



# INNOVATION IN CALIFORNIA DAIRY

## THE CALIFORNIA DAIRY INNOVATION CENTER

CCOA Meeting, June 27, 2023

Veronique Lagrange, CMAB

*Enter the*  
**GOLDEN STATE™**  
WITH REAL CALIFORNIA DAIRY





# CALIFORNIA DAIRY INNOVATION CENTER



- An overview of the California Dairy Innovation Center
- Innovation and training services for processors and creameries

[cdic.net](http://cdic.net)



# WHAT IS THE CALIFORNIA DAIRY INNOVATION CENTER?

A **collaboration** of processors, universities and check-off organizations



Focused on **stimulating innovation** in the California dairy sector

## STEERING COMMITTEE



# OPERATING ACROSS MULTIPLE LOCATIONS TO MEET YOUR NEEDS



Partnership  
for on-line  
**Dairy Processing Certificate**





# HOW WE SUPPORT CALIFORNIA PROCESSORS

*Enter the*  
**GOLDEN STATE™**  
WITH REAL CALIFORNIA DAIRY

# CORE STRATEGIES TO SUPPORT INNOVATION

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## Products & Packaging



**Drive Export Sales**

**Diversify Portfolio**

**Sustainable Packaging**

## People



**Continuing Education**

**Attract new workforce**

**Academic/Research Capacity**



# SERVICES FOR PROCESSORS

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From product idea/concept to prototype: delivering turn-key formulations you can customize



Testing new ingredients or processes



Providing technical know-how to shorten your product development cycle

# TURN-KEY FORMULATIONS - EXAMPLES

“High protein, no sugar added, lactose free ice creams

**10** PROTEIN  
g

4% MILKFAT

100% LACTOSE FREE

NO SUGAR ADDED

Nutrition Facts	
servings per container	
Serving size	(100g)
Amount per serving	
<b>Calories</b>	<b>120</b>
	% Daily Value*
Total Fat 4g	5%
Saturated Fat 2.5g	13%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 95mg	4%
Total Carbohydrate 22g	8%
Dietary Fiber 0g	0%
Total Sugars 7g	
Includes 0g Added Sugars	0%
<b>Protein 10g</b>	
Vitamin D 0mcg	0%
Calcium 283mg	20%
Iron 0mg	0%
Potassium 249mg	6%

\*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Hydration/  
*Liquid IV*  
frozen bars



Asian tea drinks,  
bobba beverages





# SERVICES FOR PROCESSORS

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From product idea/concept to prototype: delivering turn-key formulations you can customize



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Providing technical know-how to shorten your product development cycle

# TESTING NEW INGREDIENTS, PROCESSES

Functionality of alternative sweeteners



Cultures for high protein drinking yogurts



Fiber ingredients for aseptic dairy beverages





# SERVICES FOR PROCESSORS

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From product idea/concept to prototype: delivering turn-key formulations you can customize



Testing new ingredients or processes



Providing technical know-how to shorten your product development cycle

# DEVELOPING KNOW-HOW FOR TECH SUPPORT & TRAINING (EXAMPLES)

## BEVERAGES



## HISPANIC CHEESES



## FROZEN DESSERTS

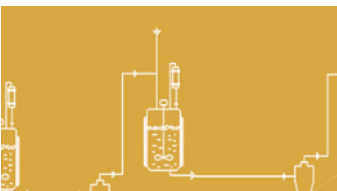




# CALIFORNIA PACKAGING CHALLENGE: REPLACING PLASTICS

## PRIMARY RESEARCH

Compostable bioplastics from whey



**UC DAVIS**  
UNIVERSITY OF CALIFORNIA



## MATERIALS TESTING

Compostable cups for yogurts and spreads



## NEW DEVELOPMENT

Dairy-based edible cups



## PACKAGE DESIGN & PILOT TESTING

Reusable, fit for purpose milk bottles & containers



# INNOVATION IS ABOUT PEOPLE

## CDIC'S FOCUS ON DEVELOPING AND RETAINING TALENT FOR THE INDUSTRY

### DEVELOPING ACADEMIC CAPACITY



New equipment, new positions



### INTERNSHIP PROGRAMS

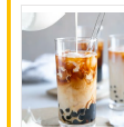
CDIC offers ~ 15 internships per year

We help processors attract and select interns with diverse backgrounds and expertise



