with his wife.

Rothe

crothe@elitespice.com

Pamela Sweeten

Pamela is involved in food and beverage business development at ChemStation in Modesto helping customers with comprehensive food safety plans. She also serves as a Vice Chair for the Agricultural Advisory Board for Stanislaus County. She has also held positions with Shepard Brothers and BioSafe Systems. Pam has been an active volunteer in the Leadership Development Program for American Agri-Women, is a founding board member of Women in Ag for Mentoring and Empowerment, and as a vice president for Ag Awareness and Literacy.

Sweeten

pamelasweeten@me.com

Northern California IFT Executive Committee Meeting August 20, 2018

Meeting Called to Order 8:45 AM

Attendees: Brad Olson, Erin Evers, Nikoo Arasteh, Craig Rothe, Bruce Ferree, Anjali Ganpule, Elaine Chow, Abigail Selya- Executive Committee, Susannah Smith-UC Davis NCIFT Representative

Steve Cooper Memorial

- Discussion of how to cover donations towards mortum members.
- Carol and Steve Cooper Scholarship fund for travel grants
- Nominated to rename the travel fund to be the Carol and Steve Cooper Grant, and do an additional $100 donation to the fund.
- Additionally moved to donate 100$ to St. Jude – Erin Evers, Anjali Ganpule Seconded Approved.

New NCIFT Website

- New website launched, will go live after review.
- Add the new professional events to the events tab
- Add a link to the facebook and linkedin pages.
- Update membership dues information- Remove the description of the options and have it link directly to IFT website.
- Update the University websites to have only food science programs related to us
- On contacts add a link to the emails of those people
- Get updated information for all members listed.

Hornblower

- Establish a Hornblower Committee with training and succession to assist with the newsletter.
- Need a job description with volunteer opportunities to kick start the new Hornblower.

Social Media

- Elaine- to lead presence on LinkedIn and Facebook
- Events
- Hornblower release
- New professional events

Event Planning

- Discussion below:

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Mattson is an Institution

by Brian Chau

Located in the San Francisco Bay Area, Mattson is situated in the most ideal conditions for the food world. Nestled in Silicon Valley, Mattson has access to entrepreneurial ventures in food and tech on a daily basis. To the north, South San Francisco offers biotechnological advancements. A little further north, San Francisco shares its culinary traditions including a hefty amount of good booze. To the east, Berkeley invites Mattson to a world of food activism. A little further away, Napa Valley shares its wine and food. The geography of the San Francisco Bay Area is within hours of an agricultural cornucopia of fresh ideas for the feasting and Mattson is in the center of it all. Now, more than any other time is where innovation and product development intersect with much discourse around what to do with food and where food will go. Mattson will make food happen. It's literally on their wall as a mantra for all to see.

Justin Shimek, CEO, and Barb Stuckey, President and CIO, led a presentation for all guests to better understand what makes Mattson an institution. One key strength for Mattson is their understanding of what the needs of their clients are. Mattson tries to get all the ideas out of their clients' heads into a concept and as close to commercial viability as soon as possible. To shed some light, Janine Magyar, Consumer Insights and Innovation Manager, described the process of how Mattson can assist from ideation to commercialization and consumer insight research. Caitlin Angell, Senior Culinary Product Developer, shared her trials and tribulations with Enjoy Life Cookies and the difficulties of gluten free cookies. Edwin Palang, Commercialization Manager, took us on a journey to figure out how to scale up for an avocado sauce that needed to retain its green color through acidic, heat, and packaging issues. Kalynda Stone, Food Technologist, described her experience and research with Tillamook Cheese Starters by working with Barb on a concept that was untapped and ripe for the market. Kalynda was able to take a crash course on cheese and brought back that knowledge for all cheese lovers to enjoy in the process of creating the cheese starter dips.

Mattson is a reminder of the tenacity and empathy required to create products for shelf stability. From large brand names to up and coming startups, Mattson has maintained its reputation by leveraging its location and focusing on the people. Mattson is an institution to make food happen.

Executive Committee Meeting — August 20, 2018

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- Craig- Want to do an event in Reno, Nevada to do an Elite Spice to host venue, to do a get to know you event.
- Bruce-Fairfield event and do a Jelly Belly/Budweiser event.
- Bruce: Prop 65 event, location TBD. Bruce to be in charge.
- Erin/Brad: 2018 October Fall opener- Have a speaker and bring a friend night.
- Brad/Erin: Webinar, Executive Committee Meeting, Chair of Statistics and Strategy for IFT.
- Craig: Event at the Oakland A's to do a tour of the food facilities and event.
- Jas/Brad: Holiday Dinner, December, 13, 2018 – Doing a place in Dublin and would allow for a speaker. Send a request to IFT presidents or other speakers to participate in events and give speeches for holiday dinner.
- Brad to reach out to National to see availability of speakers and Nikoo to reach out to Peet's coffee
- March event at the Oakland Zoo or Oakland Museum.
- Linda Harris could do a talk for us on where food is going and address future needs; call and give her dates.
- Could do a new professionals hike.
- Livermore grape stomping event.
- Next year 2 holiday Meetings

Budget:

- Topline Discussion: Exact budget available on request
- Cruess Fund: Move to seperate account for student scholarships
- Membership Dues were lower because of reduced membership
- Follow up on credit card and baking fees

Meeting Adjourned: 12:30 Motioned: Erin Evers, Seconded: Nikoo Arasteh

October 2, 2018

Meeting called to order: 3:06 pm

Attendees: In-person: Craig Rothe, Eric Le Barbe, Erin Evers, Jas Walia, Brad Olson, Carol Cooper; Phone: Marty Potnick, Nikoo Arasteh, Imelda Vasques

New Business

2018-2019 Budget Review and Approval

- Updates needed: Income and Expenses should be separated for Local Meetings and IFT National, Suppliers Night Golf and Expo. Imelda will provide itemized amounts for budget update.
- Discussed possibility of scholarship for children of active NCIFT members – tabled for future meeting with the Scholarship Committee
- Budget changes will be made and revised budget will be sent out via email to ExCom for approval.

