

## 2010 Sustainable Agriculture and Food Systems Competitive Grants Program

### Project Title: Phat Beets Produce Markets and Gardens-Creating a Local Food System

#### Proposal Category:

- Planning Grant  Education and Outreach Grant
- Research Grant  Graduate Student Research Grant – Food & Society

#### Priority Area:

- Agriculture, Resources and the Environment (ARE)
- Food and Society (F&S)
- Social Learning in Agriculture and Food Systems (SL)

#### Topic(s) Addressed in Proposal:

- Climate Change (ARE)
- Nutrients and Water in Agricultural Landscapes (ARE)
- Harnessing Ecosystem Services (ARE)
- Closing the Loop: Sustainable Waste Management in Agriculture (ARE)
- Building Regional Markets (F&S)
- Community Food Security (F&S)
- Food System Assessments/Policy (F&S)
- Farmworker and Rural Community Wellbeing (F&S)
- Social Learning in Agriculture and Food Systems (SL)

#### Principal Investigator (main contact)

Name: Dr. Jenifer Matthews  
Title: Physician/Pediatrician  
Organization/University: Phat Beets Produce  
Phone: 530-400-8906  
Email: [jen@phatbeetsproduce.org](mailto:jen@phatbeetsproduce.org)

#### Collaborators:

*Identify by "\*" each collaborator from a county-based UC Cooperative Extension office or a community-based stakeholder group. All proposals must include at least one collaborator identified as such.*

Name & Affiliation	Email	Telephone
1. *Rachel Miller Graduate Student Researcher UC Davis, Dept. of Nutrition	<a href="mailto:ramiller@ucdavis.edu">ramiller@ucdavis.edu</a>	530-752-3817
2. *Dr. Sheri Zidenberg-Cherr Chair, Nutritional Biology UC Davis	<a href="mailto:sazidenbergcherr@ucdavis.edu">sazidenbergcherr@ucdavis.edu</a>	530-752-3817

3. Dr. Lydia Tinajero-Deck  
Healthy Hearts Clinic  
Children's Hospital Oakland

[ltinajero@mail.cho.org](mailto:ltinajero@mail.cho.org)

510-428-3000

### **Project Summary -**

Phat Beets Produce is working to develop a local food system that integrates and empowers low-income families of Oakland whose children are suffering from diet related diseases such as obesity and type 2 diabetes to be leaders in the food movement. We are working to connect small farmers to urban communities and engage Oakland's youth in healthy eating through the creation of community produce stands, certified farmers' markets, and green spaces in marginalized areas with disenfranchised communities. Our project includes development of a garden-based educational curriculum and internship for patients from the Healthy Hearts Obesity Clinic at Children's Hospital Oakland in partnership with UC Davis Department of Nutritional Biology. We are also working to improve community food security through affordable, culturally appropriate opportunities through our local farmer's markets and community supported agriculture program.

**Total funds requested from SAREP: \$10,000**

## SECTION II:

### **Phat Beets Produce Markets and Gardens-Creating a Local Food System**

#### **Our Project's Priority Areas/Topics:**

Our proposal falls under the priority area: Food and Security, specifically addressing the topics, Building Regional Markets and Community Food Security.

Phat Beets Produce is a North Oakland based organization that works to connect small and under-supported farmers to urban communities. Phat Beets Produce is working to develop a local food system that integrates and empowers low-income families of Oakland whose children are suffering from diet related diseases such as obesity and type 2 diabetes to be leaders in shaping their local food system. Phat Beets Produce is working to help build local food systems through these three program areas:

1. Community based farmers' markets: Connects small farmers and farmers of color with community based institutions that seek to connect their patients to outlets for healthy produce and groceries through creative CSA (community supported agriculture) programs, use of EBT/SNAP and WIC coupons, and voucher based shopping options.
2. Urban Agriculture Program: Connects youth effected by diet related diseases through the Healthy Hearts Clinic at the Children's Hospital Oakland to garden based exercise and experiential education.
3. School and clinic based nutrition empowerment program: Creates after school/after clinic activities that revolve around nutrition education through "Eat Right! Stay Tight!" hands-on cooking demonstrations and youth led, youth operated community produce stands highlighting produce from urban youth gardens.