### TRAINING PROGRAMS FOR YOUR PERSONNEL

## 6 California-based short courses in 2023



Registration Closed  
Class Full

January 10-11, 2023  
**Coffee, Tea, and Creamers**  
The Science and Art of Milk in Beverages  
Chapman University, Ranney Processing Lab, Orange, California  
This workshop introduces students to the science of roasting coffee, milk and creamers fundamentals, and how to develop innovative coffee and tea milk-based products. Experts will share tips on formulations for ready-to-drink aseptic and shelf-stable products and processing know-how.



Registration Closed  
Class Full

January 17-20, 2023  
**Better Process Control School - Dairy Processors**  
Chapman University, Food Science Department, Orange, California  
This course applies to processors of low-acid, retorted, aseptic and acidified foods and packaged in metal or plastic cans, glass jars, and flexible pouches.



Registration Closed  
Class Full

February 8-9, 2023  
**Dairy Operations Workshop**  
Dairy Products Technology Center, CalPoly, San Luis Obispo  
This workshop focuses on the fundamentals and building blocks of dairy processing: thermal processing, homogenization and separation processes, enzymatic processes, fermentation, concentration and drying, and state of the art QA. Hands-on demonstrations in the pilot plant. No pre-requisites needed.

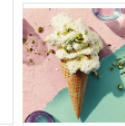
Need another short-course? CDIC co-organizes short-courses and workshops throughout the year to meet industry's needs. We welcome industry's participation and suggestions! Please contact CDIC for more info: [viagrange@cmab.net](mailto:viagrange@cmab.net), +1 202-316-1265.



April 11-13, 2023  
**Advanced Cheesemaking**  
Dairy Products Technology Center, CalPoly, San Luis Obispo  
This workshop will feature extensive hands-on cheesemaking in the pilot plant, making fresh/farmer's cheese, Gouda and Parmesan. Students will learn about pasta filata and global cheese varieties. No pre-requisites needed. For more info: [kiles@calpoly.edu](mailto:kiles@calpoly.edu)  
Registration: <https://dairy.calpoly.edu/short-course-symposia>



June 21-22  
**Hispanic Cheeses**  
Dairy Products Technology Center, CalPoly, San Luis Obispo, in collaboration with Fresno State and International faculty  
Attendees will learn about the major varieties of Hispanic cheeses, their manufacture, characteristics and applications. Hands-on cheese making in the creamery. No pre-requisites needed. For more info: [kiles@calpoly.edu](mailto:kiles@calpoly.edu)  
Registration: <https://dairy.calpoly.edu/short-course-symposia>



September 19-20  
**Frozen Desserts Innovation from gelato to novelties**  
Dairy Products Technology Center, CalPoly, San Luis Obispo  
Explore hot industry trends and learn how to formulate base mixes to achieve nutritional and product targets. Fundamentals of mixing and freezing. Hands-on manufacture of innovative formulations in the pilot plant. No pre-requisites needed.  
Registration: <https://dairy.calpoly.edu/short-course-symposia>



# JOIN US AT FRESNO STATE, SEPTEMBER 7

- Consumer insights
- Opportunities for California processors
- New product, process and packaging research
- Industry panel
- Networking with students, academia

Full program at [cdic.net](http://cdic.net)

Registration available at [www.dairypcc.net/events/](http://www.dairypcc.net/events/)