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New Professionals Event at Kagome Inc., July 3, 2018

by Danielle Hamaker
Regulatory and Thermal Process Supervisor, Kagome USA, Inc.

Our new professionals had a chance to battle it out in a friendly "Vegetarian Pizza Throw down" at the New Professionals event hosted at Kagome's Innovation Center in San Carlos, CA. As people arrived they were teamed up into groups of five to compete with a Kagome team leader. Teams immediately bonded over fun props and silly poses at the photo booth stationed in front of Kagome's "Truly Global" mural. Kagome has hosted events in the past, showing off their new research facility and sauce making capabilities, but this time the Kagome crew really thought outside the "pizza" box to liven things up.

Kagome USA (owned by Kagome Co. LTD of Japan) is a long standing California based company that helps restaurants bring their ideas to life with professional help in ideation, development, and manufacture of custom culinary sauces. Kagome is known primarily for taking advantage of California's perfect tomato growing weather and manufacturing a multitude of tomato based sauces. However, the young group of Food Scientists who work at the state of the art innovation center in San Carlos are quickly turning Kagome into a powerhouse of innovation with globally inspired sauces, spreads, toppings, hot sauces, condiments, and more.

At this New Professionals event, Kagome wanted to have some fun while helping new professionals see what it takes to create a winning menu item for fast casual pizza restaurants. Each team was provided nine innovative pizza sauces to choose from and a wide variety of specialty vegetarian toppings. The results were some really show stopping pizzas, which wowed the judges: Michelle Flood, Erin Evers and Kathy Kennedy. As teams split off to build their pizzas the ideas started flowing. Some contestants used secret spice blends, or were inspired by the abundant colors of the vegetarian toppings. Other groups experimented by exploring their diversity through flavors, or by changing perspectives with interesting shaped pies. The final products were judged on eye appeal, aroma, color, texture, taste, uniqueness and overall presentation. The winning team was inspired by an "East meets West" theme. With a twist on the traditional, the winning pie was a classically topped, tomato sauce based pizza on one side, while the other side boasted bold flavors of Thai red curry sauce, butternut squash, carrot, eggplant, green beans, garlic, basil and tofu. All pizzas created at the event were winning ideas, and Kagome may even be pitching some of these new ideas to their customers soon! It was a wonderful event where nobody left hungry and everyone left feeling inspired.

Event Update: Reno, NV Networking (10/24/18)

- NCIFT is partnering with food-relate organizations in the Reno area for a networking event. First ever event in this area. Invites have gone out via Constant Contact for the event.
- Craig brought NCIFT marketing materials and IFT info flyers up to Reno for the event. Gallo is donating wine (provided today at meeting) and Craig will bring these to the event.

Event Update: Holiday Dinner (12/13/18)

- Invitations going out shortly. ExCom should assemble questions to ask Pam, who will be in attendance at ExCom meeting prior to holiday dinner. Brad will contact Dublin Ranch golf course to make sure there is a meeting room that can be used prior to the meeting. Planning phone call/WebEx or meeting in person for November. Nikoo will determine date and location.
- AACT Holiday Event in November (11/15) at Jack London Square. NCIFT is not funding in anyway, but we have offered to add the meeting info to our site and remind our members about the organizations event.
- Event Idea for April: World of Beers. New location opening up in Dublin with ample space for speaker. NCIFT ExCom may visit this location in November for our follow-up meeting to check out the venue

Committee Updates:

Nominations & Elections Committee

- Most ballot positions have already been filled. Still need 2-3 Directors at Large.

Scholarships & Grants Committee (Upcoming Deadline, need to visit Davis again?)

Suppliers Night

- MP: Golf set for Bridges Country Club. Set for day before suppliers night

Activities/Events Committee: CLFP Luncheon

Unfinished Business

- Craig and Brad spoke to Wells Fargo about adding additional account. Need signatures of all "owners" of the account, which currently include Jayne, Liz Cuff, Earl, Jas, Craig, Brad. Need to figure out go forward strategy for accounts to ensure consistency as board members transition
- Brad/Carol: Hornblower Fees – Move towards digital format; connect with advertisers verify that they would still want to be a part of it
- Jaspreet/Bianca: work on developing new involvement and assigning a champion with industry connections for low attendance areas

Meeting Adjourned: 4:37 pm, Officer 1: Erin Evers; Officer 2: Eric Le Barbe

Rod Frost

by Rick Stier

The NCIFT lost one of their Old Guard recently. Roderic R. Frost passed away in April up in Lake Tahoe while on holiday with his son James and daughter Megan at the age of 87. Rod served as NCIFT Chair and occupied many other offices for the Section.

I have known Rod since 1974 when I was a graduate student at Davis and continued the relationship when I joined the National Food Processors Association in 1977 and beyond. Rod lived a full life professionally and personally. He graduated from UC Berkeley with a degree in Zoology and minors in Chemistry and Physics in 1952.

He served in the Army during the Korean War in Japan as a rifle range and chemical warfare instructor.

He joined the food industry in 1953. Rod started with Nabisco, Mary Ellen's, then moved on to Owens-Illinois (OI). While at OI, he became perhaps the pre-eminent glass expert in the United States. Rod helped develop the low-acid canned food regulation for the United States in 1971 following the Bon Vivant vichyssoise outbreak and worked closely with companies all over the United States on issues related to glass. He later moved on to California Glass, and finally Saxco. The Cal Glass position was after he retired from OI because he had a hard time sitting still and the company needed a "hands-on troubleshooter."

In 2000 – 2001, I invited Rod to work on a USAID funded project in Egypt and to help teach the first Better Process Control School offered in that country and because he was the most knowledgeable person about glass I ever met. He earned the nickname, "Amon Rod", for his work there. He also demonstrated how he worked to a number of processors. One of the glass packers we were working with was having trouble maintaining good vacuums on jars. Rod looked at the line and asked if he would like him to fix the problem. They said "Sure," so he took off his jacket, rolled up his sleeves and asked maintenance for a few tools. Within minutes he fixed the problem to the amazement of his Egyptian hosts. That was Rod in a nutshell.

