

Institute for Clinical Research Education

Promoting Education and Research in Clinical and Translational Science

University of Pittsburgh

ANNUAL REPORT, JULY 2007 – JUNE 2008

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University of Pittsburgh
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Overview: Institute for Clinical Research Education



The University of Pittsburgh has a distinguished history of and established infrastructure for successfully training medical students, residents, postdoctoral fellows, and junior faculty in clinical and translational research and supporting their career development. At the heart of the training enterprise is the Institute for Clinical Research Education (ICRE).

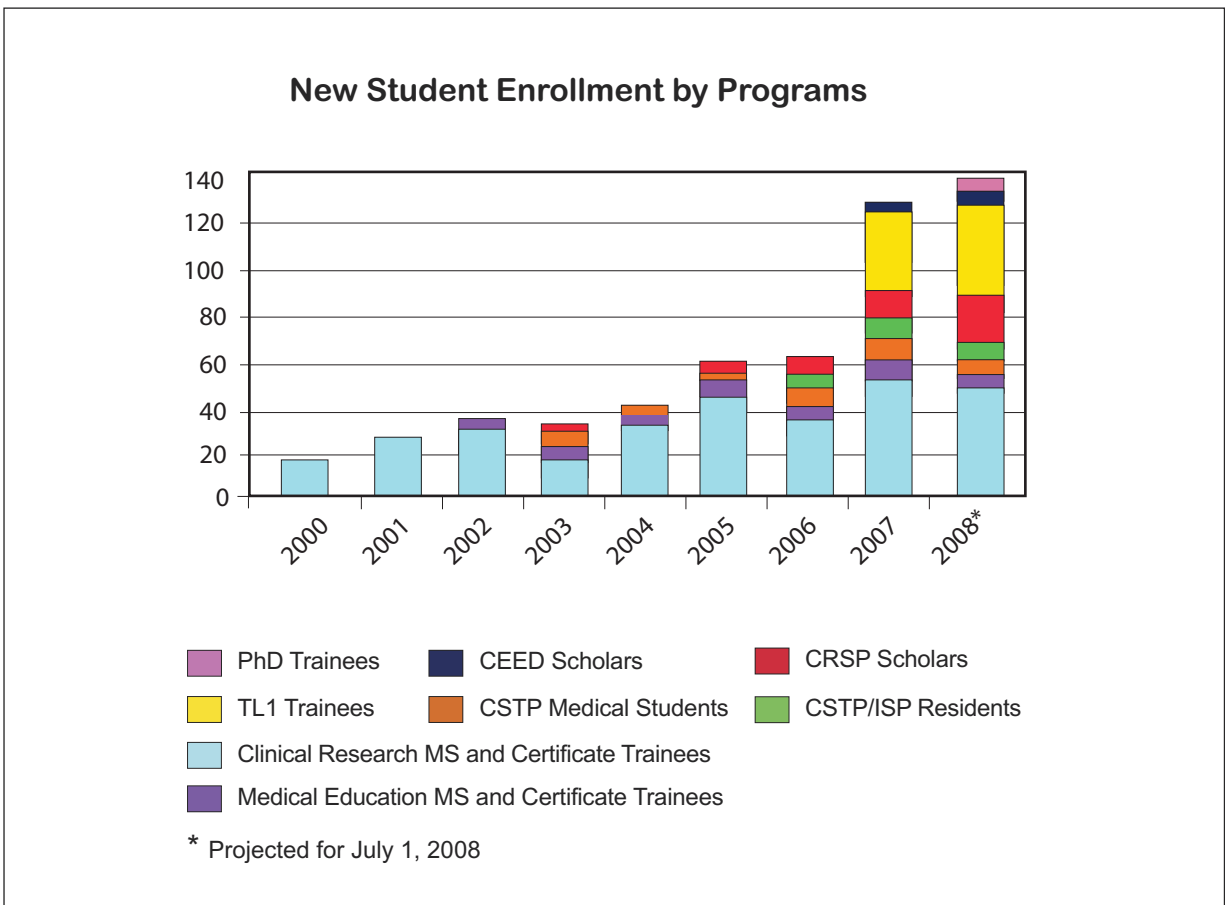
Founded in 2006, the ICRE is devoted to the development of high-quality clinical and translational researchers throughout the schools of the health sciences: the School of Medicine, the Graduate School of Public Health, the School of Dental Medicine, the School of Health and Rehabilitation Sciences, the School of Nursing, and the School of Pharmacy. The ICRE has core faculty members and mentors from the disciplines represented in each of the six schools, and it is designed to offer opportunities in clinical and translational studies ranging from brief research experiences to doctoral degree programs. In addition to offering training programs that lead to a PhD in Clinical and Translational Science, a Master of Science in Clinical Research, and a Certificate in Clinical Research, the ICRE provides the foundation for the Multidisciplinary Clinical Research Scholars Program, the Clinical Scientist Training Program for medical students and residents, and other programs for trainees at all stages of the career pipeline.

With the advent of the Clinical and Translational Science Awards (CTSAs), the ICRE has strategically built upon its existing programs to create a strong infrastructure for the Research Education and Career Development Core of the Clinical and Translational Science Institute (CTSI), to coordinate efforts across the schools of the health sciences, to enhance existing offerings, to reduce boundaries between the schools and disciplines, and to meet the overall aims of the CTSI.

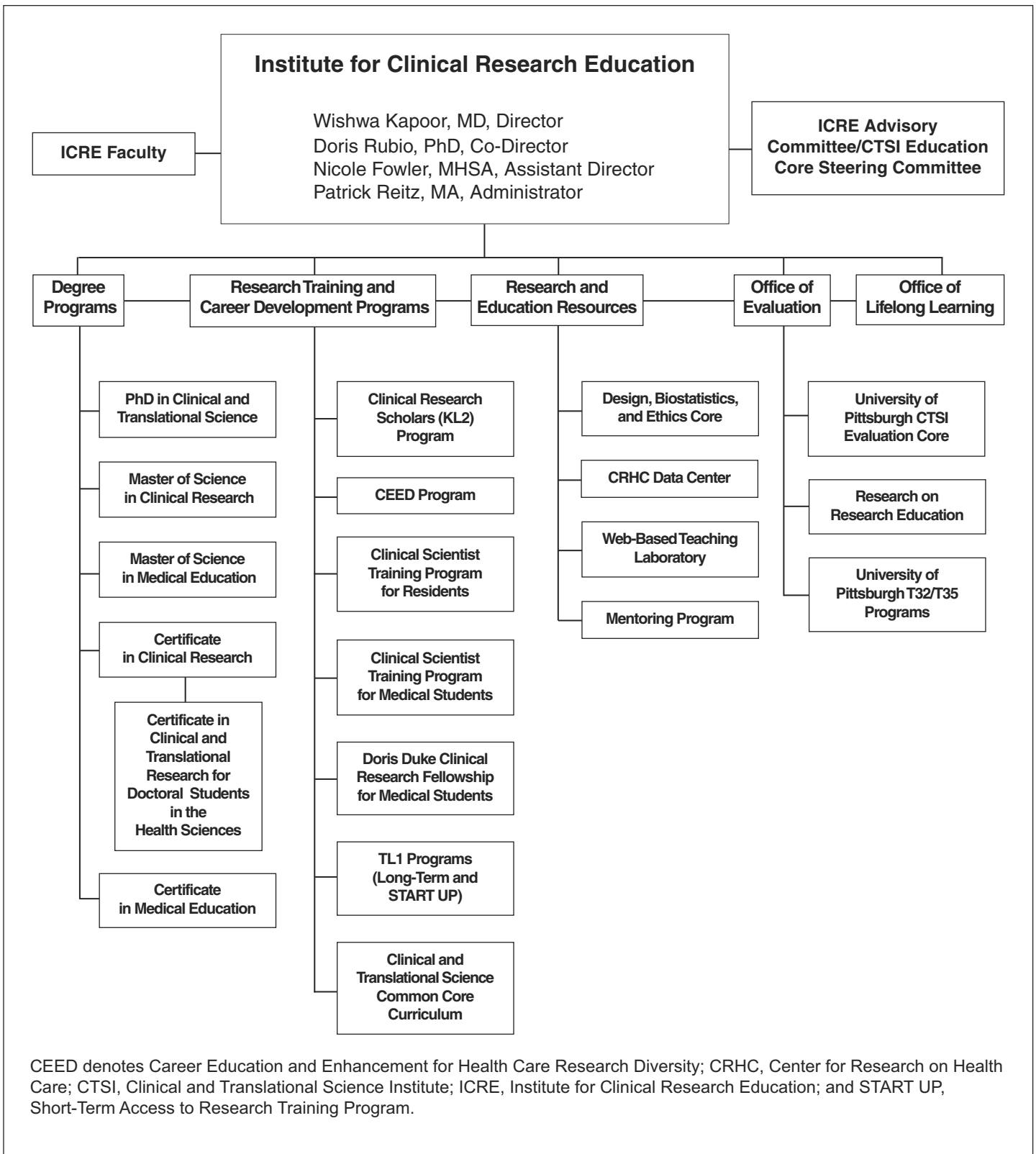
Mission of the Institute for Clinical Research Education

The ICRE is home to the University of Pittsburgh's premier clinical and translational science training programs and to the Research Education and Career Development Core of the Clinical and Translational Science Institute (CTSI).

The ICRE's mission is to develop, nurture, and support careers in clinical and translational research. Its ultimate goals are to advance the field of clinical and translational science and to help meet the nation's need for researchers and leaders in this field.



Advanced Training and Degree Programs in Clinical and Translational Research



Arthur Levine, MD

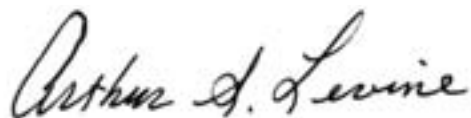
Senior Vice Chancellor, Health Sciences
Dean, School of Medicine

Since 2005, the University of Pittsburgh's Institute for Clinical Research Education (ICRE) has grown into one of the premier clinical and translational research training programs in the nation.