#### **The Organizations:**

Phat Beets was created after the closure of the North Oakland Grocery in 2007, which essentially created a food desert in North Oakland. We first established a produce stand in collaboration with St. Martin de Porres Elementary School in North Oakland, and a year later launched a full-scale farmers' market in partnership with the Healthy Hearts Clinic at Children's Hospital Oakland, which has been in operation since June 2009. Healthy Hearts clinic has been distributing coupons good for \$5 worth of produce at this weekly market, "Beet Bucks." This past July 2010, Phat Beets launched a second certified farmer's market at a medical center in North Oakland.

Children's Hospital & Research Center Oakland has had a pediatric weight management clinic started in 2004. Healthy Hearts is a longitudinal pediatric obesity clinic for children ages 2 to 19, and patients return to clinic for typically 8 visits over the course of a year. Among patients who are seen at Oakland, 38% have a household income that is under \$15,000 per year, 29% have an income between \$15,001 and \$30,000, and 11% have a household income between \$30,001 and \$45,000. Patients are 24.7% African American, 13.6% White, 56.6% Latino, and 6% Asian. Patients range in age from 2 to 18 years of age, and are 55% male.

#### **Our Target, Meeting a Need:**

In impoverished communities, there are stark disparities in the food environment and in the built environment that lead systematically to poorer diets and fewer opportunities for physical activity

among children and families in low-income neighborhoods. Social stratification and poverty lead to an inequitable food system that creates food apartheid, separation of access to healthy food based on race and/or class, in many communities of color in urban centers in the US. These social barriers have lack of power and self-determination at their core. This is true for residents of Alameda County, specifically the city of Oakland. Our youth are particularly disconnected from where food comes from, and often have little opportunity to actually change this relationship. Low-income neighborhoods are surrounded by fast food outlets, fewer supermarkets, and residents often rely on access to processed foods that have a long shelf-life but lack whole nutrients.

### **Our Goals and Objectives:**

1. Creation of the nation's first vegetable garden (Healthy Hearts Youth Garden) that is in direct partnership with and engages clinic patients from an obesity prevention clinic (Healthy Hearts Clinic)
  - a. Cesar Chavez Celebration/Information Session and BBQ at garden for 30 families of the Healthy Hearts Clinic
  - b. Experiential Learning Summer Program for 30 qualifying youth from the Healthy Hearts Clinic that includes cooking demos, growing food, social media development, and physical activity.
2. Increase access to healthy, culturally appropriate foods by means of increasing participation in shaping the local food system by the North Oakland community
  - a. Incorporation of neighbors in our garden workdays and activity planning.
  - b. Creation of an equitable Community Supported Agriculture (CSA) program with our market farmer's for the community of North Oakland with goal of 200 members.
  - c. Continued expansion of our voucher program entitled "Beet Bucks" program to encourage clinic patients to increase exposure and fresh produce consumption.
3. Empower youth of color and at risk youth affected by the gaps in the food system to learn to become producers of healthy foods for their communities and advocates of social change.
  - a. Creation and implementation of a teen internship program for 2-3 teenagers from the Healthy Hearts Clinic with emphasis on learning basics of food justice, cooking classes and nutrition, and gardening.
  - b. Social media training and development for interns as an avenue for advocacy with production of blogs, films, and photos to be shared on-line.
4. Investigation of impact of nutrition and food justice education on health indicators
  - a. Measurement of health indicators on program participant's pre and post intervention.

### **Methods/Activities:**

At the heart of this proposal is a vegetable garden in the Dover Street Park, a few blocks away from Children's Hospital & Research Center Oakland. Work on the garden began this summer with volunteers from the clinic, the neighborhood, and Phat Beets installing vegetable beds and fruit trees. We plan to use this garden as an interactive mechanism for increasing access to fresh

produce among patients and the surrounding community as well as providing a vehicle for nutrition and food justice education.

