

## **Biobehavioral Cancer Prevention & Control Training Program**

University of Washington

### **FACULTY RESEARCH IN EMPHASIS AREAS**

#### Tobacco Control and Smoking Cessation

Tobacco control research is an important part of the research agenda at both the University of Washington and the Fred Hutchinson Cancer Research Center. Faculty in tobacco control research are well known and respected in their fields; Dr. Thompson, for example, was recently a chapter editor of the Surgeon-General's report of women and smoking. Faculty at the two institutions are involved in a variety of smoking cessation studies at the community level, at the individual level, and among adolescents. At the community level, intervention trials build on other successful community intervention trials in ethnic minorities. At the individual level, studies examine not only smoking outcomes, but also psychosocial factors related to successful cessation, as well as the processes of change. A large school-based project provides smoking prevention expertise. Faculty have also examined the role ethnic minority status plays in smoking cessation. Most recently, scientists are examining genetic influences on smoking cessation among women

A number of individual studies will provide opportunities for students to be engaged in research in various population subgroups, including heavy smokers (those smoking 25 cigarettes per day or more) and ethnic minorities (e.g., southeast Asians, Chinese men, and Hispanics). The faculty has great expertise in qualitative assessment, which is necessary to understand the best ways to communicate with diverse populations. The faculty are expanding their research in tobacco control to include genetic influences of smoking cessation or smoking onset. As a first step, investigators are examining the dopaminergic neurotransmission pathway for any addictive effects it may have. Students and post-docs will have opportunities to participate in tobacco control research through affiliations with investigators with research projects in tobacco control, by analysis of existing data sets, by practicums, and by coursework that includes segments on tobacco control.

#### Diet and Dietary Change

The research activities to be offered as training experiences in the field of dietary change are among the greatest strengths of the combined institutions and one of the strongest in the country. The faculty involved in this area span the spectrum of research from the basic science of nutrition and disease, the study of biomarkers, human food interactions in a laboratory and/or controlled setting, clinical interventions of specific nutrients to prevent incidence or recurrence of disease, public health interventions on specific sets of nutrients to eventually lower disease risk in the public, and policy and public health research aimed at changing environmental conditions appropriate for health dietary intake. Small, tightly controlled intervention studies of the relationship between nutrient consumption and intermediate markers of disease, conducted by Drs. Potter and Lampe, will provide new knowledge of intervention targets for future larger scale intervention studies. Measures of genetic predisposition to tasting bitter foods and preferring high fat taste are a focus of Dr. Drewnowski's research. The Women's Health Initiative, the largest study of women's health ever done, has both the coordinating center and one of the clinical centers housed at the FHCRRC, headed by Dr. Beresford who is participating in this training grant. This study provides trainees the opportunities to learn about the workings of large scale prevention trials, either taking a larger view from the coordinating center or running the daily operations of a clinical center. Other examples of dietary change in clinical settings housed within our research group include the Women's Intervention Nutrition Study and the Prostate Cancer Prevention Trial. Several randomized trials of individuals to change dietary intake are currently being conducted by participating faculty. For example, Dr. Bowen is conducting a randomized trial of the use of a web-based intervention to reduce dietary fat consumption, among other endpoints. Using innovative communications strategies to provide information and support for changing dietary fat consumption will be critical to a public health strategy to

change the public's dietary patterns. New models of assessment have been developed and are being tested in several of the ongoing studies, making it easier and more accurate to use self-reported dietary intake to evaluate community programs. A particular strength of the group is a focus on group randomized studies to change dietary intake. Dr. Beresford and Thompson's active research on promoting the 5 A Day messages in worksites is the best example of this research. Other targets include religious organizations and entire communities. Finally, research into national policies that have the potential to change intake on a larger scale are important parts of our portfolio. Dr. Kristal's active participation in the national evaluation of the 5 A Day program will provide insight into the relationship of policy to intake. These diverse and active research programs all provide trainees with exposure and experience in dietary change research

### Health Communication

The study of health communication at University of Washington is concentrated in the Social and Behavioral Science Program, including participating faculty from the Center for Health Education and Research (CHER). As currently structured, the research activities allows students involvement in a broad spectrum of different projects. The faculty involved in health communication span the spectrum of message development, interpersonal communication, small group/social support, mass communication and use of interactive technology, in increasing personal control over and improve health of individuals and communities.

