

PROPOSAL NARRATIVE

(Maximum of 5 double-spaced pages, 1" margins, 12-point font)

I. Abstract

As a finalist of the Institute of Food Technologists (IFT) Product Development Disney competition a healthy snacking alternative utilizing interdisciplinary skills was developed, in hopes of decreasing childhood obesity and increasing positive eating habits. Nem-O's offers an improved substitute to the traditional oatmeal cookie as it is composed of quinoa, dates, sweet potatoes, applesauce, and oats, targeting children age 10 and younger. Nem-O's is processed in a semi-continuous, sanitary process that ensures production of safe snacks. As the current market lacks a substitute for children's cookies, Nem-O's fills this void to create an enjoyable, bite-sized cookie containing no allergens. As one of the five finalist teams selected out of 32, the Cal Poly team consisting of five members will compete in an oral presentation and sensory evaluation in front of a panel of judges and professionals from the food industry at the Annual IFT Conference in New Orleans in June. Therefore, the team is requesting for \$3,280 endowment to cover some of the remaining travel expenses.

II. Introduction

The Institute of Food Technologists (IFT) is a professional organization that aims to advance food science and technology. IFT Student Association provides students the opportunity to gain hands-on experience by developing industry solutions through product development competitions. This competition offers the opportunity for students to acquire experience working in teams to practice interdisciplinary skills in the fields of marketing, industrial technology, microbiology, chemistry, food science, etcetera. For example, food science students work alongside industrial technology students to establish appealing and

ecological packaging. The competition consists of three parts: a product proposal, oral presentation, and sensory evaluation. Students better their written and oral communication skills through the competition.

The Disney Product Development Competition specifically, requires students to integrate at least half a serving of a fruit, vegetables, whole grains, or low fat dairy ingredients into their product. These requirements aim to decrease childhood obesity while developing healthy eating patterns at an early age. The product must also incorporate certain Disney characters to target children age ten and younger.

In response to this need, Nem-O's (O's), a healthy twist on oatmeal cookies containing fruit, vegetable, a serving of whole grains, and a hint of cinnamon and vanilla, was formulated. Nem-O's can be enjoyed any time of day: paired with yogurt in the morning, as an afternoon snack before physical activity, or as a treat after dinner. Nem-O's ultimately aims to promote healthy decision-making that will resonate throughout one's lifetime while helping solve child.

III. Objective(s)

- (1) Successfully meet the Disney requirement of producing a healthy snacking opportunity for children in order to decrease child obesity and develop positive eating habits at an early age.
 - a. Develop an appealing, crunchy cookie alternative that contains a whole serving of grains for children age 10 and below.
- (2) Utilize interdisciplinary skills to acquire learn by doing experience by obtaining advice from industry suppliers and experts to effectively produce, package, and market a high quality, safe, shelf stable children's snack.
- (3) Send all five team members to do an oral presentation and sensory evaluation of Nem-O's at the Annual IFT meeting in front of panel of judges, industry professionals, professors, and

students.

IV. Methodology

The objective of competition is to develop a healthy snacking alternative containing a full serving of whole grains to promote healthy eating habits in children age 10 and younger.

(1) Meeting Disney requirements- The initial steps of developing a product to meet Disney regulations of creating a product containing a whole serving of grains while appealing to children age 10 and below, consisted of numerous innovative brainstorming sessions. After examining current children's healthy, baked goods that lack "Big 8" allergens, coupled with discovering the growing popularity of popped quinoa, Nem-O's was created.

a. Developing Nem-O's- In developing Nem-O's over 100 parents were initially interviewed and asked three main questions: what ingredients and characteristics do parents want in a children's snack, what ingredients and characteristics do children want in a children's snack, and what snacks do your children consume on a regular basis. From this analysis, a desire of a crunchy, children's snack was discovered. This analysis of consumer desires was followed up with a conjoint analysis of approximately 100 people. The conjoint analysis asked parents to rank, in order of importance, what types of ingredients they wished children's snacks contained, what nutritional claims they wished children's snacks contained, and what type of preparation they wanted the snack to require. Parents stated they desired a on the go, vegetable containing snack for their children.

The snack will be formulated to a child's liking by conducting an initial sensory evaluation at open house and a second one at an elementary school. Suppliers are being contacted to get the highest quality ingredients during the formulation stage. The product will need to be tested for water activity as a safety measure and other analytical tests will be done for quality testing. The shelf life of this product will also be analyzed and an

approximate shelf life will be decided.

(2) *Learn by Doing*- Students will learn the obstacles encountered throughout the process of brainstorming, formulating, producing, and launching a product. In order to create a successful, appealing product, students work with professors, industry professionals, and other students in a variety of fields. Industry professionals were contacted to obtain samples of ingredients and acquire a better understanding of the technical difficulties encountered when the ingredient was processed. Food Science professors were asked to aid in evaluating the taste, texture, and appearance of the product, as well as, providing feedback for the final product proposal. Industrial technology students and professors were approached to gain a better understanding of materials utilized for packaging, as well as, machinery used for packaging. Lastly, graphic arts and communication students collaborated in creating the product logo and label.

(3) *Presentation of Nem-O's*- Nem-O's will be presented to a panel of judges, industry professionals, professors, and students, at the Annual IFT Conference in New Orleans this June. The presentation will consist of two parts: an oral presentation and sensory evaluation. Student presenters will develop their communication skills while thoroughly researching the methods and difficulties of producing a children's snack in order to answer various questions posed by industry professionals.