In addition to the garden, our local food system development includes 2 certified clinic based farmer's markets. These markets provide an outlet for fresh produce and education for community members. CSA boxes, or Beet Boxes, are sold to the community and hospital staff and help support our clinic voucher program. We encourage participation and exposure to the markets for our clinic families through 5\$ vouchers for use at the market. Every time a box is purchased, 5\$ of farmers' market produce is made available for a physician to give to a patient in the Healthy Hearts and Teen Clinics.

#### The Garden:

The Healthy Hearts Youth Garden will be integrated into the Healthy Hearts Clinic, the weekly hospital farmer's market, and the surrounding community. Clinic and community visitors who attend a tour and who are interested in further involvement will be invited to participate in an educational curriculum teaching nutrition and food justice. This program will provide access to healthy food production and encourage physical activity for low-income individuals at the community level irrespective of their disease or obesity status.

This model is based on empowering youth through peer-to-peer education in nutrition, food justice, and gardening. Teens from Healthy Hearts clinic who demonstrate commitment and interest in the garden program will be eligible to apply for a paid internship in the garden. As a paid intern, they would not only have a higher degree of involvement with the maintenance of the garden, but they would also be trained to be youth leaders capable of teaching about food systems and ecologic justice. Our teenage interns will be involved as mentors in a summer program for younger patients that will take place at the garden and have a focus on experiential learning. Our summer program will provide avenues for physical activity, growing and preparing healthy food from the garden, and a better understanding of food justice. Youth that take part in the summer program will also be engaged with social media opportunities to allow them to share their experience and knowledge with their families during the summer and at an end of the summer celebration, thus extending their knowledge and enthusiasm to their families.

#### The Markets:

The CSA program is a win-win for the farmer, the community, and patients. Our goal is to enlist 200 members by December 2011 to provide regular support and stability to our farmers'. Community members that enroll in the CSA program will receive a weekly box of produce along with recipe and nutrition information. The CSA box also directly provides a 5\$ voucher for a patient to use at our market. Eventually, we plan to incorporate the produce from the garden at our markets.

#### **Timetable:**

##### *March-April 2011*

- Recruitment of teen interns for 6-month program and clinic participants for garden (for summer program), garden preparation. Start of teen-internship.
- Cesar Chavez Celebration at Garden-Recruitment party with BBQ, cooking demos, tree planting.

*June 2011*

- Healthy Hearts Summer Youth Garden Program begins (2.5 month program)
- Teen leaders hold cooking demonstrations at both farmers' markets and garden

*August 2011*

- Summer Program ends
- Youth community presentation
- CSA and Beet Bucks participant community forum

*Sept –October 2011*

- 6 month teen internship finishes in September, program evaluation
- Hire 1 teen leader to continue in the garden and assist in community based cooking demonstrations

*December 2011*

- CSA program running with 200 members
- Community “next steps” food system meeting with Oakland Food Policy Council and City Council Representative for North Oakland. Presentation of findings

**Products:**

Education:

Food justice and nutrition curriculum for both teenagers and kids that is culturally appropriate for an urban population and may be downloaded for free use by groups in urban-settings.

Social Media:

Photos, blogs, and movies developed by garden participants.

Publication/Reports:

A discussion of our findings from our measurements of health indicators on program participant’s pre and post intervention.

**Evaluation:**

We will use two approaches to assess the impact of the garden on direct participants and the community.

Clinic-based health outcomes & behaviors:

A subset of the youth who participate in the tours, garden work, and paid internship will be Healthy Hearts patients. These patients are followed longitudinally, and we have detailed information on health outcomes that are collected at every visit (BMI, blood pressure) and laboratory values related to cholesterol and diabetes risk. Additionally, standardized health behaviors (beverage consumption and physical activity) are collected at every visit as well as more in-depth health behaviors at regular intervals. We use an online database that will enable us to analyze participant data longitudinally over time and to compare endpoints with clinic participants who do not interact with the garden.