The health communication activities of CHER, under the leadership of Dr. Downer, are offered through fee-for-service and contractual agreements with clients. CHER maintains in-house capability to produce a full spectrum of communication materials, including videotape, and to market and distribute finished products. CHER communication staff consult on the design of communication campaigns. CHER also offers experience in development of international communication materials on best practices in HIV/AIDS prevention from developing countries. CHER is currently developing a center for excellence in palliative care to augment its prevention efforts in HIV/AIDS. Additionally, CHER is involved in a partnership with Porter Novelli to fulfill requests for targeted health communication campaigns for CDC and in a partnership with Arnold Communication and the American Legacy Foundation to target the Truth About Tobacco media campaign to Alaska Native and Native American youth.

At the Seattle-King County Health Department, Dr. Meischke and colleagues are embarking on a large randomized trial to test the efficacy of an interpersonal, face-to-face intervention, delivered by local fire fighters to increase early recognition of and appropriate response to symptoms of acute myocardial infarction, among seniors. Other health communication activities at the Health Department include the evaluation of a mass media campaign promoting the use of a telephone assistance and referral hot line for seniors in King County, Washington. This project is conducted under Dr. Collier, who is participating in this grant.

Several exciting projects focusing on the use of interactive technologies for dissemination of health information are currently ongoing at UW affiliated organizations. Dr. Bowen is conducting a randomized trial of the use of web-based intervention to help women cope better with breast cancer risk, and issues around breast cancer prevention. Investigation of the use of the internet in the dissemination of health information will be critical to a public health strategy to change health behaviors and/or psychological impacts of dealing with health risks.

### Public Health Genetics

As in many universities and cancer centers, genetic is an area of increasing research attention at the UW and FHCRC. The Public Health Genetics Program and genetics research program at the Fred Hutchinson Cancer Center are building capacity for applications of genetics to biobehavioral cancer prevention and control. Two projects currently underway include "Genetic Testing in the Workplace: Application for Public Policy" and "Social Construction of Genetic Knowledge: Interviews with Japanese Americans and U.S. Pacific Islanders". The second project has already led to an NIH grant application on "Culture and

Genetics". Another project being conducted by a faculty mentor in this program (Veenstra) is going to be funded on "The Clinical and Economic Implications of Genetic Testing for Individualized Drug Therapy: Warfarin and the CYP2C9 Gene. The Public Health Genetics Program also has ongoing collaboration with the Center for Ecogenetics and Environmental health funded as a Center of Excellence from the national Institute of Environmental Health Sciences (David L. Eaton, PI and member of the PHG faculty). This Center was established to increase understanding of mechanisms underlying human variability in response to environmental exposures, with a focus on gene-environment interactions. The Ethical, Legal, and Social Issues Group (Drs Austin, Bowen, and Burke) has formed within this Center to focus research efforts in more diverse disciplines. How to investigate shared decision-making around genetic testing and the impact of such testing on the psychological well-being and quality of life of consumers is under discussion. Communicating about genetics to the general public and to providers will be a key part of this effort. Projects related to cancer genetics are contemplated and will be available to trainees in this program. The Public Health Genetics Program at the University of Washington will fund pilot projects to foster multidisciplinary research broadly related to public health genetics in the context of Law, Ethics and Policy and these projects are potentially available to trainees in this program.

