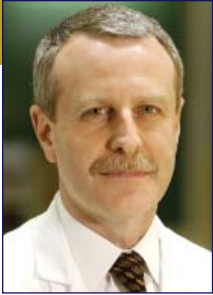


Division of Translational Research



Steven D.
Freedman, MD, PhD,
Chief

● Overview

The Division of Translational Research provides a unique “home” for faculty who play a major role in the infrastructure for clinical/translational investigation. The division is integrated with the Harvard-Thorndike General Clinical Research Center (GCRC) of Beth Israel Deaconess Medical Center. Recently, the GCRC was incorporated into the Harvard Clinical Translational Science Center (CTSC) funded through the NIH Clinical and Translational Science Award.

This five-year \$200 million grant from the National Institutes of Health which includes institutional support from Harvard University, Harvard Medical School, and the affiliated Academic Health Care Centers brings together the 11 Harvard schools and 18 Harvard teaching hospitals in an unprecedented collaboration to advance therapeutic discovery and patient care.

The Harvard CTSC is co-directed by Dr. Steven Freedman (BIDMC) and Dr. Lee Nadler (Dana Farber Cancer Institute), who have been appointed as Associate Dean and Dean for Clinical and Translational Research at Harvard Medical School, respectively. The goal of the Harvard CTSC is to enhance clinical and translational research by addressing critical gaps and barriers and providing the needed connections to facilitate discoveries from the bench to the bedside. This includes 10 Programs: education and training, regulatory support, biostatistics, biomedical informatics, novel clinical and translational methodologies, translational technologies, participant clinical interactive resources (replaces the GCRCs), diversity and health disparities research, community outreach research, and pilot grant funding.

● Educational Programs

The Division of Translational Research has led three educational initiatives. The Crown Life Endowed Lecture Series, a weekly educational program targeted to all clinical/translational investigators and support staff, offers a series of four rotating modules which include study design, biostatistics/bioinformatics, ethics, and scientific approaches. A second initiative is through the two Harvard Medical School Masters in Clinical Research programs (K30 and Clinical Investigator Training Program (CITP)). Dr. Freedman is the Associate Director of CITP and a member of the Committee on Mentoring and the Advisory Board for the K30 Scholars in Clinical Science Program. He also provides mentoring and infrastructure support. The third initiative is a Harvard-wide educational program in Responsible Conduct in Research. This program, developed by Dr. Freedman through his educational leadership role with the CTSA, brings NIH-funded pre- and post-doctoral trainees throughout Harvard as well as at the Boston College doctoral nursing program into compliance with NIH requirements.

With regard to Biostatistics and Epidemiology, Dr. Shiva Gautam is a senior tutor in Harvard Medical School's month-long Clinical Epidemiological course for first year medical students. Dr. Gautam is also engaged in teaching/training of medical students, residents, fellows, and new investigators in the area of research design and other critical biostatistical aspects of research.

● *Research Activities*

| <i>GCRC Funding • AY'07</i> | |
|-----------------------------|------------|
| Federal Direct | 674,515.07 |
| Federal Indirect | 29,926 |
| Other Direct | 7,898 |
| Other Indirect | 0 |

Research activities can be divided into two arenas and represent a broad range of science. The first focuses on providing the infrastructure and tools necessary for clinical/translational investigation. This includes biostatistical support and study design assistance to investigators (Shiva Gautam) and the development of assays and analysis of human-based samples through the GCRC Core Lab (Hsi-Chiang Lin). The second area focuses on providing strategic vision and initiatives both at a local BIDMC level and Harvard-wide. This is driven through Dr. Freedman's leadership role as Director of Clinical Research Affairs at BIDMC and Harvard-wide through the CTSC. In addition, Dr. Shiva Gautam is the newly appointed Associate Director of the Harvard CTSC Biostatistics Program at BIDMC which focuses on enhancing biostatistical support at BIDMC in coordination with the Harvard wide CTSC biostatistics program.

Dr. Anna Johansson focuses on social psychology, complex organizations and social science research methods. She brings her expertise to bear on a range of programs in the areas of medical education, simulation training, and team-based clinical quality improvement. Dr. Johansson works with both the Shapiro Institute for Education and Research, and Critical Care Quality to advance research in the areas of team training, critical thinking, and provider-patient communication. Her current research activities involve examining the utility of applying theory and methodology from basic social science research to understand team dynamics and performance in the medical ICU, in team-based simulation training, and to develop meaningful behavioral measures of team performance.

● *Awards and Honors*

Dr. Freedman was recently appointed the Associate Dean for Clinical and Translational Research at Harvard Medical School and Co-Director of the Harvard CTSC. Dr. Shiva Gautam is the newly appointed Associate Director of the Harvard CTSC Biostatistics Program at BIDMC.

● *Selected Publications*

Bishop MD, Freedman SD, Zielenski J, Ahmed N, Dupuis A, Sheelagh M, Ellis L, Shea J, Hopper I, Corey M, Kortan P, Haber G, Ross C, Tzountzouris J, Ray PN, Tsui L-C, Durie PR. The cystic fibrosis transmembrane conductance regulator gene and ion channel function in patients with idiopathic pancreatitis. *Hum Genet* 2005; 118:372-81.



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● From left to right, Steven D. Freedman MD, PhD, Shiva Gautam, PhD, and Anna Johansson, PhD, vet different models to enhance collaborative clinical/translational research at BIDMC.

Pall H, Zielenski J, Jonas MM, Dasilva DA, Potvin KM, Yuan X-Y, Huang Q, Freedman SD. Primary sclerosing cholangitis in childhood is associated with abnormalities in cystic fibrosis-mediated chloride channel function. *J Pediatr* 2007; 151:255-9.

Fregni F, Freedman SD, Pascual-Leone A. Recent advances in the treatment of chronic pain with noninvasive brain stimulation techniques. *Lancet Neurol* 2007; 6:188-191.

Andersson C, Al-Turkmani MR, Savaille JE, Alturkmani R, Katrangi W, Cluette-Brown JE, Zaman MM, Laposata M, Freedman SD. Cell culture models demonstrate that CFTR dysfunction leads to defective fatty acid composition and metabolism. *J Lipid Res* 2008; 49:1692-700.

Gautam S, Ashikaga T. Assessing the effect of an open-ended category on the trend in 2xK ordered tables. *J Data Sci* 2003; 1:167-183.

Zhou P, Gautam S, Recht A. Factors affecting outcome for young women with early stage invasive breast cancer treated with breast-conserving therapy. *Breast Canc Res Treat* 2007; 101:51-5.

Rooks DS, Gautam S, Romeling M, Cross ML, Stratigakis D, Evans B, Goldenberg DL, Iversen MD, Katz JN. Group exercise, education, and combination self-management in women with fibromyalgia. A randomized trial. *Ann Intern Med* 2007; 167(20):2192-200.

Gallagher DC, Parikh SM, Balanov K, Miller A, Gautam S, Talmor D, Sukhatme VP. Circulating Angiotensin II correlates with mortality in a surgical population with ALI/ARDS. *Shock* 2008; 29:656-661.

Johansson AC, Sell J. Sources of legitimation and their effects on group routines: A theoretical analysis. In: Johnson C, editor. *Research in Sociology of Organizations*. Oxford: Elsevier Science, Ltd. 2004; 22:89-116.

● Faculty

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| Steven D. Freedman, MD, PhD | Anna Johansson, PhD |
| Shiva Gautam, PhD | Hsi-Chiang Lin, PhD |