Rod loved working with his hands especially with wood. His home was filled with pieces that he built. He was also an avid collector of antique car and railroad lights.

He is survived by his wife Margery, children Megan, Charles and James and their families.

He had a famous second cousin: the poet Robert Frost, so we can honor Rod with one of the poet laureates' works.

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence;
Two roads diverged in a wood, and I –
Took the one less travelled by;
And that has made all the difference.

New Professionals Event - Semifreddi's

by Elaine Chow

In 1984, Semifreddi's opened its doors in a 450-square-foot bakery in Kensington, California. Later on, in 2009, they moved to a 33,000-square-foot bakery in Alameda, California, and it is now one of the San Francisco Bay Area's premier artisan bakeries with approximately 140 employees. Their top three sellers are the sweet baguette, ciabatta deck bread and rustic sour bread.

On May 29, 2018, Semifreddi's hosted a Northern California Institute of Food Technologist (NCIFT) new professional event with a detailed tour of their facility with their CEO/President – Tom Frainier, a self-proclaimed "Chief Boot Licker", and their Vice President of Bakery Operations – John Tredgold. They walked us through the baking process from start to finish, food safety parameters, and stories on how they learned from their experiences to make improvements. Our group saw the live action of their production workers hand rolling baguettes, which then went into an automatic loading and unloading oven.

Semifreddi's culture is to focus on caring for their employees and they have a very low turnover rate. There is an emphasis on hiring from within to allow their employees to move up in their

career. In addition, they have never laid anyone off. Semifreddi's has a unique high energy and friendly environment. In addition, there is upbeat music playing in their bakery! Their bakery is decorated with around 22 flags hung on the ceiling; each flag representing the countries their employees are from.

They ended their tour with free reusable Semifreddi's logo goodie bags filled with a variety of their yummy products: morning bun, baguette, super garlic croutons, Kalamata olive croutons, and more!

Many thanks to the Semifreddi's for their generosity to NCIFT!

Advice to Food Science Students and Graduates: The Many Ways to Get a Leg in the Food Industry

by Hortense Carrot
Food Technology Postgraduate, Wageningen University

It is now Fall, the time where soon-to-be bachelor holders start to concretize a plan for after the graduation ceremony, be it pursuing a higher degree or going directly into the work force. For those looking at graduate schools, I personally recommend Wageningen University (the Netherlands), where I obtained my Master of Food Technology. The reason behind my recommendation is that, not only has this university's Master of Food Technology program been voted number one in the world, it also offers nine specializations, and most importantly, the courses are taught in English.

Hortense Carrot

Another way one can extend their knowledge base besides going through a traditional higher education route is by applying to graduate schemes, which are programs offered by multinationals which range from a few months to three years. Food companies like Unilever and Bakkavor recently started accepting applications, and offer a wide range of graduate schemes, ranging from R&D to Supply Chain Management. Although no substitute for a Master's degree, they offer extensive training plus financial compensation to become a future leader to anyone who has at least a Bachelor's degree. For those interested in food safety, another way to increase their knowledge base and network is to check if the food science department of the nearest university offers extension workshops and certification classes for industry professionals (Paul Rockwell, Corporate Chef Diversified Foods & Seasonings, LLC).

For both currently enrolled students and graduates/post graduates looking for jobs and/or internships, the first thing I recommend is finding ways to improve your LinkedIn profile: there are general skills like proficiency in Microsoft office, which can be proven by getting certified online by Career Academy, and Sigma six green belt, if one is interested in a position geared more towards project management, that are quasi required. One certification that is best to have is the general Certified Food Scientist (CFS), offered by IFT, which can be taken after a Bachelor's degree and 4 years of work experience, or a Master's degree and 2 years of work experience.

To determine which skills and qualifications would be relevant to a position of interest, I also recommend looking at the LinkedIn profiles of people that are already in that position. From there, one will eventually see a pattern of skills (software, social, technical) and qualifications (certifiable and working knowledge) people in that position tend to have and who endorses them. It is an option to connect with them, and ask them how they managed to get the endorsement for the skill: did they have to work a minimum amount of hours to qualify for that skill, or did they need a certification? Can this certification be taken online or through a third party, and at what costs? Most importantly, do they feel this skill in question really helps them get a leg up in the industry, and does having that skill come up during their interviews with recruiters and potential employers?

Based on my research, the most commonly required and/or preferred skill and qualifications for the ideal food science candidate are knowledge of food safety regulations (FDA, USDA, CFR), nutrition labelling (NLEA act), project management (ERP, PLM), in addition to working knowledge of software like Genesis and Compusense. However, once hired, employers will be explicit as to what type of certification and/or further education is encouraged/required to advance in a position. Thus, one should not immediately try to learn the skills before getting in the industry as that can be overwhelming and counter productive.

In addition, it is important to stress that a lot of people end up working for companies and positions completely different from what they studied. The Bay Area, although full of food startups, like Impossible Foods, is not known for the presence of medium-to-large food companies, let alone multinationals. I would recommend to a recent food graduate or post graduate still interested in working for the food industry but wanting to progressively move from the laboratory into more business positions to start applying for positions like research assistant/coordinator, technical sales representative or assistant project manager for non food companies. Once that experience is acquired, it will be easier to apply for that position in a food company, as the skills learned tend to be the same. To narrow down the company option, if one is interested in a position that acts as an interface between business and the laboratory, like consumer research for improvement of products, it is better to look into small to medium sized companies when job hunting. The reason is that big and multinational corporations tend to not have positions where one can wear several "hats".

