From our Director:

Greetings from The Metabolic Kitchen & Children’s Eating Behavior Laboratory at Penn State! We opened in November 2013, and the past year has been busy. We now have a Research Coordinator, 5 graduate students, 10 undergraduate students, and 2 high school students! We have described a few of our ongoing studies in this letter. The goal of this research is to help families improve eating behaviors and live longer, healthier lives.

Our laboratory is a shared facility. If you are interested in measuring food intake, taste preferences, and other behavioral assessments as part of your research, please contact us.

Stay warm!

Kathleen

Hello from our lab!

In this newsletter, you’ll find updates on the studies taking place in our lab, as well as a picture tour of our facilities.

We hope you have a happy and healthy winter season!

Visit our website to find out more about our research team and what we do!

http://nutrition.psu.edu/childrens-eating-lab
We completed our pilot study with 3 to 5 year-olds to test the effect of using child-friendly packaging to increase children's vegetable intake. Treatment strategies included increasing the appeal of vegetables by packaging them with cartoons, giving stickers as incentives, and presenting vegetables as the default choice. We found that children in the treatment group, on average, almost doubled their vegetable intake in comparison to baseline. We are currently preparing this study for presentation at the 2014 Experimental Biology meeting!

The purpose of this study is to learn about how parents and their 4 to 6 year old children make choices about food. During the two sessions, parents fill out various questionnaires about their family, their children's eating habits, and their thoughts about food and nutrition, while children taste different foods and tell us about the foods they like and dislike. At the end of each session, children eat a meal consisting of all the foods and beverages they previously tried. We hope that the data will provide insight into how different family characteristics impact the way kids eat!

The food behavior study investigates the way children’s brains respond to different types of food and how this is correlated with eating behavior. Children (7-10 years old) and their parents attend 5 sessions. In 4 of these visits, we provide a meal for the children to eat. On the 5th visit, we conduct an fMRI. In addition, we collect physical activity data for a week using accelerometer technology. We hope the data will provide insight into individual differences in food-related behaviors that impact weight status.

We completed a pilot Brand Familiarity Study in July. 20 children participated. We were interested in learning about 7-9 year old children’s response to common food and non-food brands. Currently, we are completing the follow-up study, which includes 1 functional brain scan (fMRI) and 3 test-meals. The primary questions driving this research are: How do children respond to common food and non-food brands? Are there differences in children’s behavioral and neural responses based on weight status?

This study examines how genes impact fat preferences in children. The overall goal of this research study is to use brain imaging and genetic testing to understand why some children prefer higher fat foods than others. The goal of our study is to enroll 150 participants between 7-9 years old. This study includes 4 visits that will span over 2 years. Currently, 36 children have participated.
The Metabolic Kitchen & Children’s Eating Behavior Laboratory
The Department of Nutritional Sciences
Located in 311 Chandlee Lab, University Park, PA

* Please contact us to arrange a tour or to discuss your project *

This facility is a 1600 sq. ft. metabolic kitchen and feeding laboratory. The laboratory is a state-of-the-art facility for experimental meal preparation and sensory evaluation for children and their families. It was completed in September 2012, and is dedicated to studying nutrition in adults and children. It is available for investigators interested in studying these issues.

The facilities include: a 165 sq. ft. reception area with seating for adults and children, including an activity table with toys and books.

A kitchen manager’s office with file storage space and computers for data management.

There is also a Nutrition Assessment Room in 325 Chandlee.

A 580 sq. ft. kitchen with stainless steel work tables with over 50 square feet of workspace, 2 sinks, and an Americans with Disabilities Act compatible hand sink. Appliances include a 50 cubic ft. refrigerator, two 20 cubic ft. freezers, an industrial 6-burner range with oven, a commercial-grade, under-counter dishwasher, a heavy-duty microwave, and additional appliances. In addition, the kitchen is equipped with cookware, serving utensils, glassware, and analytical equipment for measurement. The kitchen also has an 85 sq. ft. pantry, storage shelves, utility carts and student lockers.

Three individual assessment booths are available for questionnaire assessments, taste tests, and eating behavior tests.

A 190 sq. ft. group dining and conference room includes seating for 12. A 52” flat screen television is mounted on the wall. This room is multi-functional, used for conducting focus groups, presentations, lab meetings, and for completing study questionnaires and consent forms.

Two observation rooms (90 sq. ft. and 106 sq. ft.) are included in this laboratory with height adjustable tables for compatibility with both adult and child-size chairs. These rooms are equipped for meal and observational studies. Each observation room contains a one-way mirror and a video camera connected to computer workstations situated outside the observation rooms in a control room. The workstation computers are connected to Penn State's secure network and have capabilities for data acquisition via video software, as well as statistical analysis.