island of Ireland and the U.S. to hear the latest developments in the rapidly advancing field of cancer genomics.

- In conjunction with the Consortium-sponsored 4th AICC, IACR hosted a mini-symposium entitled "Cancer Biology Informs Cancer Medicine." IACR is an all-Ireland non-profit organization for cancer researchers in the Irish biomedical community. The mini-symposium showcased the best and the brightest from the research community in Ireland and included a number of speakers from the NCI. Additional information about IACR can be found at http://www.ia-cr.ie.

During 2008, SE WG membership was reconstituted with representation invited from other Consortium Working Groups, as well as the HRB in Ireland and the HSC R&D Office in Northern Ireland. At the 4th AICC, the SE WG met for a highly successful meeting, during which the group developed a strategy for intensifying scholar exchange and training efforts in the coming years.

CANCER REGISTRIES/ EPIDEMIOLOGY

Dr. Anna Gavin, Chair

The Consortium BOD established the Cancer Registries Working Group (CR WG) to coordinate cooperative efforts between the cancer registries of Ireland and Northern Ireland. In addition to facilitating training and furthering the education of cancer epidemiologists, the CR WG works to develop joint programs to assist researchers in gaining a more complete understanding of cancer rates, trends, and outcomes across the island of Ireland. In 2008, the cancer registries in Ireland and Northern Ireland continued to collaborate on a number of projects in the areas of prostate cancer, pancreatic cancer, Barrett's esophagus, and esophageal cancer. Further details on some of these collaborations are provided below.

4TH ALL-IRELAND CANCER CONFERENCE

The pivotal event of 2008 was the 4th AICC held in Dublin, 30 November through 3 December. The conference, organized by a scientific committee led by Dr. Harry Comber, director of the NCRI, showcased the Consortium's collaborative endeavors of the past nine years. Conference sessions covered a variety of diverse topics, such as biobanking, molecular mechanisms in cancer development, clinical trials, and survivorship. Current and past NCI CPFP fellows provided presentations about their research with NCI investigators. The 4th AICC featured 117 posters from researchers who presented their ongoing work in the areas of basic science, clinical science, nursing science, and cancer prevention and population health on the island of Ireland. Winners and their poster titles in each category are listed below:

Basic science: Dr. Martin Barr for *Vascular endothelial growth factor (VEGF) and the Epigenetic Regulation of its Receptors in Non-Small Cell Lung Cancer.*

Clinical science: Dr. Prerna Tewari for *Investigations of Genetic Variation in DNA Repair Genes and Disease Susceptibility to Multiple Myeloma by Application of a Candidate Pathway Strategy.*

Nursing Science: Dr. Cherith Semple for *Evaluation of a Problem-Focused Intervention Programme for Patients with Head and Neck Cancer.*

Prevention and population health: Ms. Tess Clendenen for *Vitamin D and Risk of Epithelial Ovarian Cancer.*

3RD ALL-IRELAND CANCER STATISTICS REPORT

During 2008, Dr. David Donnelly of the Northern Ireland Cancer Registry (NICR) conducted extensive analysis of the all-Ireland cancer data collected in 2007 for the 3rd All-Ireland Cancer Statistics Report. The report will be publicly released in April 2009.

IRELAND-NORTHERN IRELAND COOPERATION RESEARCH PROJECT GRANT

Since August 2005, the research project grant "Factors underlying differences and trends in prostate-specific antigen (PSA) testing, biopsy and prostate cancer incidence in Ireland 1994-2003" has been funded jointly by the HRB in Ireland and the DHSSPS in Northern Ireland. During 2008, the NCRI and the NICR continued to collaborate on this project to investigate varying prostate cancer incidence trends in Ireland and Northern Ireland.

In cooperation with colleagues from the International Agency for Research on Cancer (IARC), Ms. Anne-Elie Carsin of the NCRI has been leading a collaborative analysis of trends in prostate cancer incidence and mortality in Ireland and Northern Ireland. This work centers on Irish data, compiled by cancer registries in the north and south, garnered from PSA tests and prostatic biopsies since the mid-1990s. This data has been invaluable in facilitating the interpretation of trends in incidence and mortality.

ALL-IRELAND PANCREATIC CASE CONTROL STUDY 2006-2009

In 2008, recruitment efforts for the All-Ireland Pancreatic Case Control Study (PanCAM) continued. This study, coordinated by Dr. Linda Sharp of the NCRI and Professor Liam Murray of the Cancer

Epidemiology and Prevention Research Group at QUB, involves clinicians and other all-Ireland health professionals engaged in collaborative work as part of the study. Over 120 patients have participated in the study and recruitment of controls has commenced through general practices.

