Cancer Prevention Internship Program

Dorothy Teegarden, Ph.D.

Professor and Associate Head for Research, Department of Foods and Nutrition
Lead, Cancer Prevention and Control Program, Oncological Sciences Center
Director, Cancer Prevention Internship Program
Cancer Prevention and Control Impact

- **Diet**
  - 30% of cancer deaths are related to (Doll, 1981).

- **Tobacco use**
  - 30% or 160,000 lung cancer deaths in the United States (ACS, 2010).
  - 20% of all deaths, 443,000/ year (2000-2004)

- **Other modifiable factors**
  - Environmental exposures
  - Obesity
  - Lack of physical activity.

- **Could achieve by 2015 (IoM, 2004):**
  - 19% decline in new cancer cases
  - 29% decline in the rate of cancer deaths
The **objective** is to develop and test a curriculum to train students across disciplines to effectively address the interdisciplinary field of cancer prevention to optimally further cancer prevention research.

**Interdisciplinary**

- Dorothy Teegarden
  - Foods and Nutrition

- Sophie Lelièvre
  - Basic Med Sci

- Deborah Knapp
  - Veterinary Clin Sci

- Christopher Agnew
  - Psychological Sci

- Jakob Jensen
  - Communication

- James Leary
  - Bindley Biosci

- Robin Adams
  - Eng Ed

- Cleveland Shields
  - Marriage & Fam Therapy

**Institutions**

- Dorothy Teegarden
  - Department of Foods and Nutrition

- Julie Nagel
  - Oncological Sciences Center

- Willie Burgess
  - Discovery Learning Research Center
Research Grant

Funding Source:
National Institute of Health
National Cancer Institute
R25
Hypothesis

• Development of an undergraduate and graduate interdisciplinary program in cancer prevention will
  
  — increase interest in the pursuit of graduate studies and subsequent careers in cancer prevention research
  
  — provide exposure to all aspects of the field at a critical time to prepare students to better approach research problems; interdisciplinary
  
  — prepare these students for successful careers in cancer prevention research
Research Goals

Develop and test an interdisciplinary curriculum for undergraduates and graduates that will create a new pool of scientists who will effectively address research problems in cancer prevention.

Extend to other disciplines.
CPIP Research

• Undergraduates
  — Full time summer internship working in research laboratory
  — Continue in laboratory through academic year
  — 10 undergraduate students/year

• Graduates
  — Full stipend
  — 4 graduate students/year
CPIP Overview

- Overall
  - Research experience
  - Seminar series
  - Networking events
  - Discussion groups
  - Presentation at research conferences
  - Professional development
  - Horizontal, peer-peer mentoring
  - Vertical, faculty, student, graduate student mentoring
- Undergraduates (10/year)
  - Service learning experiences
- Graduates (4/year)
  - Mentoring

- PROGRAM EVALUATION
  - Discovery Learning Research Center
Research Experience

- Communication
- Targeted Messaging Software
- Biomedical Engineering
- Biology
- Alcohol and Breast Cancer
- Biomedical Engineering
- Patient/physician communication
- Biology
- Stem Cell Research
Graduates

Basic Science
Vitamin D and Breast Cancer Prevention

Communication
Targeted Messaging

Chemistry
Early Detection by Metabolomics

Biomedical Engineering
Early Detection
Professional Development

- Brown bag seminars (Undergraduates)
- Presentations
  -- Posters
    -- End of summer
    -- End of fall
    -- End of spring
  -- Oral
    -- Group meetings of faculty, staff and students
    -- National meeting (graduates student)
- Interaction between Undergraduate and Graduate students
- Discussion of career opportunities
Seminar Course

- Cancer Survivors and Practice of Oncology
- Cancer Pathology
- Cancer Biology and Research Models
- Study Design and Clinical Trials
- Early Detection and Diagnostics
- Application to Clinical Practice
- Biosocial Psychology
- Cancer Communication
Service Learning/Community Service

• Goal:
  • To increase the awareness that issues of cancer prevention are inherently linked to people and to raise awareness of underserved populations and opportunities for the CPIP students future careers.
  • Better understand how their research experiences are linked to the context of their service-learning experience.
  • Long term goal of a service learning/community service specific to cancer or cancer prevention will provide the students with tools and information to inform their future research efforts to make optimal progress in cancer prevention.
  • Work in teams
Programmatic and Curricular Evaluation Methodology

- Pre and Post Testing
- Quantitative
- Qualitative
- Formative
- Summative

- Student journals
- Focus groups
- Pre and post-program knowledge
- Attitude survey
- Mentor and student surveys
- Dissemination
- Longitudinal Tracking
Why the DLRC?

• My research background
• Strong, collaborative focus
• Provides
  — grant writing
  — intellectual contributions to curriculum development and evaluation
  — implementation of programmatic evaluation
  — dissemination of research
• Training grant, only better!
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