Neighborhood-level health behaviors and social capital:

For the neighborhood participants of the garden, we will gather initial standardized information on fruit/vegetable consumption, etc. We will have a cross-sectional sampling of all individuals who take a tour, as well as individuals who participate in the garden to a larger extent. We will be able to do pre-and post-participation comparison of behaviors.

**Investigators:**

Dr. Jenifer Matthews, Phat Beets Produce  
 General program support, development, and evaluation

Rachel Miller, graduate student researcher.  
 University of California at Davis, Department of Nutrition  
 Nutritionist for Healthy Hearts Clinic  
 Educational curriculum development and program evaluation

**Cooperators:**

Healthy Hearts Clinic at Children’s Hospital Oakland  
 UC Davis, Department of Nutritional Biology

**Budget:**

<b><i>Phat Beets Produce Garden and Markets- Creating A Food System</i></b>	Requested Funds	Matching Funds	Source of Matching Funds
<b><i>Personnel</i></b>			
Food System Coordinator@.10 FTE	\$2,500.00	\$5,000.00	LLCF* (Pending)
<i>Benefits @ 7%</i>	\$175.00		
Garden Youth Program Coordinator@ .20FTE	\$5,000.00	\$7,500.00	LLCF* (Pending)
<i>Benefits @7%</i>	\$350.00		
<b>Total Personnel Costs</b>	<b>\$8,025.00</b>		
<b><i>Supplies and Expenses</i></b>			
Cooking Demo Supplies	\$500.00	\$500.00	Cliff Bar
Outreach materials(1)	\$500.00	\$500.00	Cliff Bar
Summer Program Youth Meals (2)	\$225.00	\$1,000.00	Healthy Hearts
<b>Permanent Equipment</b>	0	0	0
<b>Contractors</b>			
Brent Walker- CSA Advisor/Consultant	\$750.00		
<b>Totals Funds Requested</b>	<b>\$10,000.00</b>		

(1) Posters, recruitment fliers  
 (2) Lunch time supplemental meals for youth participants  
 \* Lawrence Levine Charitable Foundation

SECTION III. REQUIRED APPENDICES

**1. Curriculum vitae:**

**JENIFER MATTHEWS, M.D.**

**EMPLOYMENT**

*Children's Hospital Oakland, Dept. of Adolescent Medicine*

7/09-present

Pediatrician

*Children's Hospital Oakland, Summit Unit*

8/09-present

Hospitalist

*Mission Neighborhood Health Center, San Francisco, CA*

7/09-present

Pediatrician

*UC Davis School of Veterinary Medicine, Davis, CA*

6/00- 6/01

Veterinary Anatomy Teaching Assistant

*UC Davis Undergraduate Microbiology Program, Davis, CA*

6/00-6/02

Microbiology Teaching Assistant

*Institute of Toxicology and Environmental Health, UC Davis, Davis, CA*

6/99-6/00

Postgraduate Researcher

**EDUCATION & TRAINING**

*Children's Hospital and Research Center Oakland, Oakland, CA*

6/07-6/09

Pediatric Resident

*Primary Children's Hospital, Salt Lake City, Utah*

6/06-6/07

Pediatric Intern

*University of California at Davis School of Medicine, Davis, CA*

9/02-6/06

Doctor of Medicine

*California Polytechnic State University, San Luis Obispo, CA*

6/99

B.S. Biochemistry

### **VOLUNTEER WORK**

#### ***Phat Beets Produce***

6/09-current

Core organizer with food justice collective in North Oakland.

#### ***Medical Trek in Nepal, Kathmandu, Nepal***

3/09

Spent one month in Nepal working with the Mountain Fund, a non-governmental organization, providing medical care and delivering supplies to remote villages.

#### ***MEDICOS, UC Davis Medical School International Rotation***

***Leon, Nicaragua, 4/06***

Spent one month in Leon, Nicaragua and worked to establish an international fourth year rotation for medical students at UC Davis. We also spent time working in clinics and rural health outposts.