Beginning with an active master's degree program and now offering more than 20 training and career development programs, the ICRE has established the University's schools of the health sciences as leaders in clinical and translational science education. The ICRE is a manifestation of our strong commitment to addressing the shortage of physician and clinical investigators, a group considered an "endangered species."

The success of the ICRE programs was instrumental in securing funding from the National Institutes of Health to establish the Clinical and Translational Science Institute (CTSI). The purpose of the CTSI is to advance the nation's clinical research agenda by accelerating the movement of basic science discoveries from the researcher's bench to the patient's bedside and applying the discoveries to the prevention and treatment of disease. Through its educational offerings, the CTSI can train future investigators and reduce the critical national shortage of physicians who can be successful and independent clinical and translational researchers.

I believe that progress toward improving the health and well-being of the nation's citizens will be achieved only through the translation of basic research findings into the clinical arena, with ongoing follow-up and rigorous evaluation of outcomes. The Rosetta stone for this translation lies at the heart of the ICRE mission in the training of the nation's growing cadre of clinical researchers working in multidisciplinary teams.



Arthur S. Levine, MD
Senior Vice Chancellor, Health Sciences
Dean, School of Medicine

Wishwa Kapoor, MD, MPH

**Director, Institute for
Clinical Research Education**

This past year was a time of major accomplishment for the Institute for Clinical Research Education (ICRE). From July 2007 to June 2008, we fully completed the implementation of research training programs for the pipeline of investigators from medical students to faculty, and we developed educational opportunities for the entire spectrum of training from exposure to mastery of research skills. Highlights included the following:

- Implementing the program for a PhD in Clinical and Translational Science and recruiting students into the program.
- Receiving University approval for PhD students in the schools of the health sciences to pursue a Certificate in Clinical and Translational Research.
- Initiating the Doris Duke Clinical Research Fellowship for Medical Students and recruiting students for the fellowship program from various universities.
- Witnessing the success of the Clinical Research Scholars Program, designed to support the career development of faculty who are drawn from multiple disciplines and are conducting cutting-edge translational research.
- Launching the Career Education and Enhancement for Health Care Research Diversity (CEED) Program, created to support the research careers of faculty and postdoctoral students from underrepresented minority groups.
- Offering a Web-based curriculum for all of our courses.
- Enhancing each of our existing programs, with the result that program enrollments and excitement about a career in clinical and translational research are higher than ever.

We strive for excellence in our training and educational programs. Toward this end, we continue to make changes in all of our courses, teaching formats, and program offerings. Working with a national consortium of universities that have received Clinical and Translational Science Awards (CTSAs), we have begun an intensive review of the competencies in the field of clinical and translational research. The competencies will be reviewed, evaluated, and updated on a regular basis as the science and education in the field evolve.

I am grateful to the core faculty members who created the ICRE programs and who continue to provide outstanding teaching in and leadership of these programs. I am also grateful to Dr. Arthur Levine, whose unconditional and enthusiastic support of the ICRE has contributed substantially to the ICRE's success.



Wishwa Kapoor, MD, MPH
*Director, Institute for
Clinical Research Education*

Steven Reis, MD

Director, Clinical and Translational Science Institute



As one of the twelve initial recipients of a Clinical and Translational Science Award (CTSA) from the National Institutes of Health in 2006, the University of Pittsburgh founded the Clinical and Translational Science Institute (CTSI) to transform its research enterprise. With \$83.5 million in CTSA funding over a five-year period, the CTSI serves as the academic home to integrate clinical and translational sciences across the University's six health science schools, Carnegie Mellon University, the University of Pittsburgh Medical Center (UPMC), and the region. The CTSI's primary focus is to develop, nurture, and support cadres of clinical and translational scientists by building on the University's existing clinical research training programs, supporting new comprehensive training programs, and providing resources and opportunities that will facilitate the translation of research findings from the bench to the bedside to the community.

One of the central elements of the CTSI is the CTSI Research Education and Career Development Core, housed in the Institute for Clinical Research Education (ICRE). Over the past year, the ICRE has successfully developed translational science education and training opportunities across the entire academic pipeline of investigators from medical and health science students to senior faculty investigators. The maturation and expansion of the Clinical Research Scholars Program (KL2), the launching of a new program leading to the PhD in Clinical and Translational Science, and the receipt of a Doris Duke Clinical Research Fellowship for Medical Students are highlights of the ICRE's accomplishments during 2007–2008.

I am looking forward to the ICRE's growth during the next year. The ICRE is clearly a national leader in clinical and translational research training.

A handwritten signature in black ink that reads "Steven E. Reis, MD".

Steven Reis, MD

*Associate Vice Chancellor for Clinical Research, Health Sciences
Director, Clinical and Translational Science Institute*

CTSI Research Education and Career Development Steering Committee

Cindy Bryce, PhD

Associate Professor of Medicine
Associate Director, ICRE Degree Programs
School of Medicine

Donald Burke, MD

Dean, Graduate School of Public Health
Associate Vice Chancellor for Global Health
UPMC–Jonas Salk Chair in Global Health

Lora Burke, PhD, MPH, RN

Associate Professor of Nursing
School of Nursing

Ellen Cohn, PhD

Associate Professor, Department of
Communication Science and Disorders
Associate Dean for Instructional Development
School of Health and Rehabilitation Sciences

Gregory Cooper, MD, PhD

Associate Professor of Biomedical Informatics,
Computer Science, and Intelligent Systems
Director, Biomedical Informatics Training Program
Vice Chair, Department of Biomedical Informatics
School of Medicine

Janice Dorman, MS, PhD

Associate Professor of Epidemiology
Associate Dean for Scientific and International
Affairs
School of Nursing

Kelly Dornin-Koss, MPPM, RN

Director, Research Conduct and Compliance
Office

Judith Erlen, PhD, RN

Professor and Coordinator, PhD Program
School of Nursing

Beth Fischer, PhD

Assistant Professor of Medicine
Director, Survival Skills and Ethics Program
School of Medicine

Nicole Fowler, MHSA

Assistant Director, ICRE
Research Associate
School of Medicine

Susan Greenspan, MD

Professor of Medicine
Director, Osteoporosis Prevention and
Treatment Center
School of Medicine

John Horn, PhD

Associate Dean of Graduate Studies
Director, Interdisciplinary Biomedical Graduate Program
Professor of Neurobiology
School of Medicine

Said Ibrahim, MD, MPH

Associate Professor of Medicine
VA Center for Health Equity Research and
Promotion (CHERP)
Director, Career Education and Enhancement for
Health Care Research Diversity (CEED) Program
School of Medicine

Wishwa Kapoor, MD, MPH

Falk Professor of Medicine
Professor of Health Policy and Management
and Clinical and Translational Science
Chief, Division of General Internal Medicine
Vice Chair, Department of Medicine
Director, ICRE
Director, Center for Research on Health Care (CRHC)
Co-Director, RAND–University of Pittsburgh Health Institute
Co-Director, Clinical and Translational Science Institute
School of Medicine

Robert Kraut, PhD

Herbert A. Simon Professor of Human-Computer
Interaction
Carnegie Mellon University

Patricia Kroboth, PhD

Dean, School of Pharmacy
Professor of Pharmaceutical Sciences
School of Pharmacy

CTSI Research Education and Career Development Steering Committee

Joan Lakoski, PhD

Professor of Pharmacology
Associate Vice Chancellor for Academic Career Development
Associate Dean for Postdoctoral Education
University of Pittsburgh Health Sciences

Mary Marazita, PhD

Professor and Chair of Oral Biology
Associate Dean for Research
School of Dental Medicine

Margaret McDonald, PhD

Assistant Professor of Epidemiology and Psychiatry
Associate Vice Chancellor for Academic Affairs
University of Pittsburgh Health Sciences

Kathleen McTigue, MD, MS, MPH

Assistant Professor of Medicine and Epidemiology
School of Medicine

James Osborn, PhD

Executive Director, Healthcare Robotics Center
Carnegie Mellon University

Samuel Poloyac, PharmD, PhD

Assistant Professor of Pharmaceutical Sciences
School of Pharmacy

Sandra Quinn, PhD

Associate Professor of Behavioral and Community Health Sciences
Associate Dean for Student Affairs and Education
Graduate School of Public Health

James Roberts, MD

Professor of Obstetrics, Gynecology, and Reproductive Sciences and Epidemiology
Vice Chair of Research, Department of Obstetrics, Gynecology, and Reproductive Sciences
School of Medicine

Mark Roberts, MD, MPP

Professor of Medicine, Health Policy and Management, and Industrial Engineering
Chief, Section of Decision Sciences and Clinical Systems Modeling
School of Medicine

Howard Rockette Jr., PhD

Professor and Chair, Department of Biostatistics
Graduate School of Public Health

Doris Rubio, PhD

Associate Professor of Medicine, Biostatistics, Nursing, and Clinical and Translational Science
Co-Director, ICRE
Director, CRHC Data Center
Co-Director, Clinical Research Scholars Program
CTSI Core Director, Design, Biostatistics, and Clinical Research Ethics Core
CTSI Core Director, Evaluation Core
School of Medicine

Deborah Seltzer

Research Associate
School of Medicine

Daniel Siewiorek, PhD

Professor of Computer Science
Director, Human-Computer Interaction Institute
Buhl University Professor of Electrical and Computer Engineering and Computer Science
Carnegie Mellon University

Randall Smith, PhD

Professor of Pharmacy
Associate Dean for Research
School of Pharmacy

Stephanie Studenski, MD, MPH

Professor of Medicine
Director, Claude D. Pepper Independence Center
School of Medicine

Galen Switzer, PhD

Associate Professor of Medicine and Psychiatry
Associate Director, VA Center for Health Equity Research and Promotion
Co-Chief, Measurement Core
VA Pittsburgh Healthcare System

Stephen Thomas, PhD

Professor of Behavioral and Community Health Sciences
Director, Center for Minority Health
Graduate School of Public Health

Robert Weyant, DMD, DrPH

Professor and Chair
Department of Dental Public Health and Information Management
Associate Dean, Office of Public Health and Outreach
School of Dental Medicine

Clinical and Translational Science Degree Programs

The Institute for Clinical Research Education at the University of Pittsburgh has developed customized courses and advanced training programs to meet the needs of clinical and translational researchers at every stage. Our courses emphasize the multidisciplinary nature of clinical and translational research and engage adult learners by focusing on applied approaches to designing and conducting sound and ethical research.