**PACIFIC COAST COALITION**

# Dairy Products Innovation

## CONFERENCE

at FRESNO STATE

### SEPTEMBER 7, 2023

Jordan College of Agricultural Sciences and Technology

## Program

8:00	Registration and coffee
9:00	Opening (Fresno State Regreen)
9:15	What consumers want – 2023 landscape study (M. Quirk, Dairy)
9:45	Why innovation? Market oppo dairy sector, capacity gaps (Bob Cornell and Ben Yoo, Califor)
10:30	Break and gaster session
11:00	The role of sensory sciences in (Dr. M. Drake, Southeast Dairy Foods Research Center)
Noon	Lunch and gaster session
1:00	Integrating sustainability, nutrition and innovation (D. Mullins, California Dairy Reso)
	Omega 3 milk, cream and but study (Dr. C. Uden, Fresno State)
1:30	Coffee, tea and milk drinks – li (L. Hoang/ Dr. A. Prakash, Chagn)
1:50	Product innovation showcase (hosted by J. Margolis, CMAA, on Presentations by student team CalPoly, Oregon State)
3:15	Break and product tasting
3:30	Process Innovation Spotlight – (L. Peterson, Youngstown - Readi)
3:50	Workforce Development and Opportunities <ul style="list-style-type: none"><li>▪ CalPoly, Chapman Univers</li><li>▪ Industry Representatives Po</li></ul>
5:00	Networking reception at Fre
7:00	Adjourn

FRESNO STATE



# AND SAVE THE DATE FOR 2024 INNOVATION CONFERENCE

## DAIRY PRODUCTS, PROCESSING & PACKAGING INNOVATION CONFERENCE

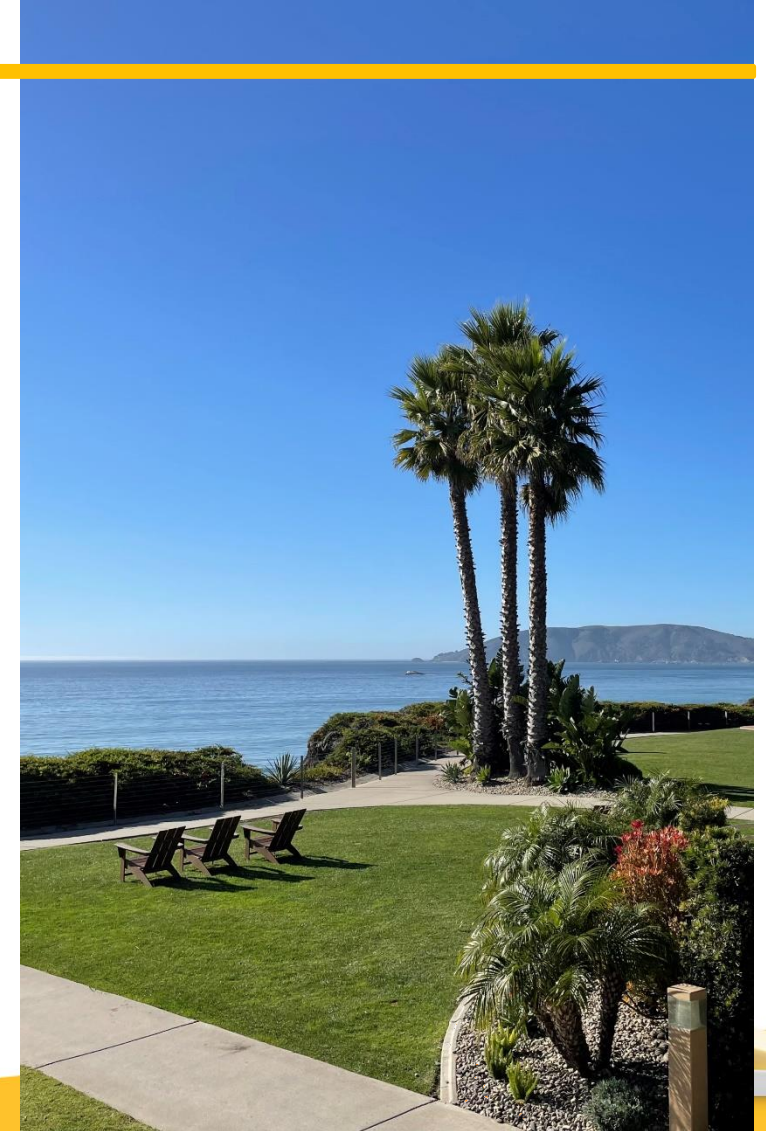
New paths to sustainability

SHELL BEACH, CALIFORNIA.

FEBRUARY 27-29, 2024



CAL POLY





**Questions?**  
Thank you!

Vlagrange@cmab.net



See more at  
[www.cdic.net](http://www.cdic.net)