PanCAM formally joined the Molecular Diagnosis of Pancreatic Cancer Consortium Study, which is comprised of a variety of experts in pancreatic cancer epidemiology, diagnosis, and treatment from across Europe. Funding received through the European Commission's Sixth Framework Programme has served to enhance PanCAM recruitment efforts.

EXTENSION TO THE FACTORS INFLUENCING THE BARRETT'S ADENOCARCINOMA RELATIONSHIP STUDY

The Factors Influencing the Barrett's Adenocarcinoma Relationship (FINBAR) Study, an all-Ireland, case-control study examining risk factors for adenocarcinoma of the esophagus and Barrett's esophagus, is a collaborative effort among the NICR, QUB, and clinicians in Ireland and Northern Ireland. Funded by the HSC R&D Office, the HRB, and the Ulster Cancer Foundation, FINBAR was initially extended from 2006 through 2008 to examine the role of the insulin growth factor axis and folate metabolism in the esophageal inflammation, metaplasia, and adenocarcinoma sequence. Detailed data regarding diet, lifestyle, and medical history, as well as DNA and biological samples, have been collected from 230 patients with adenocarcinoma, 223 with Barrett's esophagus, and 249 control subjects.

In another extension to the FINBAR study, a project investigating polymorphisms in a series of genes involved in the metabolism of folate and vitamin B12 commenced in 2008. Initial analysis of FINBAR data suggested that individuals with higher levels of folate intake were at lower risk of developing Barrett's esophagus and esophageal adenocarcinoma. The current project will explore the role of genetic variations in these associations.

Professor Liam Murray of QUB and Dr. Christian Abnet of the NCI's Nutritional Epidemiology Branch, Division of Cancer Epidemiology and Genetics, were awarded a JRPC grant to investigate the role that antioxidant and iron status may play in the development of esophageal adenocarcinoma, Barrett's esophagus, and reflux esophagitis, using data and specimens collected in the FINBAR study. Information regarding other JRPC projects may be found in the "Spotlight on Scholars" section of this report.

UPDATE REGARDING CONSORTIUM SCHOLARS

Dr. Paula Hyland, from the Centre for Cancer Research and Cell Biology (CCRCB) at QUB, was awarded a CPFP fellowship in 2008. Dr. Hyland will first obtain a Masters of Public Health (MPH) degree from QUB and will go on to spend several years in research at NCI. She plans to focus her efforts on researching the molecular epidemiology of Barrett's esophagus and esophageal adenocarcinoma.

Dr. Amanda Black, 2006-2009 CPFP fellow, studied ovarian and prostate cancer through the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial during 2008. Over the course of the year, Dr. Black published several papers in peer-reviewed journals and presented her work at international conferences.

Dr. Lesley Anderson, 2005-2008 CPFP fellow, completed her fellowship at the Infections and Immunoepidemiology Branch, Department of Epidemiology and Genetics, NCI, where she spent the duration of her fellowship investigating the etiology of hematopoietic malignancies and classic Kaposi's sarcoma. In 2008, she published six papers in the fields of infection and cancer, esophageal adenocarcinoma, and Barrett's esophagus. Dr. Anderson is now based as an academic fellow in Cancer Prevention at the Centre for Clinical and Population Sciences at QUB.

Dr. Marie Cantwell, 2002-2005 CPFP fellow, continues to serve as a lecturer in nutritional and cancer epidemiology within the Cancer Epidemiology and Prevention Research Group at QUB. Dr. Cantwell has successfully established collaborative links with NCI investigators and has identified nutritional risk factors and nutrient-gene interactions associated with adenoma recurrence through the Polyp Prevention Trial. Dr. Cantwell remains engaged in the study of early life exposures as part of the Nurses' Health Study, a collaborative study conducted with researchers at the Harvard School of Public Health and the MD Anderson Cancer Center at the University of Texas. To date, Dr. Cantwell's research has focused on investigating the etiology of colorectal adenomas and improving exposure assessment in nutritional epidemiology. This research will be used to evaluate the association between nutritional exposures and esophageal adenocarcinoma in the FINBAR study.