If one is apprehensive about losing their knowledge base in food science when working for a non food company, there are many ways to stay involved in the industry. The number one way is being involved in IFT, by taking advantage of the volunteering and leadership opportunities for students and young professionals. If membership costs are an issue, there is now a more affordable Networking and Engagement membership and a Premier Early Career discount option for recent graduates. This type of membership gives access to on-demand web events and live web events are free, access to mentors and most importantly, access to different volunteer and leadership opportunities in the many division groups that are offered by IFT, ranging from

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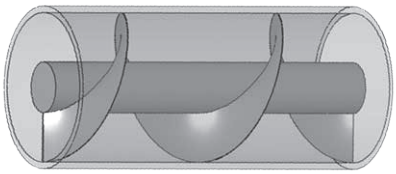
Chocolate Tempering

by Christina Megyesi
R&D Project Lead,
Barry Callebaut North America

Chocolate is an indulgence known and loved by many, but not everyone is aware of the amount of care, precision, and even science that goes into making the candy bars, panned nuts and bon bons you see at the store. While there are several ingredients and processing steps that make each chocolate recipe unique, all chocolates must undergo proper tempering in order to be presented to the customer with the desired characteristics such as gloss and brittle snap. This crucial step of tempering also helps to prevent bloom, or undesirable fat crystals from forming throughout storage.

The basis of tempering is to control the type of fat crystals that form upon solidification of the cocoa butter within the chocolate. There are several different techniques for doing so, but all use time, temperature, and some form of agitation to bring the fat molecules into proper crystallization. Cocoa butter is a polymorphic fat that crystallizes in various forms, six to be exact. Of these six, only form V and VI are stable and desirable. Form V is formed through proper tempering, but Form VI can only be created after the chocolate has aged anywhere from two weeks to several months. During this time, the triglycerides in the cocoa butter are tightly packed producing a firm chocolate with a more gradual melting curve.

Diagram of Screw Tempering Unit



The two most common types of hand tempering are the seeding and tabling methods. For the seeding method, chocolate is heated up anywhere between 104-122F based on the type of chocolate. This melts all of the possible crystal forms to ensure that only the desired Form V crystals are created. Pieces of tempered chocolate are then added slowly and mixed into the liquid chocolate at about 15-20%. By introducing only Form V crystals, the rest of the un-tempered chocolate follows this crystallization pattern as it cools and results in an exceptional temper.

If there is no properly tempered chocolate on hand, tabling is a great way to produce a well- tempered chocolate. Tabling is the more traditional and artisan method of tempering chocolate and great for small batches. Chocolate is first heated up to 104-122F. This can be done using a double boiler, microwave or melter, exercising caution if using the double boiler as any water that gets into the chocolate will cause it to seize. Once heated about two thirds of the chocolate are poured onto a marble or granite table top with one third remaining in the bowl. A metal scraper and offset spatula are used to continuously move the chocolate as it cools. The chocolate will begin to thicken slightly. Many experienced chocolatiers can tell by the look and feel that the chocolate has reached the point where Form V, and some Form IV crystals have formed, typically between 79-84F depending on the type of chocolate. The tabled chocolate is then added back to the bowl of warm chocolate that was set aside. Here, the Form IV crystals are melted out and only the stable crystals remain to

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Advice to Food Science Students and Graduates

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product development, business and marketing to education and outreach. Although time consuming and not paid, this type of involvement is seen positively by future employers as it bolsters one's credibility and allows to network in the industry.

There are other large organizations for professionals and students to get involved and network besides IFT, as the latter is a very general organization. There is the Research Chefs Association (which is great for connecting with professionals in R&D), the Association of Dressings and Sauces (ADS), the Flavors and Extracts Manufacturing Association (which is very specific for those wanting to be in the flavor industry, the National Restaurant Association (for those interested in food service) and many more (Paul Rockwell, Corporate Chef Diversified Foods & Seasonings, LLC).

For more local trade and professional organizations, the first one I recommend joining is obviously NCIFT. From monthly events to joining the New Professionals Group, there are plenty of ways to be involved and network. The Hornblower also regularly cites names of smaller companies when talking about events hosted by them, to which one can contact directly for job opportunities, and officer positions that are open.

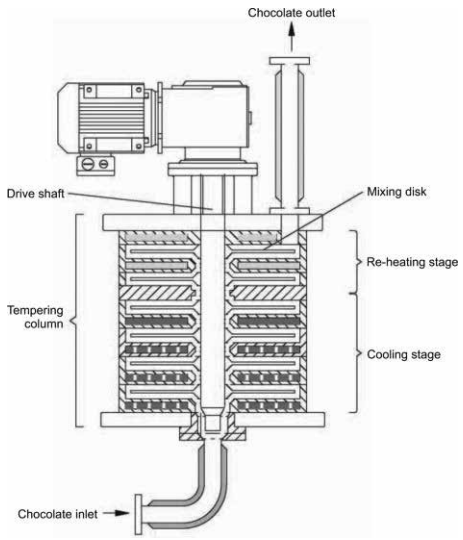
I also recommend the San Francisco-based meetup called the Food Innovation Circle, which a has a Facebook page and a page on the online publishing platform Medium. Through this meetup, I got connected to the Mixing Bowls, an online platform that connects innovators in food, agriculture and IT, and offers an extensive list of conferences and workshops one can attend. For those interested in "clean label" foods and health, I recommend joining the Naturally Bay Area, a 501(c)(6) non-profit corporation that was formed earlier this year to connect entrepreneurs, investors and corporate innovators in the food and natural products community in Northern California .

The take home message is this: if one has trouble finding an internship and/or entry level position in the food industry, it is an idea to look for that same position in another industry, while being involved in the food industry through networking and volunteering.

seed the chocolate. It is important to do all hand tempering in a room that is both cool and dry. The ambient temperature if too warm will make it difficult to reach the desired temperature zones and any moisture can cause the chocolate to thicken and decrease shelf-life.

Another important part of the chocolate tempering process is proper cooling. After tempering and molding, chocolate

Diagram of Disc Tempering Unit



can be cooled in a gentle cooler at 60F or out at room temperature no higher than 68F and 55-65% humidity. If chocolate is cooled too quickly such as in a cold fridge or freezer it can cause blooming, loss of shine as well as risk for condensation on the product.