ICRE Curriculum Committee

David Barnard, PhD, JD
Amber Barnato, MD, MPH, MS
Cindy Bryce, PhD
Joyce Chang, PhD
Nicole Fowler, MHSA
Jennifer Grandis, MD
Wishwa Kapoor, MD, MPH
Karen Matthews, PhD
Kathleen McTigue, MD, MS, MPH

Mark Mooney, PhD
Charity Moore, PhD
Kumaravel Rajakumar, MD
Mark Roberts, MD, MPP
Doris Rubio, PhD
Kenneth Smith, MD, MS
Stephanie Studenski, MD, MPH
Galen Switzer, PhD

Medical Education Curriculum Committee

Rachel Bonnema, MD
Robert Brooks, MD, PhD
Cindy Bryce, PhD
D. Michael Elnicki, MD
Rosanne Granieri, MD
Scott Herrle, MD
Dena Hofkosh, MD
Steven Kanter, MD
Wishwa Kapoor, MD, MPH

Alan Lesgold, PhD
David Macpherson, MD, MPH
Haruka Matsubara, MD
J.B. McGee, MD
Melissa McNeil, MD, MPH
Dianna Ploof, EdD
Jeannette South-Paul, MD
Reed Van Deusen, MD

PhD in Clinical and Translational Science

Program Leadership:

Mark Roberts, MD, MPP, Co-Director

Galen Switzer, PhD, Co-Director

Nicole Fowler, MHSA, Program Administrator

Benjamin Huffman, Program Coordinator

Program Committee:

Cindy Bryce, PhD

Institute for Clinical Research Education

Wendy Chapman, PhD

Department of Biomedical Informatics

John Horn, PhD

Associate Dean for Graduate Studies

Wishwa Kapoor, MD, MPH

Institute for Clinical Research Education

Doris Rubio, PhD

Institute for Clinical Research Education, Center for Research on Health Care Data Center

Clayton Wiley, MD, PhD

Department of Pathology, Medical Scientist Training Program

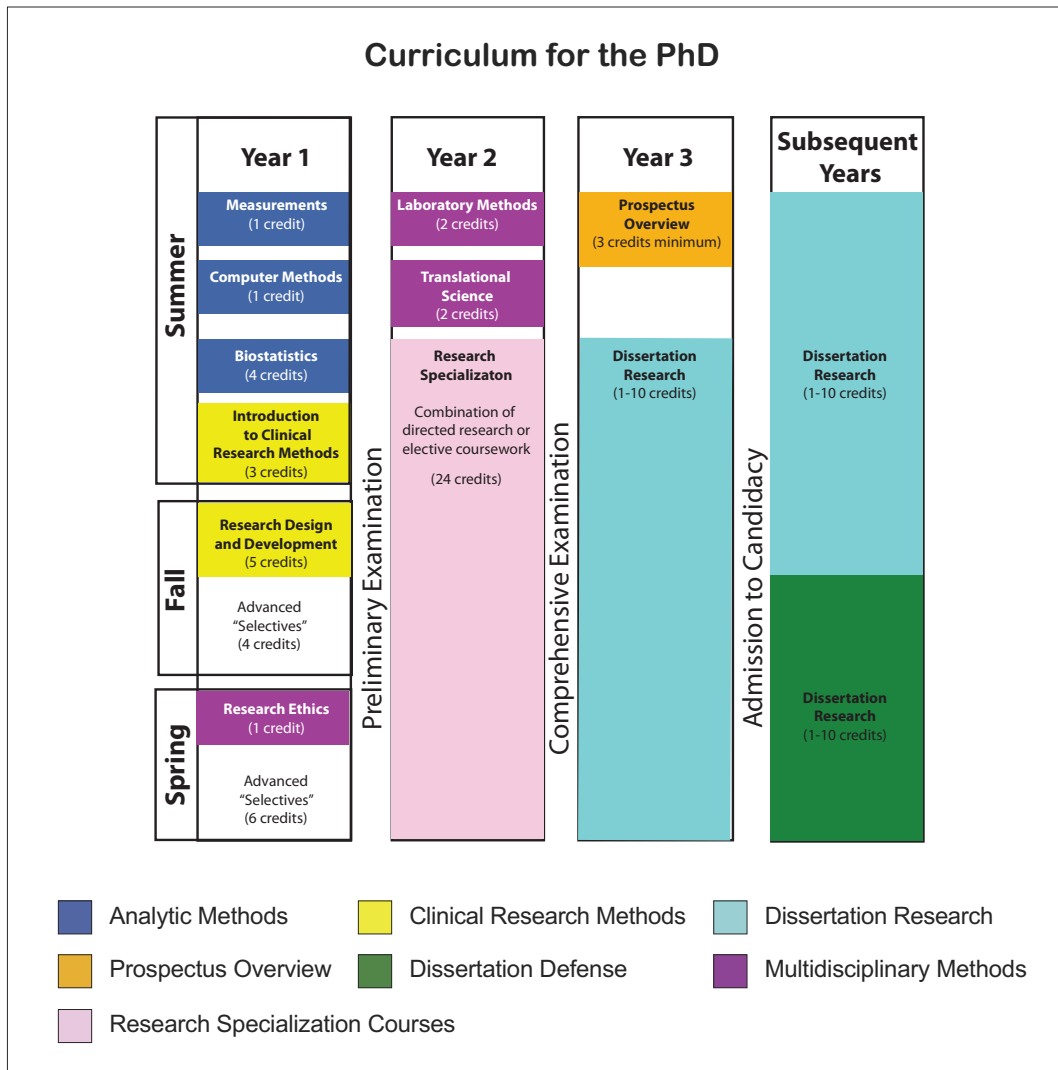
The PhD in Clinical and Translational Science is the newest degree offering of the ICRE and is a central component of the CTSI educational core. The PhD program is a rigorous training program designed to teach clinicians to conduct high-quality clinical and translational research.

The program provides trainees with advanced knowledge of research concepts and gives them the skills and opportunities to conduct innovative research and develop into independent investigators.

Modeled after the highly successful and individually tailored PhD curriculum in the basic sciences, the didactic curriculum in clinical and translational science offers courses in clinical research methods and analytic methods, with advanced requirements in the specific methodologies that trainees will need to complete their research specialization. Directed, mentored research begins early in the program, allowing trainees to develop expertise in planning and conducting an independent research project that will become the basis of their dissertation.

As with all of the ICRE programs, the PhD program encourages multidisciplinary work. It provides multidisciplinary mentoring and requires that dissertation committees have representation from two or more disparate disciplines.

PhD in Clinical and Translational Science



The July 2008 Inaugural Class

Brian Primack, MD, EdM, MS

Assistant Professor
Division of General Internal Medicine
Department of Medicine

Research Topic: The relationship between media messages (i.e., television, advertising, and popular music) and adolescent health behaviors such as smoking, alcohol use, and sexual behavior.

Ahmad Tarhini, MD, MS

Assistant Professor
Division of Hematology/Oncology
Department of Medicine

Research Topic: Translational research to test the safety and immunogenicity of a triple peptide vaccine designed to improve the efficacy of immunization and to better immunize patients with advanced melanoma.

Hussein Tawbi, MD, MS

Assistant Professor
Division of Hematology/Oncology
Department of Medicine

Research Topic: Investigating the effect of epigenetic modifications on the expression of DNA repair genes and the clinical response of patients with melanoma.

Master of Science and Certificate Programs in Clinical and Translational Science

Program Leadership:

Mark Roberts, MD, MPP, Director

Cindy Bryce, PhD, Associate Director

Jennifer Kush, Program Coordinator

Jessica Dornin, Student Services Coordinator

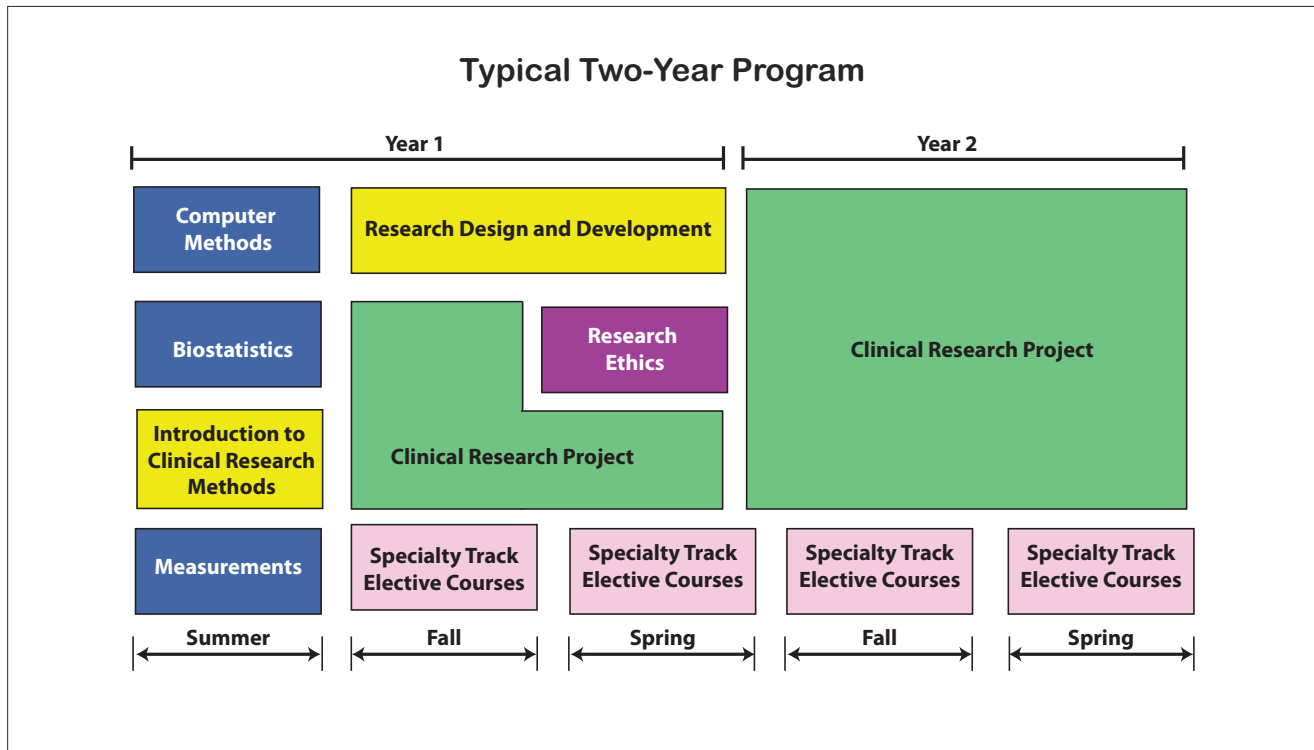
Initially funded in 1999 under the K30 mechanism of the National Institutes of Health (NIH), the program leading to a Master of Science (MS) in Clinical Research has become a national model for programs to educate clinical trainees at multiple levels, including medical students, residents, fellows, and junior faculty.

The MS curriculum provides a basic set of knowledge and skills that every clinical investigator needs, regardless of the specific field in which he or she conducts patient-oriented research. The basics include clinical research methods, biostatistics, measurement of outcomes, and ethical and regulatory principles regarding human research. The core curriculum serves as the central didactic experience for a variety of ICRE training programs and consists of a tightly integrated series of courses focusing on topics, problems, and skills acquisition across the various content areas.

The summer coursework is followed by a course in grant writing. This course is required for the MS and builds on information that is provided through two seminar series: the Research Design and Development Series and the Ethics and Regulation of Clinical Research Series. In these seminar series, students learn how to develop a research question into an NIH-style grant proposal, how to identify and deal with potential problems related to the protection of human subjects, and how to prepare a protocol for the Institutional Review Board. The final product is a completed grant application that follows the PHS-398 application format.



Master of Science and Certificate Programs in Clinical and Translational Science



Specialty Tracks

Specialty tracks, distinguished primarily along methodological grounds, have allowed trainees to concentrate on the type of research that they plan to participate in during their careers.

Clinical Trials Research Track (Charity Moore, PhD, Director)

This track provides training in the design, implementation, and analysis of experimental studies (phase 1, 2, and 3 trials) through didactic and practical experiences. Trainees are encouraged to direct a clinical trial for which they develop the protocol, manage the study, and analyze the results.

Effectiveness, Outcomes, and Quality Research Track (Mark Roberts, MD, MPP, Director)

This track provides training in health services research. The courses offer more sophisticated skills in analytic methods (especially as they relate to observational data), outcomes measurement, and cost-effectiveness studies.

Health and Behavior Track (Karen Matthews, PhD, Director)

This track focuses on behavioral factors involved in the etiology and treatment of physical illness, with an emphasis on intrapersonal, interpersonal, and sociocultural processes and how they interact.

Translational Research Track (Jennifer Grandis, MD, Director)

The trainees in this research track have previous or concurrent laboratory experience or plan to partner with a basic science investigator to implement translational research projects in the clinical setting. Trainees participate in the Translational Research Seminar Series and take courses related to T1 or T2 translational research.

Certificate in Clinical and Translational Research for Doctoral Students in the Health Sciences

Program Leadership:

Mark Roberts, MD, MPP, Director

Cindy Bryce, PhD, Associate Director

Jennifer Kush, Coordinator

Jessica Dornin, Student Services Coordinator

Starting in the fall of 2008, the ICRE will provide doctoral students in the University of Pittsburgh's schools of the health sciences with the opportunity to enroll in a program that leads to a Certificate in Clinical and Translational Research. In addition to offering courses in research methodology, the rigorous program will give students the chance to participate in collaborative research under the mentorship of translational researchers.

The goal of the certificate program is to enhance the University's doctoral training programs in various areas of basic science and health-related sciences by providing students with a new opportunity to learn the skills needed to conduct high-quality clinical and translational research.

The certificate is available to graduate students in the programs listed below.

Graduate School of Public Health

Behavioral and Community Health Sciences	DrPH
Biostatistics	PhD
Environmental and Occupational Health	PhD
Epidemiology	PhD
Health Services Research and Policy	PhD
Human Genetics	PhD
Infectious Diseases and Microbiology	DrPH, PhD
Public Health Statistics	DrPH

School of Health and Rehabilitation Sciences

Communication Science and Disorders	PhD
Rehabilitation Science	PhD

School of Nursing

Nursing	PhD
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School of Medicine

Biochemistry and Molecular Genetics	PhD
Biomedical Informatics	PhD
Cell Biology and Molecular Physiology	PhD
Cellular and Molecular Pathology	PhD
Computational Biology	PhD
Immunology	PhD
Integrative Molecular Biology	PhD
Molecular Biophysics and Structural Biology	PhD
Molecular Pharmacology	PhD
Molecular Virology and Microbiology	PhD
Neurobiology	PhD

School of Pharmacy

Pharmaceutical Sciences	PhD
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Master of Science and Certificate in Medical Education

Program Leadership:

Rosanne Granieri, MD, Director

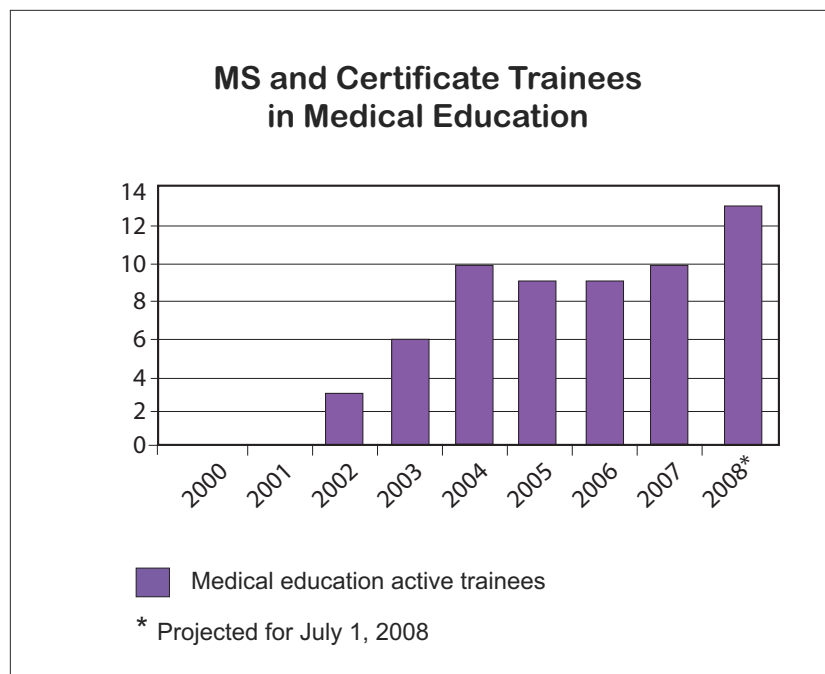
Cindy Bryce, PhD, Associate Director

Jennifer Kush, Program Coordinator

The University of Pittsburgh offers a program that leads to a Master of Science (MS) in Medical Education and a Certificate in Medical Education. The program is designed to train future leaders in the field.

The program provides trainees with didactic material and precepted teaching experiences that enhance their skills in classroom and clinical instruction, curriculum development, professional leadership, medical education, and medical administration.

In addition, through the MS program in clinical research, the trainees take core courses in research and complete a mentored research or curriculum development project.



Career Development and Research Training Programs



The ICRE's training and career development programs are customized to meet the needs of each researcher's stage in the academic "career pipeline."

Clinical Research Scholars (KL2) Program

Program Leadership:

Wishwa Kapoor, MD, MPH, Director

Doris Rubio, PhD, Co-Director

Joan Lakoski, PhD, Co-Director

Heather Johnson, Program Coordinator

Lorraine Pollini, Administrative Assistant

The Clinical Research Scholars Program (CRSP) is a multidisciplinary career development program that prepares scientists from a broad range of disciplines, specialties, and subspecialties for independent careers in clinical or translational research. This program brings together the collaborative efforts of the schools of the health sciences (the Graduate School of Public Health, the School of Dental Medicine, the School of Health and Rehabilitation Sciences, the School of Medicine, the School of Nursing, and the School of Pharmacy), the Swanson School of Engineering, the many multidisciplinary research centers at the University of Pittsburgh, and the extensive clinical entities that constitute the University of Pittsburgh Medical Center (UPMC). CRSP scholars engage in diverse types of multidisciplinary clinical research, including large and small clinical trials, patient-oriented research, epidemiologic studies, health services research, and translational research. The scholars pursue educational offerings pertaining to research ethics and regulations, to best practices in clinical research, and to the development of management and leadership skills. An integral component of the program involves working in multidisciplinary teams and being mentored by a group of highly experienced, federally funded senior investigators.

