**History**

In 2010, the Medical College of Wisconsin became one of the NIH funded CTSA institutions along with seven academic and healthcare center partners. This clinical and translational science award serves as the backbone of the [**Clinical and Translational Science Institute**](https://ctsi.mcw.edu/), which offers two Masters degrees and two PhD degrees in Clinical and Translation Sciences, in addition to a robust Mentored Career Development Award Program and Clinical Research Scholars Program. These are a few examples of a large number of training and educational opportunities provided by CTSI. MCW currently enrolls 810 medical students, more than 450 graduate students.

The Graduate School of Biomedical Sciences has a proud history of educating future scholars. Alumni from MCW are located around the world in areas such as academic research, industry and the federal government. The Graduate School is home to six basic science departments:

[**Biochemistry**](http://www.mcw.edu/biochemistry.htm)**:** The research interests of our faculty span a broad spectrum of biochemistry ranging from cell and developmental biology to structural biology. The unifying theme defining us is an interest in biological processes at the molecular level. The department is home to state of the art facilities and instruments for X-ray crystallography, NMR spectroscopy, mass spectrometry, fluorescence microscopy. A collaborative and collegial atmosphere makes the Biochemistry Department an ideal place to do science and train for a wide variety of biomedical science careers.

[**Biophysics**](http://www.mcw.edu/biophysics.htm)**:** The research interests of our faculty are broadly based, with strong programs in: Free radicals and nitric oxide, Spin-labeling and protein structure, Paramagnetic metal ions: A structural determination of active sites, EPR instrumentation, Functional MRI (fMRI), Molecular imaging, Research on drugs of abuse, and Statistical methods in fMRI.

[**Cell Biology, Neurobiology & Anatomy**](http://www.mcw.edu/cellbiology.htm)**:** Current research in the department is strong in two major areas: developmental biology and neurobiology. In developmental biology there is a focus on growth, regeneration and transcription mediated pathways in such systems as neural crest differentiation, heart development, liver development and in the area of muscle atrophy and plasticity. In neurobiology there is strength in vision science with special focus on photoreceptor cell biology, color vision, plasticity in the visual cortex, and functional MRI of the visual system.

[**Microbiology & Molecular Genetics**](http://www.mcw.edu/microbiology.htm)**:** The research interests of the faculty include molecular biology of bacterial pathogenesis, molecular genetics of human viruses, molecular mechanisms of signaling and gene expression, cancer research – viral oncogenesis, protein kinases and cell proliferation, chemokines and metastasis, cellular and molecular analysis of the immune response, and cell- and animal-based model systems of infection and immunity.

[**Pharmacology & Toxicology**](http://www.mcw.edu/pharmacology.htm)**:** The research interests of our faculty are broadly based in cardiovascular pharmacology, neuropharmacology, cancer pharmacology, toxicology and molecular pharmacology. The research programs in the Department of Pharmacology and Toxicology are also multidisciplinary in nature and have strong associations with researchers of other basic science and clinical departments.

[**Physiology**](http://www.phys.mcw.edu/index.htm)**:** The research interests of our faculty are broadly based, with strong programs in cardiovascular, renal and respiratory physiology; physiological genomics; proteomics; bioinformatics; and computational biology. The research programs in this department are multidisciplinary in nature and our program has strong associations with researchers of other basic science and clinical departments. There is a long history of quality graduate education. The graduates are successful scientists in universities, pharmaceutical companies and government. The size of the program encourages the development of close working relationships between students and faculty. In addition, every effort is made to optimize and tailor our training programs to meet individual student needs in preparation for successful careers.

In FY 2012, faculty received more than $166 million in external support for research, teaching, training and related purposes, of which more than $152 million was for research. This total includes highly competitive research and training awards from the National Institutes of Health (NIH).

In the federal government’s FY 2012, the Medical College received approximately $95.5 million in NIH funding and ranked 42nd among the nation’s 136 medical schools for NIH research funding.

**Growth and Expansion**

Over the past five years, the Milwaukee Regional Medical Center (which encompasses the Medical College of Wisconsin and affiliated hospitals, clinics, and research institutes) has been one of the fastest growing medical centers in the country. These campus expansions include:

* The recently completed Translational and Biomedical Research Center and [**Children's Research Institute**](http://www.chw.org/display/PPF/DocID/30477/router.asp), built as a collaborative effort between the Medical College of Wisconsin and Children's Hospital of Wisconsin. This building is primarily dedicated to cancer, cardiovascular disease, genetics, and neuroscience research. This new facility provides approximately 200,000 square feet of additional research space and 50,000 square feet of vivarium space for housing mice and rats.
* The [**Blood Research Institute**](http://www.bcw.edu/bcw/index.htm), recently expanded by 35,000 square feet to accommodate the organization's rapidly growing research programs in transfusion medicine, immunobiology, hematopoiesis/cancer biology, thrombosis, hemostasis, and vascular biology.
* A 5,400 square foot Biophysics EPR/MR Facility which houses two new MRI imaging systems and an EPR spectrometer.
* The recently completed Sargeant Health Center, which includes an ambulatory surgical facility as well as internal medicine clinics.
* [**Children's Hospital of Wisconsin**](http://www.chw.org/display/PPF/DocID/12082/router.asp), which was recently expanded through construction of a 240,000 square foot, eight level office building and a 1,600-space parking structure. Construction of a 12-story, 425,000 square foot expansion of the main hospital facility is now underway, with completion anticipated in spring of 2009. This project will provide expanded bed capacity, additional intensive care units, and specialized clinics.
* The new Froedtert Cancer Pavilion, which provides 280,000 square feet on four floors to support the multidisciplinary delivery of treatment for all types of cancer. The Pavilion includes clinics, chemotherapy, radiation therapy, clinical research, and support services such as dietary, social services, and an education center.