The same process is carried out in chocolate manufacturing, but in a much more automated manner through the use of various types of tempering machines. Two of the most common types of tempering units are screw and disc heat exchangers. Screw tempering units contain a large screw or scraper within a temperature controlled cylinder that turns the chocolate and moves it through different temperature zones. Disc tempering consists of a series of heated discs staggered horizontally within a large chamber. As the chocolate is pumped it weaves between the discs and flows through the various temperature zones to promote proper crystal formation. Both types of tempering units are a continuous process that is ideal for large scale production. The chocolate can then be molded and sent through a cooling tunnel that uses a fan to circulate cool air around the chocolate.

There are several signs indicating that chocolate has been properly tempered including gloss or shine, a firm snap, contraction from within a mold, and smooth melt in the mouth. Conversely, a chocolate with a poor temper may have a more matte appearance, softer texture, stick to molds, and melt more quickly. Another big indicator of a poor temper is bloom. Bloom from improper tempering occurs when any combination of crystal formations I-IV are formed. These unstable formations are seen as light brown to whitish gray spots or streaks upon solidifying of the chocolate and may worsen over time. Thankfully, even if fat bloom has occurred, the chocolate can be melted down and re-tempered to its most desirable state.

Bloom can also be caused by poor storage conditions of properly tempered chocolate where temperature fluctuations cause the chocolate to form unstable crystals. If you have ever left a chocolate bar in a hot car and come back to find it covered in white-gray film or spots, this is bloom due to poor storage conditions. If stored properly in a cool dry place, dark chocolate has the shelf life of two years. After that time, the flavor and overall quality of the chocolate will degrade and may exhibit bloom regardless of storage conditions.

Tempering is a skill that is essential to any chocolatier and is perfected over time through both precision and intuition. It is

Left: Tempered Chocolate
Right: Bloomed Chocolate

both art and science that come together in this unique process to produce many of our favorite corner store confections to the most extravagant of chocolate desserts.

Sources:

Greweling, P. P. (2007). Chocolates and Confections. Hoboken, NJ, USA: John Wiley and Sons, Inc.

Beckett, S. T. (2013). The Science of Chocolate. Cambridge, UK: RSC Publishing.

Compound Interest, N. A. (2016, July 7). The Polymorphs of Chocolate | Compound Interest. Retrieved October 2, 2018, from https:// Richter, K. (2009, January 1

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Peschar, S. (n.d.). Structure of chocolate unravelled at the ESRF. Retrieved October 2, 2018, from http://www.esrf.eu/news/general-old/general-2004/chocolate/index_html

Capsicum Spices

The spices contained under the capsicum umbrella are many, and include paprika, chili peppers, red peppers and bell peppers although bell peppers are generally considered vegetables and normally not included. The capsicum species are indigenous to the Western Hemisphere and notable that Christopher Columbus discovered them in his New World expeditions. He took the plants back to Europe and their popularity spread throughout Asia and Africa in a short period of time. Volatile oil levels are sufficiently low in all capsicums and therefore not considered a specification. Pungency and color values are generally the two most important parameters when specifying a capsicum.

Paprika (capsicum annum L) contains the carotenoid capsanthin

CONTINUED ON PAGE 16

Capsicum Spices

CONTINUED FROM PAGE 15

which is responsible for the pigment in paprika. The intensity of the pigment increases as the fruit ripens and continues after maturity. Color retention is affected by heat and light, resulting in color degradation over time. To prevent that, most manufacturers use ethoxyquin or another antioxidant to hold the color. The color value of paprika is generally expressed in ASTA color value, and refers to the extractable color (the color that will be visible in the finished food product) rather than the surface color. The most common ASTA for paprika is 120, although the range is from 85-150. The best and most pure paprika comes from grinding whole, stemless pods and blending with various lots to achieve the desired ASTA. Some companies however, use defatted paprika (the remains of oleoresin production) where various levels of the solvent hexane are present in the paprika. A reputable outside lab can easily determine the presence of hexane in the paprika if you suspect this is being done to your product.

Red Pepper *(capsicum Frutescens L)* contains capsaicin the major component for pungency or heat. In past years, the primary

method for determining heat levels was an organoleptic method called Scoville Heat Units or SHU. Many still refer to the levels of pungency or heat as SHU, although a more accurate method has replaced it. HPLC (high performance liquid chromotography) is far more reliable and uses specific instrumentation in a QC lab to accurately determine heat levels. Commercially used red pepper heat levels generally range from 5,000 HPLC to over 100,000. If higher heat levels are desired, many employ OCAP (oleoresin capsicum) which averages 1 million HPLC and is applied using various dilutions.

Chili Peppers are milder than red peppers and are grown in the Southwest United States as well as Mexico. Suppliers will roast them and offer a Dark, Medium and Natural option in a variety of mesh sizes generally ranging from 20 (more coarse) to 40 (more fine). Dark Chili Peppers provide some nice caramelized flavor notes, and are quite low in HPLC, usually around 1,000 or so.

The World of Food Science

by Richard F. Stier

2019 will mark my 50th year as an IFT member but my association with food science goes back even farther. How so? My Mother was a professor in the food science department at Rutgers so I have literally been part of the discipline my whole life. One of the advantages of being associated with food science is that it is a global business. This is especially true when one looks at food science departments around the country. Growing up with a parent who was a food science faculty member and then attending Rutgers and UC Davis, I met students from all over the world, which probably helped contribute to my interest in travel and international work. This exposure to people from so many places has also given me a unique perspective on the immigration and refugee issues that are so much in the headlines here and in Europe.

One of the great traditions practiced at Rutgers when I was there was the Christmas party. It was always a great feast and event. Why? All the faculty and graduate students attended with their families. It was a potluck and the international students were encouraged to bring one of their national dishes, so the party would include foods from Asia, South and Central America, the Middle East and Europe. You wanted to try everything but often there was simply no room to put it all. The departments also served as venues where "enemies" would become friends. One example occurred years back when an Israeli and an Egyptian graduate student came into the department together. They became good friends and learned that they had stood on opposite sides of the Suez Canal during the 1967 war. Some of

CONTINUED ON PAGE 18

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The NCIFT Holiday Dinner will include world-class wines paired with amazing dinner entrées. Our featured guest speaker, Pam Coleman, is the President-Elect of National IFT and will be speaking on Feeding Minds for Tomorrow's World.