2007–2008 CRSP Scholars

Aletha Akers, MD

Obstetrics, Gynecology, and
Reproductive Sciences

Sonya Borrero, MD, MS

Internal Medicine

Julie Donohue, PhD

Health Policy and Management

Kerry Empey, PharmD, PhD

Pharmacy and Therapeutics

Julie Fuchs, MD

Pediatric Surgery

T. Clark Gamblin, MD

Surgical Oncology

Mary Garza, PhD, MPH

Behavioral and Community
Health Sciences

Andrew Gilbert, MD

Psychiatry

Steven Handler, MD, MS, CMD

Geriatric Medicine and
Biomedical Informatics

Samay Jain, MD

Neurology

Jordan Karp, MD

Psychiatry and Anesthesiology

Eswar Krishnan, MD

Rheumatology

Bruce Lee, MD, MBA

Internal Medicine

Steven Little, PhD

Bioengineering

John McKinnon, MD, MSc

Internal Medicine

Ateev Mehrotra, MD, MPH

Internal Medicine

Natalia Morone, MD, MSc

Internal Medicine

Smita Nayak, MD

Internal Medicine

Sara Piva, PhD, PT

Physical Therapy

Camille Ragin, PhD, MPH

Epidemiology

Matthew Reeves, MD, MPH

Obstetrics, Gynecology, and
Reproductive Sciences

Jon Rittenberger, MD, MS

Emergency Medicine

Matthew Rosengart, MD, MPH

Surgery

Marc Simon, MD

Transplant Cardiology

Jason Sperry, MD, MPH

Surgery

Stasa Tadic, MD, MS

Geriatric Medicine

Thankam Thyvalikakath, MDS, MS

Dental Informatics

Hilary Tindle, MD, MPH

Internal Medicine

George Tseng, PhD

Biostatistics

Felicia Wu, PhD

Environmental and Occupational
Health

Leland Yee, PhD, MPH

Epidemiology

CRSP Multidisciplinary Advisory Committee

The CRSP Multidisciplinary Advisory Committee (MAC) meets every month and includes representatives from 20 disciplines and all six schools of the health sciences, faculty from the University of Pittsburgh Center for Minority Health, and the Associate Dean of Graduate Studies in the School of Medicine. The committee assists in the selection of CRSP scholars, provides guidance and direction for the scholars, monitors the program, and recommends program changes to meet the scholars' needs.

2007–2008 Multidisciplinary Advisory Committee

Timothy Billiar, MD

School of Medicine
Department of Surgery

Gregory Cooper, MD, PhD

School of Medicine
Department of Bioinformatics

Anthony Delitto, PhD, PT

School of Health and Rehabilitation
Sciences
Department of Physical Therapy

Jacqueline Dunbar-Jacob, PhD, RN

School of Nursing
Departments of Epidemiology and
Occupational Therapy

Michael Fine, MD, MSc

School of Medicine
Departments of Medicine and
Health Policy and Management

Gerald Gebhart, PhD

School of Medicine
Department of Anesthesiology

Susan Greenspan, MD

School of Medicine
Division of Endocrinology

Mary Beth Happ, PhD, RN

School of Nursing
Departments of Nursing, Bioethics,
and Health Law

Alejandro Hoberman, MD

School of Medicine
Department of Pediatrics

John Horn, PhD

School of Medicine
Department of Neurobiology

Judith Lave, PhD

Graduate School of Public Health
Departments of Health Policy and
Management, Economics,
and Psychiatry

Mary Marazita, PhD

School of Dental Medicine
Departments of Oral Biology,
Human Genetics, and Psychiatry

Karen Matthews, PhD

School of Medicine
Departments of Psychiatry,
Epidemiology, and Psychology

Charity Moore, PhD, MS

School of Medicine
Department of Medicine

Anne Newman, MD, MPH

Graduate School of
Public Health
Departments of Medicine and
Epidemiology

Steven Reis, MD

School of Medicine
Division of Cardiology

James Roberts, MD

School of Medicine
Department of Obstetrics, Gynecology,
and Reproductive Sciences

Mark Roberts, MD, MPP

School of Medicine
Departments of Medicine, Health
Policy and Management, and
Industrial Engineering

Neal Ryan, MD

School of Medicine
Department of Psychiatry

Charles Sfeir, DDS, PhD

School of Dental Medicine
Department of Oral Biology

Randall Smith, PhD

School of Pharmacy
Department of Pharmaceutical
Sciences

Stephanie Studenski, MD, MPH

School of Nursing
Division of Geriatrics

Ralph Tarter, PhD

School of Medicine
Departments of Pharmacology and
Psychiatry

Stephen Thomas, PhD

Graduate School of Public Health
Behavioral and Community Health
Sciences

Valerie Watzlaf, PhD, RHIA

School of Health and Rehabilitation
Sciences
Department of Health Information
Management

Career Education and Enhancement for Health Care Research Diversity (CEED) Program

Program Leadership:

Said Ibrahim, MD, MPH, Director

Heather Johnson, Program Coordinator

Program Committee:

Willa Doswell, PhD

Nursing

Michael Fine, MD, MSc

Medicine

Beth Fischer, PhD

Medicine

Alejandro Hoberman, MD

Pediatrics

Wishwa Kapoor, MD, MPH

Medicine

Joan Lakoski, PhD

Pharmacology

Charity Moore, PhD, MS

Medicine

Chenits Pettigrew, PhD

Medicine

Julie Price, PhD

Radiology

Edmund Ricci, PhD

Behavioral and Community Health Sciences

Doris Rubio, PhD

Medicine

Deborah Seltzer

Medicine

Jeannette South-Paul, MD

Family Medicine

Stephen Thomas, PhD

Behavioral and Community Health Sciences

The University of Pittsburgh is committed to becoming a leader in the national effort to encourage diversity among clinical and translational researchers. The Career Education and Enhancement for Health Care Research Diversity (CEED) Program is designed to help postdoctoral fellows and faculty from underrepresented minority groups by providing them with the mentoring and training needed for successful research careers; by helping them develop leadership and management skills; by enhancing their grant writing and other skills that will help them receive competitive career development awards; and by ensuring a supply of well-qualified investigators to carry out basic science, clinical, and translational research in the health sciences.

2007–2008 CEED Fellows

Danielle Beatty, PhD

Postdoctoral Fellow

Department of Psychiatry

School of Medicine

Craig Fryer, PhD

Assistant Professor

Department of Behavioral and

Community Health Sciences

Graduate School of Public Health

Assistant Director, Center for

Minority Health

Dorothy Hawthorne, RN, PhD

Assistant Professor

Department of Health Promotion

and Development

School of Nursing

2008–2009 CEED Fellows

James Butler, DrPH, MEd

Assistant Professor

Department of Behavioral and

Community Health Sciences

Graduate School of Public Health

Jamie Chatman, PhD

Postdoctoral Fellow

Kellogg Health Scholar

Department of Biostatistics

Graduate School of Public Health

Besangie Sellars, PhD

Postdoctoral Fellow

Kellogg Health Scholar

Graduate School of Public Health

Center for Minority Health

Beatrice Chakraborty, PsyD

Postdoctoral Fellow

Department of Psychiatry, Western

Psychiatric Institute and Clinic

School of Medicine

Tennille Leak, DMD

Postdoctoral Fellow

Department of Epidemiology

Graduate School of Public Health

Clinical Scientist Training Program (CSTP) for Residents

Program Leadership:

Wishwa Kapoor, MD, MPH, Director

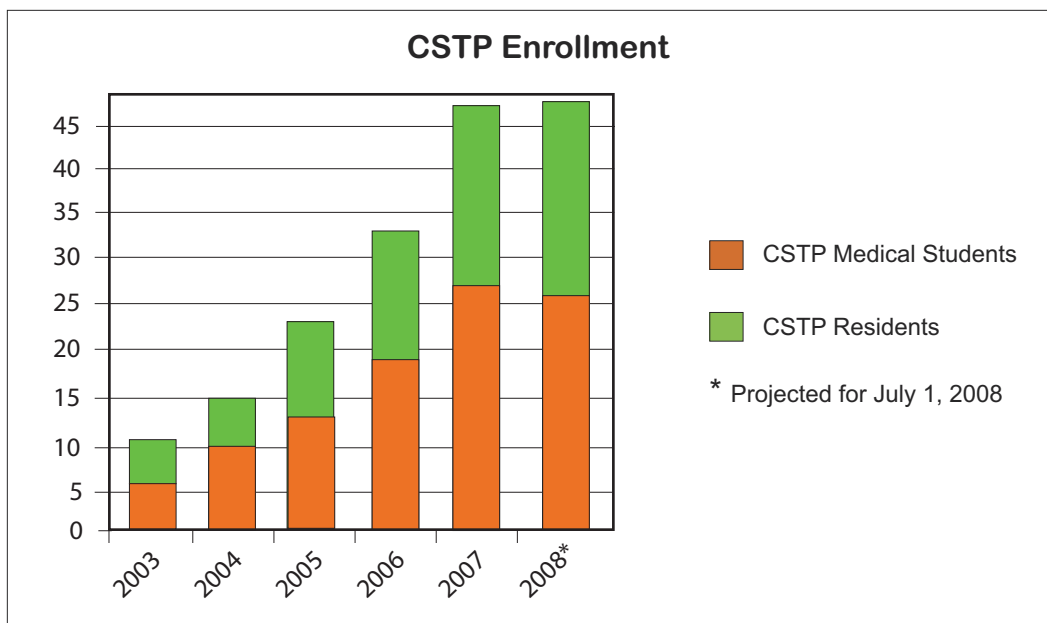
Kathleen McTigue, MD, MPH, Associate Director

Jennifer Kush, Program Coordinator

The Clinical Scientist Training Program (CSTP) for residents is designed to prepare clinicians for a career in academic medicine and clinical investigation by providing them with opportunities to learn and practice clinical research skills during their residency training. The program has three main components: courses in clinical research methods, mentored research, and a longitudinal seminar.