#### ***Imani Clinic, UC Davis School of Medicine, Davis, CA***

***Clinic Co-director, 9/03-9/04***

The Imani Clinic serves the African American community of Oak Park, a low-income neighborhood in Sacramento, providing free health care to the uninsured.

#### ***Student National Medical Association member, UC Davis, Davis, CA***

6/02-6/06

SNMA is a student organization that works for the advancement of students of color in the medical field. While in medical school, along with SNMA, I organized Global AIDS Action Week at UC Davis.

### **RESEARCH/PUBLICATIONS/PRESENTATIONS**

Children's Hospital Oakland Produce Stand Needs Assessment, 1/09

Marcin, Dharmar, Cook J; "Medication Errors Among Acutely Ill and Injured Children Treated in Rural Emergency Rooms," *Annals of Emergency Medicine*. 2007 Oct., 50 (4): 361-367.

### **HONORS & AWARDS**

Kerry's Kids Award, Children's Hospital Oakland, 6/09

UC Davis Department of Pediatrics Award for Excellence, 6/06

National Institute of Health Fellowship, 6/99

Department of Environmental Toxicology at UC Davis

**RACHEL MILLER RD, CSP**

**EDUCATION**

Doctor of Philosophy, Nutritional Biology, University of California Davis, in progress

Certified Specialist in Pediatrics, Commission on Dietetic Registration, 2008

California Children's Services Panel, 2007 to present

Registered Dietitian, Commission on Dietetic Registration, 2005 to present

Dietetic Internship, University of California Berkeley, 2005

Bachelor of Science, Applied Nutrition, California Polytechnic State University San Luis Obispo, 2004

**PROFESSIONAL EXPERIENCE**

- |                         |   |
|-------------------------|---|
| July 2010 to present    | East Bay Cardiology, Fairfield, CA - Clinical Dietitian<br>Evaluate and provide comprehensive medical nutrition therapy for pediatric patients in an outpatient obesity prevention and treatment clinic.  |
| January 2010 to present | University of California, Davis, CA - Teaching Assistant<br>Lead discussions and review sessions, hold office hours and write and grade examinations for undergraduate nutrition classes. Classes include basic nutrition as well as upper division nutrition classes.  |
| June 2006 to present    | Children's Hospital Oakland, Oakland, CA - Clinical Dietitian<br>Evaluate and provide comprehensive medical nutrition therapy for pediatric hematology, oncology and bone marrow transplant patients. Attend bedside rounds and multidisciplinary meetings. Manage outpatient clinic patients in gastrointestinal, oncology and bone marrow transplant clinics. Precept dietetic interns from local programs. |
| June 2005 to June 2010  | Kaiser Permanente, Oakland, CA - Diabetes Health Educator<br>Conduct group education sessions for management of type 2 diabetes, pre-diabetes.  |
| October 2005-June 2006  | Kaiser Permanente, Oakland, CA - Clinical Dietitian<br>Evaluated and provided comprehensive medical nutrition therapy for general pediatrics, pediatric intensive care, newborn intensive care, maternity, adult medical/surgical and adult intensive care  |

patients. Managed nutrition support patients in the transition from in-patient to home care.

- February 2005 to March 2007 Alta Bates Medical Center, Berkeley, CA - Clinical Dietitian  
Evaluated and provided comprehensive medical nutrition therapy for patient populations encompassing 3 major medical centers: Alta Bates Medical Center, Summit Medical Center, and Herrick Rehab Center. Clinical work included nutrition management in adult intensive care, newborn intensive care, maternity, renal, oncology, and cardiac care.
- June to August 2002  
June 2003  
June 2005 Bearskin Meadows Diabetic Camp, Kings Canyon Forest, CA  
Assistant Dietitian, Medical Staff  
Primary responsibilities included teaching daily nutrition education sessions for campers, supervision of insulin management, and development of celiac menu, development and execution of celiac education workshop for staff members.
- September 2003-June 2004 Jamba Juice Healthy Kids, San Luis Obispo, CA - Nutrition Ed.  
Developed and conducted a series of 6 nutrition education sessions for local fourth grade classrooms in San Luis Obispo. Lessons met cross-curriculum standards set by the state of California.
- September 2003-June 2004 Peer Health Education, California Polytechnic State University, San Luis Obispo, CA - Nutrition Team Member.  
Provided on campus nutrition consultations for students with nutrition and diet concerns, provided educational workshops for various audiences including dorm residents, California Conservation Corps and local public schools.