Event Details:

Date: Thursday, December 13th

Time: 5:30pm. Wine & Hors d'oeuvres, followed by Dinner, Dessert, Student Raffle*, and the Evening's Guest Speaker

Speaker: Pam Coleman, President-Elect of National IFT

Topic: *"Feeding Minds for Tomorrow's World:* Given the myriad of global challenges we face in feeding more people with fewer resources, what role can industry associations such as IFT play? This talk will examine the challenges and trends impacting our food system and will illustrate how IFT is adapting to these changes through initiatives such as IFTNEXT."

Place: Dublin Ranch Golf Course, 5900 Signal Hill Drive, Dublin, California

**Raffle: Students from UC Davis will be selling tickets for the Holiday Raffle to raise money for their student clubs. Please bring a prize for the Raffle!*

Registration Information:

Seating is limited to the first 120 attendees

Members $65, Students $40, Non-Members $75, if reservations and payments are made prior to November 20th. Any registrations placed after November 20th (if spots are still available) will be charged at $85, regardless of member status.

We're looking forward to seeing you! Please RSVP and submit payment to Imelda Vasquez at **ncift@marketingdesigns.net** or via phone at 650-802-0888.

The World of Food Science

CONTINUED FROM PAGE 16

the interactions that occurred might be called politically incorrect by today's standards, but they helped build comradeship and create great working relationships.

But what inspired me to talk about the World of Food Science was an old friend and long-time employee of Del Monte; Dr. Chung Hyun Son. Dr. Son arrived in the United States in 1954 and was what we would call today a political refugee. He fled the communist regime in North Korea in 1946 on foot and via rowboat to get south of the 38th parallel. He ended up in the United States through the auspices of the United States military and entered Rutgers University in 1954. He was one of my Mother's favorite students and worked his butt off receiving a B.S. in 1956, M.S. in 1957 and Ph.D in 1959. Dr. Roy Morse helped him obtain a position with the California Packing Company (old Del Monte) shortly after graduation where he worked in product development until he retired in 1983 at age 66. Dr. Son was able to bring his family to the United States in 1961 after a seven-year absence and became a United States citizen in 1966, something that he took great pride in. How do I know all of this? My Mother was one of Dr. Son's favorite people and someone whom he always credited with helping him to adjust to this country and to follow the necessary paths to get through Rutgers. He and she corresponded until my Mother passed away in 1995. When Dr. Son passed away a few years back, he was over 90 years old.

> One of the advantages of being associated with food science is that it is a global business. This is especially true when one looks at food science departments around the country.

So, how do I know so much about Dr. Son? He was a friend but he also honored me by sharing a twelve-page autobiography he wrote called "My Journey to Liberty." The last two sentences in his autobiography sum up his life and dreams and are also germane to the immigration issues we are seeing throughout the world.

> *"The life filled with gratitude often reminds me of the Italian restaurant owner's advice from 1955, "This is the best country in the world; try and stay here." I am happy and grateful that the dream planted in my mind by that advice became a reality to me and my family."*

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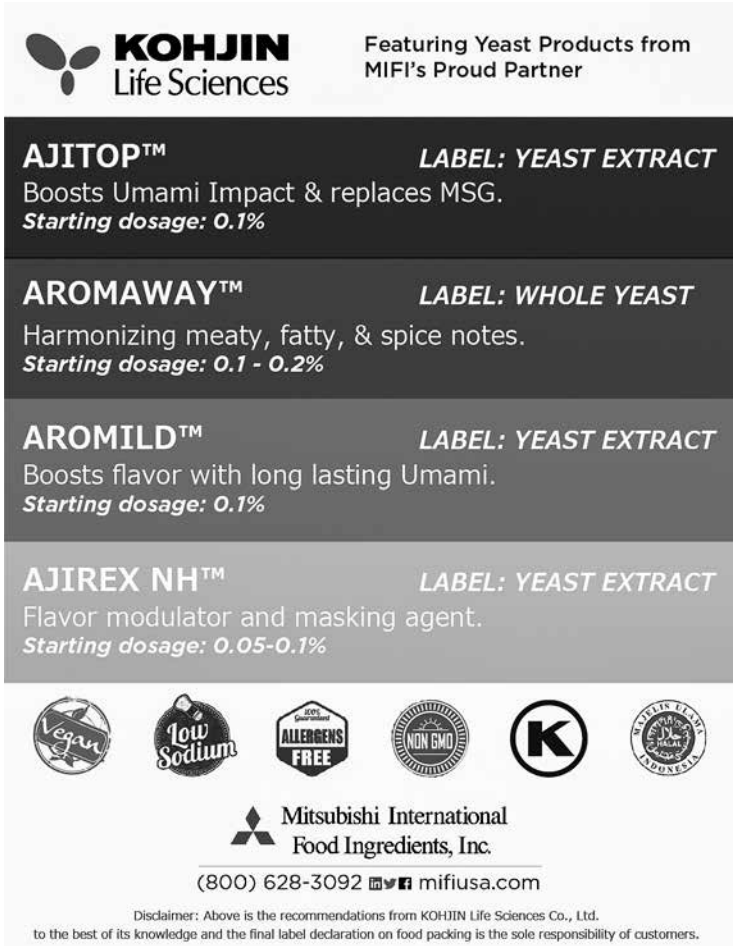