- Each resident in the CSTP completes a minimum of 9 credits of coursework over an 8-week period, typically during the summer months of the second year of residency. Generally, the time for the course work is substituted for two electives in the residency training track in which the resident is enrolled.
- During the residency program, each resident develops and carries out a mentored research project in his or her area of interest, working with a mentor and senior researcher at the University of Pittsburgh. With guidance from the mentor and CSTP faculty, the resident is expected to present his or her research findings in a public scientific forum and to develop a manuscript to be submitted for publication.
- Throughout their medical training, the residents participate in a regular seminar series that offers lectures on topics in clinical research and provides them with opportunities to present their own research and receive feedback from peers, faculty members, and physicians involved in other ICRE programs.

After completing the CRSP requirements, the residents may pursue further coursework to obtain a Certificate in Clinical Research. This generally requires an additional year of training that can be completed after residency or as part of a postresidency fellowship at the University of Pittsburgh.



Clinical Scientist Training Program (CSTP) for Medical Students

Program Leadership:

Wishwa Kapoor, MD, MPH, Director

Amber Barnato, MD, MS, Associate Director

Jennifer Kush, Program Coordinator

Program Committee:

Margaret Conroy, MD, MPH

Internal Medicine

Adam Gordon, MD, MPH

Internal Medicine

Rachel Hess, MD, MSc

Internal Medicine

Michael Lotze, MD

Surgery

Kathleen McTigue, MD, MS, MPH

Internal Medicine

Natalia Morone, MD, MSc

Internal Medicine

Eleanor Schwarz, MD

Internal Medicine

Stephanie Studenski, MD, MPH

Geriatric Medicine



The Clinical Scientist Training Program (CSTP) for medical students is a 5-year program designed to prepare outstanding students for a career in academic medicine and clinical investigation by providing them with opportunities to learn and practice clinical research skills during medical school.

Through the CSTP, students can pursue a Certificate in Clinical Research or a Master of Science (MS) in Clinical Research. Both the certificate and the MS require an additional year of study, which is usually taken between the third and fourth year of medical school. The program consists of courses in clinical research methods, mentored research, and a longitudinal seminar.

- Students develop a plan of study to fulfill requirements for the certificate or MS. The coursework is completed during the CSTP year and during research elective months in the fourth year of medical school.
- All students conduct full-time mentored clinical research with a federally funded investigator during the summer between the first and second medical school years and during the 12 months of the CSTP year. The ultimate goals are for students to complete their research, to present one or more abstracts at regional or national meetings, and to convert the abstracts into manuscripts for publication in a peer-reviewed journal.
- During all years except the third year of medical school, students attend a semiweekly seminar that covers topics such as research ethics, career paths in clinical investigation, student research in progress, and National Institutes of Health grant writing.

Doris Duke Clinical Research Fellowship Program

Program Leadership:

Wishwa Kapoor, MD, MPH, Director
Amber Barnato, MD, MS, Associate Director
Nicole Fowler, MHSA, Program Administrator
Jennifer Kush, Program Coordinator



Program Committee:

Paula Davis, MA
Assistant Vice Chancellor for Diversity
Joan Harvey, MD
Associate Dean, School of Medicine
Alejandro Hoberman, MD
Pediatrics
John Horn, PhD
Neurobiology

Cynthia Lance-Jones, PhD
Neurobiology
Charles Reynolds, MD
Psychiatry
Stephanie Studenski, MD, MPH
Geriatric Medicine
Clayton Wiley, MD, PhD
Pathology

In 2007, the University of Pittsburgh School of Medicine received the prestigious Doris Duke Research Fellowship Award. This program will be administered by the ICRE and will be a clinical research training program modeled after the CSTP for medical students. In July 2008, the program will enroll five medical students.

The Doris Duke Clinical Research Fellowship Program is designed to encourage exceptional medical students to pursue careers in clinical research by giving them a 1-year opportunity, generally taken between the third and fourth year of medical school, to learn and practice clinical and translational research skills. The program will include courses in clinical research methods, mentored research, and a longitudinal seminar.

The July 2008 Inaugural Class of Doris Duke Fellows

Priya Gursahaney
University of Pittsburgh School of Medicine
Research Topic: Partner notification practices in patients with sexually transmitted diseases

Mari Machi
University of Pittsburgh School of Medicine
Research Topic: Identifying cultural issues affecting communication about sexual health within African American families

Arvind Raina
Case Western Reserve University School of Medicine
Research Topic: Pathological mechanisms underlying idiopathic pulmonary fibrosis

Alison Goldberg Rubin
University of Pittsburgh School of Medicine
Research Topic: Emergency contraception in female adolescents

Nikhil Thaker
University of Medicine and Dentistry of New Jersey (UMDNJ) Medical School
Research Topic: Small interfering RNA-based synthetic lethal screens of glioma cells to identify novel drug combinations

Predoctoral Fellowship in Clinical and Translational Research

Program Leadership:

Mark Roberts, MD, MPP, Co-Director

Galen Switzer, PhD, Co-Director

Nicole Fowler, MHSA, Program Administrator

Benjamin Huffman, Program Coordinator

As part of the Clinical and Translational Science Institute, the ICRE offers the Predoctoral Fellowship in Clinical and Translational Research. The fellowship is designed to enhance and support multidisciplinary research training in clinical and translational science throughout the University of Pittsburgh and to encourage the University's PhD students to pursue a career in this field.

The fellowship awards are for a 1-year period and include a stipend, tuition, travel funds, and research support. The fellows are required to participate in the ICRE clinical research methods course to learn the core principles of conducting clinical research. They devote the majority of their time to research and are encouraged to pursue translational research topics.

2007–2008 Predoctoral Trainees

Jennifer Bonner

School of Pharmacy
Pharmaceutical Sciences

Research Topic: Short-term and long-term effects of small bowel transplantation on drug absorption and intestinal first-pass metabolism

Robert Koppenhaver

Swanson School of Engineering
Industrial Engineering

Research Topic: An optimization approach to care for human immunodeficiency virus infection: maximizing societal and patient benefit

Susan Fuhrman

School of Health and Rehabilitation Sciences
Rehabilitation Science

Research Topic: An investigation in a clinical setting of issues surrounding children and wheelchair seating

Mark Miedel

School of Medicine
Molecular and Cell Biology

Research Topic: The role of mucolipin-1 in the pathogenesis of the lysosomal storage disease mucopolipidosis type IV

Predoctoral Fellowship in Clinical and Translational Research

2008–2009 Predoctoral Trainees

Jennifer Bonner

School of Pharmacy
Pharmaceutical Sciences

Research Topic: Evaluation of intestinal CYP3A4/5 and p-glycoprotein function in small bowel transplant recipients

Christopher Gaiteri

School of Medicine
Psychiatry

Research Topic: Gene interaction networks in a cross-species characterization of depression

Nisanne Ghonem

School of Pharmacy
Pharmaceutical Sciences

Research Topic: The use of Remodulin, a PGI₂ analog, in liver grafts for the prevention of ischemic injury

Christi Kolarcik

School of Medicine
Pathology

Research Topic: Characterization of retinoid signaling proteins in amyotrophic lateral sclerosis

Robert Koppenhaver

Swanson School of Engineering
Industrial Engineering

Research Topic: An optimization approach to care for human immunodeficiency virus infection: maximizing societal and patient benefit

Scott Langevin

Graduate School of Public Health
Epidemiology

Research Topic: Promoter methylation and clinical outcomes in squamous cell carcinoma of the head and neck

Gaurav Shukla

Swanson School of Engineering
Bioengineering

Research Topic: Multimodal image registration of 2D ultrasound and 3D MRI for image-guided intervention reperfusion

Laura Voegtly

School of Medicine
Pathology

Research Topic: MMP activation peptide detection in biological samples as a predictor of acute exacerbations in idiopathic pulmonary fibrosis

Short-Term Access to Research Training Program (START UP) (TL1 Program)

Program Leadership:

Stephanie Studenski, MD, MPH, Director
Nicole Fowler, MHSA, Program Administrator
Benjamin Huffman, Program Coordinator

Program Committee:

Ellen Cohn, PhD
Health and Rehabilitation Sciences
Judy Erlen, PhD
Nursing
Mary Marazita, PhD
Dental Medicine

Samuel Poloyac, PharmD, PhD
Pharmacy
Sandra Quinn, PhD
Public Health

The Clinical and Translational Science Institute and ICRE have designed a summer research program for students enrolled in clinical doctoral programs in the schools of the health sciences at the University of Pittsburgh. The summer program lasts for 8–12 weeks and combines an individualized mentored research experience with group sessions that are focused on multidisciplinary translational research. Students work directly with an NIH-funded investigator to develop an initial research plan and an implementation plan.