V. Timeline

Task/ Activities	April	May	June
Initial Sensory Test of Nem-O's			
Secondary Sensory Testing of Nem-O's			
Southern California Institute of Food Technologists Poster and Oral Presentation			
Nem-O's Product Formulation			
Nem-O's Final Product Formulation			
Submit Final Proposal to IFT Judges Panel			
Final Sensory Evaluation at Annual IFT Conference in New Orleans in front of panel of judges, industry professionals, and students			

Final Oral Presentation at Annual IFT Conference in New Orleans in front of panel of judges, industry professionals, and students			
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VI. Final Products and Dissemination

Nem-O's final proposal will be submitted on May 30. Nem-O's will be presented to a panel of judges at the IFT Annual Conference in the form of an oral and sensory evaluation presentation in June. The winners of the competition will be announced in New Orleans on June 24, with the results being posted on the Cal Poly FSN Department Facebook page, IFT magazine, and IFT website: <http://www.ift.org/community/students/competitions/disney-iftsa-product-development-competition.aspx>.

VII. Budget Justification

In fundraising to transport five student presenters to New Orleans for five days and four nights, supplies and ingredients costs, and registration fees, we recruited funds from numerous sources. From the Cal Poly Food Science and Nutrition Department and IFT, we have received \$1,875 thus far, but are continuing our efforts by reaching out to further professional food science organizations and the food industry.

We are requesting a total of \$3,280 to travel to New Orleans for the Annual IFT Conference and Disney Product Development Competition. Expenses can be broken down as shown below:

- Ashton Crowne Plaza hotel at \$195 per night, for four nights, for a total of \$780
- Remaining costs of air fare, \$500 per person, for a total of \$2,500

The total we are requesting to be covered in order to send five Cal Poly students to the Annual IFT Conference in New Orleans to present equates to \$3,280.



PROPOSAL BUDGET

Student Applicant(s): Alexandra Carpenter, Katie Lanfranki, Matthew Medlin, Christina Neumayr, Alison Shapira	
Faculty Advisor: Amanda Lathrop	
Project Title: Nem-O's	Requested Baker Endowment Funding
Travel <i>subtotal</i>	\$
Travel: In-state	\$
Travel: Out-of-state	\$3,280
Travel: International	\$
Operating Expenses <i>subtotal</i>	\$
Non-computer Supplies & Materials	\$
Computer Supplies & Materials	\$
Software/Software Licenses	\$
Printing/Duplication	\$
Postage/Shipping	\$
Registration	\$
Membership Dues & Subscriptions	\$
Multimedia Services	\$
Advertising	\$
Journal Publication Costs	\$
Contractual Services <i>subtotal</i>	\$
Contracted Services	\$
Equipment Rental/Lease Agreements	\$
Service/Maintenance Agreements	\$
TOTAL	\$3,280



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April 18, 2014

Cristopher Dicus
Baker Endowment Coordinator
Office of the Provost & Executive Vice President for Academic Affairs

Dear Selection Committee,

This letter is in support of IFTSA Disney Product Development Team's application for Warren J. Baker Endowment support. The students listed below put in extraordinary amounts of time during fall and winter quarter to develop *Nem-O's* and prepare a preliminary proposal which was entered into the IFTSA international product development competition. This type of competition allows our students to apply the technical skills learned in courses, challenges them to work as a team, and teaches project management skills. Cal Poly's Learn by doing philosophy has developed these students and given them the skills needed to be successful in this competition.

Disney Team

Ali Shapira
Christina Neumayr
Matthew Medlin
Katie Lanfranki
Alex Carpenter

The team was selected as a finalist from 32 total entries. They will be competing at the IFT annual meeting against:

Donald Duck's Quinoa QUACKers: Cornell University
Finding Dory and Friends: Cornell University
Flight Bites: Iowa State University
Pocahontas Canoe Cruisers: University of Wisconsin, Madison

Like in years past, the department faculty and staff have supported the students by providing them with access to department equipment, space and consulting time. Our students have access to our department pilot plant, kitchens and labs which house all the equipment needed to develop their product. Myself along with Dr. Amy Lammert, Dr. Robert Kravets and our Department Head Gour Choudhury have provided and will continue to provide them technical guidance and assistance. Students are registered for a 400 special problems class this spring to ensure the appropriate amount of time is dedicated to the project and that all students are meeting contribution expectations. The faculty will review and provide comments on the final written

proposal, poster and presentation. I am also working with the students to seek out and raise additional funds for their trip from industry. I will also be accompanying the students to IFT.

Cal Poly is becoming a favorite in IFTSA product development competitions. There is nothing more rewarding than watching our students compete (and win) at the international level against larger primarily graduate student teams. The feedback I have gotten from industry judges, faculty from other universities and the industry audience members has been all be positive. Involvement of our students in these activities makes other students want to come to Cal Poly and establishes a high level of respect amongst my colleagues and industry for our program.

Support for our students from the Warren J. Baker Endowment will help us continue to promote our students and programs as well as provide an invaluable opportunity for student development.

Sincerely,

Amanda Lathrop, Ph.D.
Assistant Professor, Food Science and Nutrition Department