Dr. Peter McCarron, 2001-2003 Cancer Epidemiology fellow, is now a professor at QUB. Since completing his Consortium fellowship, Dr. McCarron has maintained an ongoing research program in the field of bioinformatics, with a focus on whole genome association analysis. He is a co-founder and PI on the Glasgow University

Alumni study, a follow-up study based on medical examinations conducted at Glasgow University from 1948-1968. This study has contributed to promoting a greater understanding of the role of early life exposures in later chronic cardio-respiratory disease. Dr. McCarron is also prominently involved as a bioinformatics expert in the MOnica Risk, Genetics, Archiving, and Monograph (MORGAM) project, as well as the GenomeEUtwin studies.

Dr. Paul Walsh, 2001-2003 Cancer Epidemiology fellow, continued his work at NCRI in 2008, designing and coordinating research and data analysis projects.

CLINICAL TRIALS
Dr. Anne Cody, Chair

ICORG

A major goal of the Consortium is to strengthen the capacity for cancer centers in Ireland and Northern Ireland to conduct cancer clinical trials, thereby improving patient access to new lifesaving therapies. Since 2001, the Clinical Trials Working Group (CT WG) has worked to support this mission by facilitating funding mechanisms that enable hospitals across the island of Ireland to develop and maintain an effective clinical trials program infrastructure. This endeavor resulted in the establishment of ICORG, which is comprised of two offices: the Group Central Office (GCO) located in Dublin and the Statistics and Data Management Office (SDMO) located in Belfast. The GCO fulfills a project management, coordination, and administrative role, while the SDMO provides all monitoring, data management, and statistics expertise. Eleven all-Ireland hospitals form a series of clinical trials hubs for other participating hospitals.

Some key ICORG results from 2008 are summarized below.

ACCRUALS

In 2008, 969 patients were accrued in sixty-eight ICORG studies – a 30% increase over 2007 accruals. Approximately two-thirds of all participating patients were engaged in clinical trials, while the other third participated in translational studies. Breast cancer has remained the central disease area, as 50% of all recruited patients participated in breast cancer studies. However, this percentage is now counterbalanced by additional studies in other disease areas, such as genitourinary, gastrointestinal, and lung cancer. In 2008, new disease-specific clinical trial sub-groups were established in head and neck, melanoma, and skin cancer. These additions will facilitate continued broadening of the ICORG portfolio.

COLLABORATIONS

Collaborative group studies accounted for approximately 40% of all ICORG studies during 2008. The Eastern Cooperative Oncology Group (ECOG) Trial Assigning Individualized Options for Treatment (Rx) or TAILORx study on individualized treatment options in breast cancer was particularly successful and recruited 221 patients in Ireland over the course of the year. Notably, ICORG recruited the group's first American patient for an ICORG-developed trial in the fourth quarter of 2008.

Additionally, collaborations with pharmaceutical companies expanded further in 2008, increasing from sixteen collaborations in 2007 to twenty studies in 2008.

OPERATIONS

Following the recruitment ban instituted in the last quarter of 2007, strict enforcement of staffing limits for hospitals in Ireland had a serious impact on a number of clinical trials sites, as departing staff members could not be replaced. The HRB engaged with the DoHC and the HSE of Ireland throughout 2008 in order to reach a solution. Towards the end of 2008, staffing problems abated; however, such challenges during the year clearly impacted patient accruals, as some clinical trials sites were unable to commence new trials for a period of time.

Northern Ireland Cancer Clinical Trials Unit

Following the signing of the Consortium MOU, the Northern Ireland Cancer Clinical Trials Unit (NICCTU) was established to coordinate and promote cancer clinical trials throughout Northern Ireland. As part of the Experimental Cancer Medicine Research Division of the CCRCB at QUB, the Unit is one of seventeen Experimental Cancer Medicine Centers (ECMCs) located in the U.K. Each ECMC maintains a portfolio that consists of Cancer Research U.K. (CR-UK), commercial, and local investigator initiated phase I, II, and translational trials.

The NICCTU currently performs three interconnected, yet separate functions, serving as:

- a local cancer Clinical Trials Unit (CTU), developing and coordinating investigator-initiated phase I-III clinical trials and translational studies;
- a vehicle for the development, organization, and clinical delivery of phase I-II trials and translational studies through its role in the Northern Ireland Experimental Cancer Medicine Centre (NIECMC); and
- an evolving regional cancer clinical research network, running phase III-IV cancer clinical trials, as well as other cancer studies in Northern Ireland.

In 2008, the NICCTU recruited 707 cancer patients into forty-seven clinical trials,