2007–2008 START UP Fellows

Drew Breakey

School of Health and Rehabilitation Sciences
Research Topic: Methods of reporting muscle strength as it relates to physical function in people with knee osteoarthritis

Nicholas Callahan

School of Dental Medicine
Research Topic: Human tooth agenesis and cancer susceptibility with AXIN2

Alison Colbert

School of Nursing
Research Topic: Medication adherence and self-management of human immunodeficiency virus infection

Luis Duran

Graduate School of Public Health
Research Topic: Embodiment of disease: the case of HIV/AIDS in men who have sex with men

Lindsay Ferguson

School of Pharmacy
Research Topic: Development of a novel microbicide product for prevention of human immunodeficiency virus infection

Wendy Henderson

School of Nursing
Research Topic: Testing a model of health-related quality of life in persons with human immunodeficiency virus infection and liver disease

Amit Kamat

School of Dental Medicine
Research Topic: Development of a 3D patient record for general dentistry

Kevin McMinn

School of Dental Medicine
Research Topic: Strategies for whole tooth regeneration

Cody Nelson

School of Dental Medicine
Research Topic: Assessing the relationship between periodontal disease and sickle cell anemia among an African American adult population in Pittsburgh

Nathan Pugh

Graduate School of Public Health
Research Topic: The role of coagulation biomarkers in the development of sepsis

Short-Term Access to Research Training Program (START UP) (TL1 Program)

2007–2008 START UP Fellows

Joseph Rybny

School of Pharmacy

Research Topic: The effect of therapeutic hypothermia on the cytochrome P450 enzyme system

Marilyn Torch

School of Pharmacy

Research Topic: Optimization of the pharmacotherapy of hydroxyprogesterone caproate in pregnant subjects

April Scott

School of Health and Rehabilitation Sciences

Research Topic: The perception of facial emotion in individuals with brain injury

2008–2009 START UP Fellows

Ida Anjomshoaa

School of Dental Medicine

Research Topic: The association of aquaporin-5 with caries and the impact of cardiovascular disease on susceptibility to caries

Andrew Martin

School of Dental Medicine

Research Topic: Evaluation of decision-making activities using a 3D charting interface

Tanner Bartholow

School of Medicine

Research Topic: Analysis of potential immunohistochemical markers for prognosis correlation in patients with prostate cancer metastasis

Jonathan Misner

School of Dental Medicine

Research Topic: Evaluating the effectiveness of modeling principles for data models

Tiffany Behringer

School of Medicine

Research Topic: Understanding contraceptive decision making in women who seek to avoid pregnancy

Neil Robertson

School of Dental Medicine

Research Topic: Quantitative study of human stem cell differentiation using proteomics

Nicholas Callahan

School of Dental Medicine

Research Topic: Human tooth agenesis and cancer susceptibility with AXIN2

Dana Roman

School of Pharmacy

Research Topic: Biomarker assessment of free fatty acid metabolite biomarkers of complications and outcomes in patients with subarachnoid hemorrhage

Luis Duran

Graduate School of Public Health

Research Topic: Embodiment and the social-ecological framework: potential application as a bridge between levels of analysis

Carolyn Schroeder

School of Health and Rehabilitation Sciences

Research Topic: The use of neuromuscular electrical stimulation (NMES) to reverse muscle atrophy in patients with rheumatoid arthritis

Pieter Heemstra

School of Dental Medicine

Research Topic: The isolation and characterization of stem cells from the periodontal ligament

Michael Smith

School of Pharmacy

Research Topic: The localization of UC781, a nonnucleoside reverse transcriptase inhibitor (NNRTI), in excised human tissues

Curriculum Development in Translational Science: An Introduction to Translational Research in the Health Sciences

Program Leadership:

Samuel Poloyac, PharmD, PhD, Director
Benjamin Huffman, Program Coordinator



Program Committee:

Cindy Bryce, PhD

Medicine

Ellen Cohn, PhD

Health and Rehabilitation Sciences

Judy Erlen, PhD

Nursing

Carol Feghali-Bostwick, PhD

Medicine

Nicole Fowler, MHSA

Institute for Clinical Research Education

Wishwa Kapoor, MD, MPH

Medicine

Jason Kojtek, MS

Center for Research on Health Care Data Center

Mary Marazita, PhD

Dental Medicine

Margaret McDonald, PhD

Medicine

Donna Minsterman, MEd

Institute for Clinical Research Education

Sandra Quinn, PhD

Public Health

Lauren Sendek

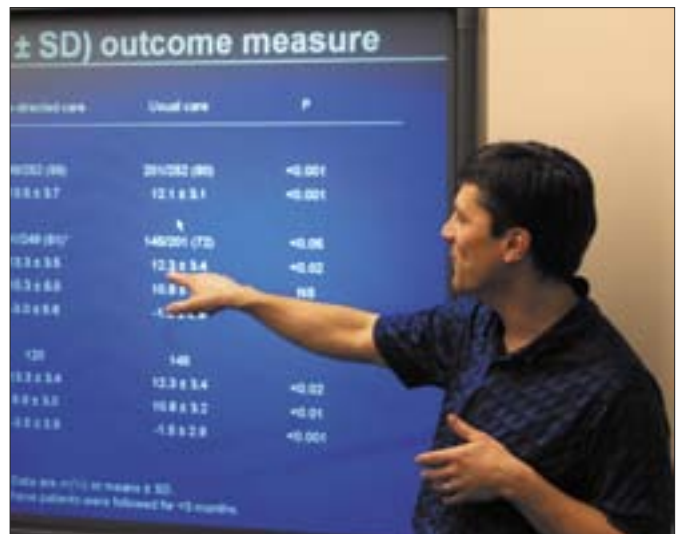
Institute for Clinical Research Education

Timothy VanDyke

Center for Research on Health Care Data Center

The goal of the common core curriculum in the Clinical and Translational Science Institute (CTSI) is to provide doctoral-level graduate students with the knowledge and critical thinking skills they need to engage in clinical or translational research.

To introduce students to the objectives, concepts, models, and processes of this research, the CTSI Education Core designed a Web-based and in-class hybrid course titled Introduction to Translational Research in the Health Sciences. This course, which will be offered for the first time in the fall of 2008, will provide students with a comprehensive survey of the processes involved in translating research discoveries into practices that promote health and prevent disease. The specific topics to be covered are listed in the lecture schedule and include the implementation of new therapies as standards of care and the application of innovative preventive services. Various research methodologies, including those encompassed in the drug, therapeutic, and device development process, will be discussed. The course will offer lectures via electronic media and will use a collaborative learning approach to classroom activities.



Competencies in Clinical and Translational Science

Competencies

The ICRE has created over 50 new courses in clinical and translational science and medical education. It has developed programs leading to a PhD in Clinical and Translational Science, a Master of Science in Clinical Research, a Master of Science in Medical Education, a Certificate in Clinical Research, a Certificate in Medical Education, and a Certificate in Clinical and Translational Research (the newest certificate, designed for PhD students enrolled in programs at the University of Pittsburgh). The ICRE has also created a concentration in health sciences for PhD students enrolled in computer sciences at Carnegie Mellon University.

During the past 9 years, the ICRE has experienced tremendous growth in its degree programs and in course enrollments of nondegree students from throughout the University of Pittsburgh. The growth has been accompanied by a recognition of the need to develop competencies and assessment criteria for advanced degree (MS and PhD) programs. At the national level, the movement to develop competencies has been organized by the National Center for Research Resources (NCRR), the Education Steering Committee of the Clinical and Translational Science Awards (CTSAs), the Association for Clinical Research Training (ACRT), and the Association of American Medical Colleges (AAMC). At the University of Pittsburgh, the movement has been led by the Office of the Provost.

In an effort to validate and maintain the quality of our degree programs in clinical and translational science, the ICRE has formed work groups to establish and assess competencies. In recognition of the work that has already been done on a national scale, we have organized the work groups around the following themes established by the NCRR and Education Steering Committee of the CTSAs:

- The identification and definition of important public health and clinical problems and of relevant translational research issues associated with these problems.
- Research methods.
- Data measurement, management, and analysis.
- Scientific writing and communication.
- Ethical conduct of research.
- Scientific leadership, management, and cross-disciplinary teamwork.

We have begun the process of establishing competencies by identifying a leader for each work group and asking the groups to meet from May 2008 to September 2008 to refine the wording of the themes; to revise and refine the competencies for the themes; to determine the appropriateness of competencies for the PhD, MS, and certificate programs; to define where in the ICRE curriculum the competencies are addressed; and to define how the competencies are assessed.

ICRE Collaborative Programs in Clinical and Translational Science

Mentoring Program

The ICRE has developed a formal program to train team mentors and to monitor the success of mentoring for all of the ICRE programs. The mentoring program provides the best possible opportunity for developing research careers that span multiple disciplines, specialties, and subspecialties.

Scholars, fellows, and trainees in ICRE programs are mentored by accomplished investigators who are actively involved in clinical or translational research, have research funding from the National Institutes of Health or other federal institutions, have established track records of mentoring and providing research training, and are committed to the career development of trainees. The following are the main components of the mentoring program:

- Mentor selection—The ICRE program directors, with assistance from the faculty or program committees, help select mentors for ICRE trainees after meeting individually with the trainees and assessing their career goals and interests.
- Mentor and mentee contracts—The ICRE mentors provide written commitments to meet regularly with the trainees throughout the duration of the training program and to help design the research plans, to discuss progress in research, and to develop solutions to problems that may arise. The ICRE uses learner-centered contracts that allow the trainees to focus on the research areas of greatest interest to them and to create educational objectives consistent with these interests. The contracts serve as a formal mechanism for ensuring that feedback is given and that progress is being made in achieving the educational objectives.
- Mentor and mentee training—The goals of mentor-mentee training are to provide a clear understanding of the purpose of mentoring, to delineate the expectations of the trainees, to develop consistent implementation of mentoring, and to develop mentoring skills. The training activities take place during an annual retreat at the beginning of the program. The retreat brings together the trainees and mentors to allow them to become acquainted, to help them establish a sharing environment, to define their roles and responsibilities, to develop agreements regarding the details of mentoring and the nonnegotiable aspects of the mentoring contract, and to provide professional skills training.
- Ongoing support and evaluation of the mentoring relationship—The leaders of each training program monitor the mentoring relationships and provide the support needed to accomplish the program goals. Through an early evaluation process, they determine if a mentoring relationship is not working. If there are problems with the relationship, the program directors collaborate with the mentors and trainees to solve problems and develop alternatives.
- Mentoring resources—Additional information about mentoring is available on the ICRE Web site: <http://www.icre.pitt.edu/mentoring>.