### Physical activity interventions

An emerging area of health behavior research within the faculty named on this proposal is changing physical activity. Dr. McTiernan is a leader in this area, both nationally and within our group specialized in cancer prevention. She is currently conducting two randomized trials of physical activity in sedentary adults, both targeting reductions in intermediate markers of disease (breast cancer and colorectal polyps). She collaborates with Dr. Bowen on the design and implementation of these interventions. Dr. McTiernan is a Principal investigator on the HEAL study, researching the changes in body weight, physical activity, and dietary intake that occur after breast cancer diagnosis and are hypothesized to contribute to recurrence. Dr. Bowen is conducting a randomized trial of a Web-based intervention to increase physical activity in women selected from the general population. These initial studies will be opportunities for student involvement and publications, and will form the basis for the group's future research on changing physical activity in individual and community settings. Dr Patrick has conducted randomized trials of physical activity interventions for adults with osteoarthritis and observational studies of physical activity interventions for persons with mobility disabilities. Drs. Patrick, Bowen, and Beresford have helped to design and evaluate physical activity interventions for seniors in public housing in Seattle.

### Cancer/Pharmaceutical Outcomes

Cancer outcomes is an emerging discipline that includes a wide variety of research areas including quality of life research, cost-effectiveness analysis, and guidelines and quality improvement efforts. Several faculty have expertise in these areas. Scott Ramsey has conducted cross sectional studies of quality of life and cost of care in long term survivors of colon cancer. He is currently looking at the cost-effectiveness of genetic screening for hereditary colon cancer, and is director of the coordinating center for a cost-effectiveness study that is being conducted alongside a multicenter randomized trial of lung volume reduction surgery for emphysema, involving Dr. Sullivan as well. Dr. Nicole Urban has outcomes research projects related to mammography and ovarian cancer screening. She currently directs a SPORE grant for ovarian cancer. Dr. Robyn Andersen has conducted studies looking at the quality of life and attitudes towards screening in women with breast and ovarian cancer. Dr. Moinpour conducts quality-of-life studies for the Southwest Oncology Group and has been involved in this field over the last two decades. Dr. Patrick has conducted cost-effectiveness analyses of Medicare Reimbursement for Preventive Services at the University of North Carolina and University of Washington/Group Health Cooperative, and a cost-effectiveness study of warm water aerobics for persons with osteoarthritis. He is currently conducting research into the interpretation of cancer outcomes measures as applied to epoetin alfa including research on missing data, the correlation between cancer-specific quality-of-life scores and hemoglobin levels over time. Drs. Moinpour and Patrick are participating in cancer-specific workshops on interpretation of cancer outcomes measures conducted at the Mayo Clinic in Rochester, Minnesota. They are also members of the Quality of Life Subcommittee of the Oncology Drugs Health Advisory Committee for the Food and Drug Administration. Drs. Ramsey, Etzioni, and Patrick recently organized the Seattle

Symposium on Cancer Outcomes Research (22-23 September 2000) at the Fred Hutchinson Cancer Research Center. Drs. Urban, Andersen, Syrjala, Moinpour, Perrin all presented at this Symposium in addition to the organizers. A copy of this program is contained in the Appendix H. Another recent effort is a workshop in the Analysis of Quality of Life with Missing Data in Advanced Stage lung Cancer: Datasets from Two Randomized Trials. Dr. Moinpour has organized this workshop and a copy of the agenda is contained in Appendix H. These investigators will also be involved in applications for the CANCORS request for proposal

### End-of-Life Care and Initiatives to Improve Quality of Care at End of Life

Improving the quality of end-of-life care for patients with cancer is an important new initiative at the National Institutes of Health and a number of private foundations. Dr. Patrick, along with colleagues at Harborview Hospital and Medical Center, are engaged in long-term projects to develop outcomes measures for evaluating the quality of care and quality of dying of persons at the end of life. Three major projects are underway: 1) development of a measure of the quality of dying and death that is being validated using preferences for end of life experience and treatments of persons in hospice care compared to actual experiences (Hospice Study) 2) assessment of physician skill and ability to discuss termination of treatment in intensive care; and 3) treatment decisions with end-stage COPD patients. The hospice and intensive care studies involve a number of patients with cancer. These projects at the present time do not have post-doctoral or pre-doctoral social science students involved and the project team welcomes future training opportunities, one of which is represented by this training application.