## **PRESENTATIONS**

- Graft Versus Host Disease Diet, Children's Hospital Oakland, Food Service Staff, 2009
- Nutrition for the Bone Marrow Transplant Patient. Children's Hospital Oakland, Nursing Clinical Conference, 2007
- Diabetes and the Child Care Provider. Bananas Inc, 2006
- Age Appropriate Feeding. Children's Hospital Oakland, Food Service Staff, 2005
- Celiac Disease, Prevalence and Management at Bearskin Meadows Diabetic Camp. Bearskin Meadows Diabetic Camp Staff Training, 2003

**Letters of Support:**

December 13, 2010

Dear Dr. Matthews,

Thank you for the opportunity to participate in the Phat Beets Produce Markets and Gardens-Creating a Local Food System project. This letter of commitment confirms that I will be pleased to serve as a collaborator in the curriculum development and evaluation of the impact of gardening and nutrition and health education on nutrition and health outcomes of program participants. Specifically, Rachel Miller, a doctoral student in my research group in the Center for Nutrition in Schools, in the Department of Nutrition, at UC Davis will work with the team to further refine the curriculum and evaluation instruments.

My research group has successfully worked with several partners to establish gardens as a tool to provide nutrition and health education. We are very excited about the prospects of expanding our garden-based nutrition education to the obesity clinic population. We feel this partnership will enable us to take the next step in expanding school/community gardens, educating children about agricultural production practices, diet, and nutrition; serving the community through the garden harvest; and learning more about the impact of community gardens.

Sincerely,



Sheri Zidenberg-Cherr, PhD  
Nutrition Science Specialist  
Chair, Graduate Group in Nutritional Biology  
Department of Nutrition  
University of California at Davis  
(530) 752-3817  
sazidenbergcherr@ucdavis.edu

December 10<sup>th</sup>, 2010

To Whom it May Concern,

This letter is in support of Phat Beets and their projects in particular their Healthy Hearts Garden and their Farmer's Market at Children's Hospital Oakland.

Our program is called Healthy Hearts and we are an overweight management program at Children's Hospital & Research Center which is run by the Cardiology group.

We are the referral center for those kids who are between the ages of 2 and 18 years of age whose families self refer or are referred by their doctor. Most patients have BMIs well over the 85<sup>th</sup> percentile (medically classified as overweight or obese) and already have co-morbidities of diabetes and hypertension.

Our program is a multi-disciplinary clinic with a dietitian, exercise physiologist, and psychologist. We work together with the patient and family to help them make lifestyle changes toward better health. We have found in our clinic that seeing is believing so our dietitian uses a lot of props to show for example quantities of sugar in beverages or quantities of fat in a bag of chips. Our exercise physiologist shows kids what it feels like to get their heart rate up. And lastly our psychologist practices mindfulness eating and helps families to do different exercises to help relieve stress.

Working with Phat Beets has enabled our families to have that hands on experience of going to a farmer's market after orientation and testing some produce or watching a cooking demonstration. The garden has enabled a few of our patients to take a trip to work on the garden and experience a bit of how the "squash" gets to the table and then maybe if you grow it yourself it might taste better.

We are proud to collaborate with Phat Beets to continue to have the most at risk and in need patients get hands on learning in the produce stand and in the garden. Working and interacting and touching and tasting compliments health education and enriches our program.

We look forward to this project. Please let me know if I can be of further help.

Sincerely,  
Lydia Tinajero-Deck MD  
Pediatrician  
Co-Director of Healthy Hearts  
Pediatric Cardiology Medical Group  
Children's Hospital & Research Center Oakland  
510-428-3129