ICRE Collaborative Programs in Clinical and Translational Science

Collaboration within the University of Pittsburgh

Design, Biostatistics, and Clinical Research Ethics (DBE) Core of the Clinical and Translational Science Institute (CTSI)

Doris Rubio, PhD, Core Director

In collaboration with the DBE core, the ICRE encourages all of its trainees to work with experienced statisticians for their research. The DBE core offers education, consultation, and training in research design, biostatistics, and data management. With experts in these fields, the DBE core provides the trainees with a unique opportunity to improve the science of their research and become better researchers.

Education and Information Technology in Clinical and Translational Science

Doris Rubio, PhD, Director

Donna Minsterman, MEd, Instructional Designer

The ICRE is committed to expanding the availability of its educational offerings through advanced information technology. The CTSI has enabled the formation of the Web Teaching Laboratory, designed to help faculty transition their classroom-based clinical and science teaching to the Internet. The ICRE has accumulated a multitude of capabilities for distance education. The goals are to provide information technology for education and to enhance course offerings and distance education.

Office for Evaluation

Doris Rubio, PhD, Director

Sunday Clark, ScD, Assistant Director

Tina Petrusic-Cooper, MPA, Program Coordinator

The Office for Evaluation has highly experienced professionals who develop and implement evaluation plans for various training programs. The office also has a sophisticated tracking system to help the programs track the success of their trainees. The office serves as the home to the CTSI Evaluation Core.

Research on Research Education

Doris Rubio, PhD, Committee Chair

With support from the CTSI, the ICRE has spearheaded an initiative to carry out research on research education. The committee involved in this initiative is currently focusing on tracking and evaluating the career development and success of CTSI and ICRE trainees. Partnering with the Office for Evaluation, the committee has developed a rigorous tracking and follow-up mechanism to accomplish its objectives.

ICRE Collaborative Programs in Clinical and Translational Science

Collaboration with Carnegie Mellon University

Wishwa Kapoor, MD, MPH, Co-Director of the Collaborative Program and Director of the Institute for Clinical Research Education, University of Pittsburgh

Robert Kraut, PhD, Co-Director of the Collaborative Program and Herbert A. Simon Professor of Human-Computer Interaction, Carnegie Mellon University

Nicole Fowler, MHSA, Coordinator of the Collaborative Program

In collaboration with Carnegie Mellon University (CMU), the Clinical and Translational Science Institute and the ICRE provide a program for PhD students who are enrolled in CMU's School of Computer Science and have an interest in applying technology to the problems of health care.

The program consists of five courses (two or three of which can be used to fulfill CMU's requirements for the PhD) and a research project that is co-advised by a faculty member from the student's home department at CMU and a clinical researcher from the schools of the health sciences at the University of Pittsburgh. The program allows CMU students to gain access to the courses in clinical and translational science and receive mentorship in this field. If they wish, they can declare a concentration in health sciences within their PhD program.

ICRE Core Faculty

Robert Arnold, MD

Professor of Medicine
Division of General Internal Medicine
Chief, Section of Palliative Care and Medical Ethics
Director, Institute for Doctor-Patient Communication

David Barnard, PhD, JD

Professor of Medicine
Division of General Internal Medicine
Section of Palliative Care and Medical Ethics
Director, Institute to Enhance Palliative Care

Amber Barnato, MD, MPH, MS

Assistant Professor of Medicine and Health Policy and Management
Division of General Internal Medicine
Section of Decision Sciences and Clinical Systems Modeling
Center for Research on Health Care

James Bost, PhD

Associate Professor of Medicine
Division of General Internal Medicine
Center for Research on Health Care Data Center

Cindy Bryce, PhD

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Division of General Internal Medicine
Section of Decision Sciences and Clinical Systems Modeling
Associate Director, Degree-Granting Programs in Clinical Research and Medical Education, ICRE
Center for Research on Health Care

Joyce Chang, PhD

Associate Professor of Medicine and Biostatistics
Division of General Internal Medicine
Center for Research on Health Care

Megan Crowley-Matoka, PhD

Assistant Professor of Medicine and Anthropology
Division of General Internal Medicine
Center for Health Equity Research and Promotion,
VA Pittsburgh Healthcare System (VAPHS)

Megane Cunnane, MD, MSc

Assistant Professor of Medicine
Division of General Internal Medicine
Section of Women's Health
Director, Teaching Evidence-Based Medicine
Co-Director, Mentorship Program for Internal Medicine Residents

David Dang, PhD

Assistant Professor of Medicine and Biostatistics
Division of General Internal Medicine
Center for Research on Health Care Data Center

Brian Davis, PhD

Assistant Professor of Medicine
Division of Gastroenterology, Hepatology, and Nutrition

D. Michael Elnicki, MD

Professor of Medicine
Division of General Internal Medicine
Director of General Internal Medicine at UPMC Shadyside
Director, Combined Ambulatory Medicine Clerkship (CAMC)

Carol Feghali-Bostwick, PhD

Assistant Professor of Medicine
Division of Pulmonary, Allergy, and Critical Care Medicine
Simmons Center for Interstitial Lung Diseases

Michael Fine, MD, MSc

Professor of Medicine
Division of General Internal Medicine
Associate Director, Center for Research on Health Care
Director, Center for Health Equity Research and Promotion
VAPHS

Adam Gordon, MD, MPH

Assistant Professor of Medicine
Division of General Internal Medicine
Center for Health Equity Research and Promotion, VAPHS

Jennifer Grandis, MD

Professor of Otolaryngology and Pharmacology
Vice Chair for Research, Department of Otolaryngology
UPMC Endowed Chair in Head and Neck Cancer
Surgical Research
Program Leader, Head and Neck Cancer Program
University of Pittsburgh Cancer Institute

Naftali Kaminski, MD

Associate Professor of Medicine, Pathology, and Human Genetics
Director, Simmons Center for Interstitial Lung Diseases

Wishwa Kapoor, MD, MPH

Falk Professor of Medicine
Professor of Health Policy and Management and
Clinical and Translational Science
Chief, Division of General Internal Medicine
Vice Chair, Department of Medicine
Director, ICRE
Director, Center for Research on Health Care
Co-Director, RAND–University of Pittsburgh Health Institute
Co-Director, Clinical and Translational Science Institute

Kevin Kraemer, MD, MSc

Associate Professor of Medicine and Health Policy and Management
Division of General Internal Medicine
Center for Research on Health Care

ICRE Core Faculty

Marijane Krohn, PhD, MPH

Associate Professor of Obstetrics, Gynecology, and Reproductive Sciences and Epidemiology
Department of Obstetrics, Gynecology, and Reproductive Sciences

C. Kent Kwoh, MD, MPH

Professor of Medicine and Epidemiology
Department of Epidemiology
Chief of Rheumatology Section, VAPHS
Director of Clinical Research, Division of Rheumatology and Clinical Immunology

Joan Lakoski, PhD

Professor of Pharmacology
Associate Vice Chancellor for Academic Career Development
Associate Dean for Postdoctoral Education
University of Pittsburgh Health Sciences

Yan Lin, PhD

Assistant Professor of Medicine and Biostatistics
Division of General Internal Medicine
Center for Research on Health Care Data Center

Kathleen McTigue, MD, MS, MPH

Assistant Professor of Medicine and Epidemiology
Division of General Internal Medicine

Charity Moore, PhD, MS

Associate Professor of Medicine
Division of General Internal Medicine
Center for Research on Health Care Data Center

Natalia Morone, MD, MSc

Assistant Professor of Medicine
Division of General Internal Medicine
Center for Research on Health Care

Larissa Myaskovsky, PhD

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Division of General Internal Medicine
Center for Health Equity Research and Promotion, VAPHS

Smita Nayak, MD

Assistant Professor of Medicine
Division of General Internal Medicine
Section of Decision Sciences and Clinical Systems Modeling

Mark Roberts, MD, MPP

Professor of Medicine, Health Policy and Management, and Industrial Engineering
Division of General Internal Medicine
Chief, Section of Decision Sciences and Clinical Systems Modeling

Marjorie Romkes, PhD

Associate Professor of Medicine
Director, Pharmacogenomics Core Laboratory in the Center for Clinical Pharmacology
Director, General Clinical Research Center
Department of Medicine

Doris Rubio, PhD

Associate Professor of Medicine, Biostatistics, Nursing, and Clinical and Translational Science
Division of General Internal Medicine
Co-Director, ICRE
Director, Center for Research on Health Care Data Center
Co-Director, Clinical Research Scholars Program

Mary Ann Sevick, ScD, MS, RN

Associate Professor of Medicine
Division of General Internal Medicine
Center for Health Equity Research and Promotion
Geriatric Research Education and Clinical Center, VAPHS

Kenneth Smith, MD, MSc

Assistant Professor of Medicine
Division of General Internal Medicine
Section of Decision Sciences and Clinical Systems Modeling

Stephanie Studenski, MD, MPH

Professor of Medicine
Division of Geriatrics
Geriatric Research Education and Clinical Center, VAPHS

Galen Switzer, PhD, MA

Associate Professor of Medicine and Psychiatry
Division of General Internal Medicine
Associate Director, Center for Health Equity Research and Promotion
Co-Chief, Measurement Core, VAPHS

Hilary Tindle, MD, MPH

Assistant Professor of Medicine
Division of General Internal Medicine
Center for Research on Health Care

Jennifer Woodward, PhD

Research Associate Professor
Department of Surgery
Director of Research Administration, Thomas E. Starzl Transplantation Institute
Assistant Dean for Faculty Affairs, University of Pittsburgh School of Medicine

Susan Zickmund, PhD

Assistant Professor of Medicine and Psychiatry
Division of General Internal Medicine
Center for Health Equity Research and Promotion, VAPHS



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