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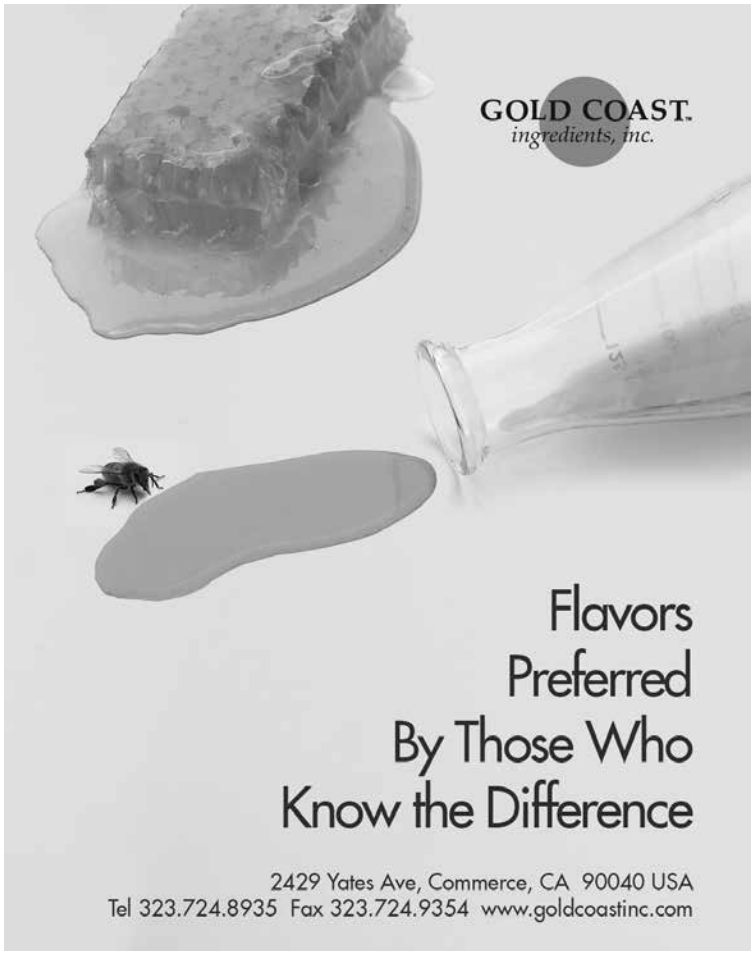

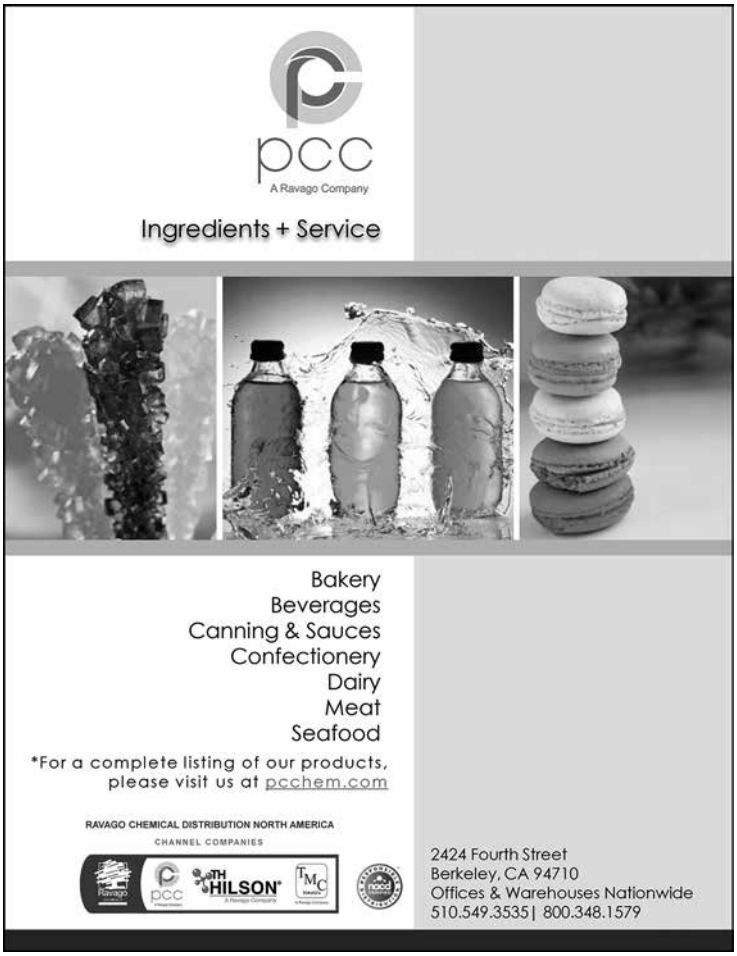

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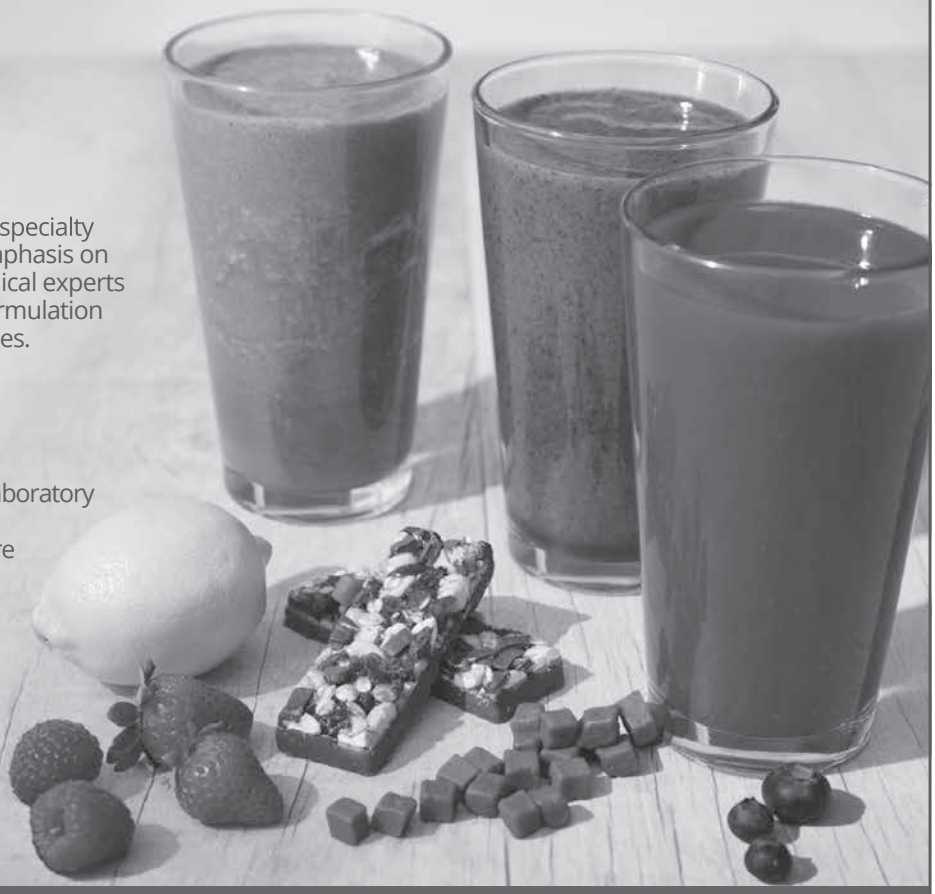

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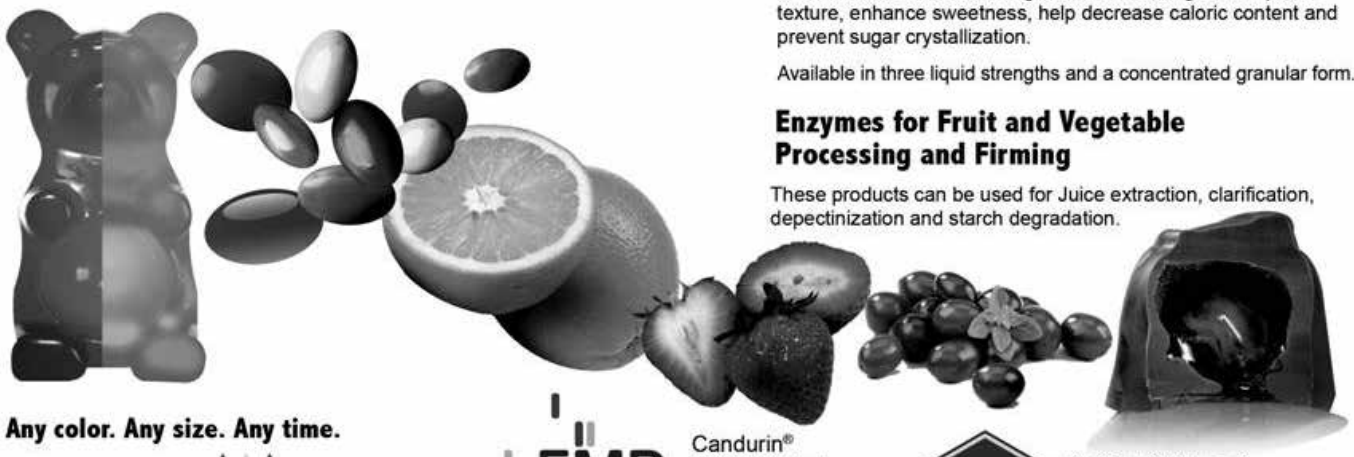

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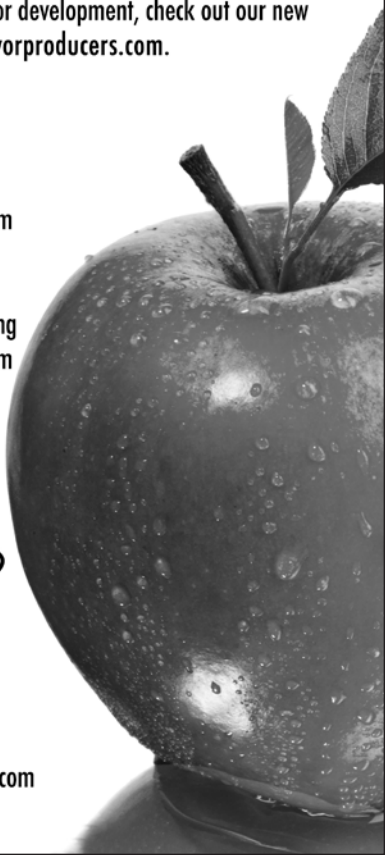

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WELCOME to the 2019 Northern California Institute of Food Technologists Suppliers' Night. The event will be held at the Alameda County Fairgrounds in Pleasanton, CA on Tuesday, May 7th.

The NCIFT Expo continues to grow in attendance and 2019 expects to bring **over 300 attendees** from all over Northern California. NCIFT attracts a wonderful mix of food professionals including **Marketing, R&D, Culinary, QA/QC, and Sensory.** With our new Expo layout and Supplier Sponsored Happy Hour, the NCIFT Suppliers' Night has become an excellent networking opportunity. Sponsorships are welcome.

The 2019 Suppliers' Night will follow our annual symposium from 1:00 to 3:00 p.m., which we expect to once again draw a large number of attendees.

The 29th Annual Golf Classic and Dinner will be held on Monday, May 6th in San Ramon, CA at the Bridges Golf Club. Don't golf? Then join everyone for dinner immediately following The Golf Classic. Also, consider becoming a **GOLD** or **PLATINUM** tee sponsor. You won't regret it!

Complete the enclosed registration form and return it to Imelda Vasquez today! We appreciate your support.

SCHEDULE OF EVENTS

Monday, May 6, 2019 The Bridges Golf Club San Ramon, CA	**10:30 a.m. – 12:30 p.m.** **12:30 – 6:00 p.m.**	Golf Check-In (arrive early), Practice Range Open, Lunch Golf Classic Shot Gun Starts – **29th YEAR!**
	6:00 – 9:00 p.m.	Cocktails, appetizers & laughs, followed by a great dinner, awards, prizes, and more fun!
Tuesday, May 7, 2019 Alameda County Fairgrounds, Young California Building Pleasanton, CA	**12:30 – 3:00 p.m.**	Exhibitor Setup
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