THE ORGANIZATIONS

Wayne State University School of Medicine (WSU School of Medicine)

Founded in 1869 as the Detroit Medical College, the WSU School of Medicine was the first established school of what would eventually become Wayne State University. As Detroit’s only medical school, the mission of the WSU School of Medicine is to raise the health status of the community and improve the delivery of health care to the surrounding area through scientific advancement, clinical service and the training of practicing physicians in the region.

The WSU School of Medicine is composed of over 750 clinical and nearly 200 basic science faculty members. At WSU, more than 1200 medical students, 900 physicians-in-training and 400 basic science graduate students make up the largest medical school on one campus on the continent.

In partnership with the several health systems, the WSU School of Medicine has emerged today as one of the nation’s leading academic medical centers, hosting one of the largest graduate medical education programs in the United States with some 900 residents and fellows.

Long regarded as a premier site for clinical training, the WSU School of Medicine has also established itself as a major center for research. Research initiatives by medical school faculty have risen to a base of over $137 million. The School has six dedicated research laboratory buildings located on the medical campus. Although the school’s faculty are comprised of experts in almost all medical fields, the institution houses centers of excellence in women’s and children’s health, cancer, neuroscience and population studies.

The School’s mission of providing clinical care is carried out by the Wayne State University Physician Group, which is comprised of over 700 clinical faculty members of the School of Medicine. The group, which includes physicians in virtually every medical specialty as well as general medicine, is dedicated to providing first-rate medical care during approximately one million patient visits annually. As an academic faculty practice, the group maintains its ability to provide leading-edge care by conducting important clinical research and educating the next generation of doctors.

Wayne State University houses the Perinatology Research Branch of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). This Branch was created by an act of Congress to address the problems of infant mortality with a special focus on prematurity. The Maternal-Fetal Medicine Fellowship is a combined WSU/NIH Fellowship, and places strong emphasis on fetal imaging, clinical and translational research, placental pathology and mechanisms of disease in perinatal medicine.

The WSU School of Medicine partners with the Barbara Ann Karmanos Cancer Institute, one of 40 National Cancer Institute-designated comprehensive cancer centers in the United States. Other NIH-funded extramural research and service networks held by the School include the Metropolitan Detroit-Area Surveillance, Epidemiology and End Results (SEER) Cancer Registry (one of 18 NCI population-based registries); the Neonatal Research Network Center (one of 17); the Pediatric Critical Care Network Center (one of 7); the NIH Neurologic Emergencies Treatment Trials Network (NETT, one of 8); the NICHD Reproductive Medicine Network (1 of 7); and the Pediatric Pharmacology Research Unit (one of 13). Several academic departments rank in the top quarter in NIH research funding, namely the Department of Obstetrics and Gynecology, which has been ranked in the top five for many years.
In addition to NIH-funded projects, the School also supports a newly established Center for Spinal Cord Injury Recovery at the Rehabilitation Institute of Michigan. Furthermore, the School of Medicine has successfully competed to obtain funding from the Michigan Technology Tri-Corridor program to fund several programs, including the Center of Excellence on Environment and Fertility.

**Multidisciplinary Biomedical Research Building**

Plans for a new 196,500 square foot Multidisciplinary Biomedical Research building at WSU are underway. This will be a $90 million project that will serve as the core of the university's translational research programs focused on enhancing its mission to accelerate delivery of improved health care outcomes. This project is to receive $30 million in support from the State of Michigan and is the first of two phases planned with the Henry Ford Health System.

This facility will house Systems Biology research and will consolidate the university's bioinformatics capabilities, including expertise using one or a combination of approaches in developmental biology, epigenetics, stem cell biology, systems biology, genetics and animal models.

Educating students and boosting research and technology remains one of the State’s most important catalysts for economic growth. Wayne State University continues to be a driver of economic growth and innovation, providing the talented workforce the State of Michigan needs for the jobs of tomorrow, not to mention the technical foundation that gives rise to new start-up companies each year.

**The Perinatology Research Branch (PRB)**

The PRB is part of the Intramural Division of the National Institute of Child Health and Human Development (NICHD). The institute is within the NIH and the U.S. Department of Health and Human Services (DHHS).

Research in perinatal medicine, under the leadership of Branch Chief, Dr. Roberto Romero, was conducted in several locations after creation of the Branch. On September 30, 2002, after a nation-wide competition, the contract to establish The Perinatology Research Branch was awarded to Wayne State University and it was recently renewed in 2013 for an additional 10 years. Detroit was chosen as the site of research in part because of its high infant mortality rate relative to other areas of the nation. This partnership, which includes Wayne State University, the Detroit Medical Center and the National Institutes of Health, forged the foundation for the establishment of premier research collaboration.

In 2009, the WSU Board of Governors committed approximately $10 million to create the WSU Perinatal Initiative (“the Perinatal Initiative”) to foster research in perinatal medicine.

Together, the researchers in the PRB create a cadre of clinician/scientists, training programs and biomedical researchers dedicated to the discovery of the acute causes of infant mortality and to devising new ways to diagnose and treat chronic disease processes. These scientists collectively work to uncover urgently needed solutions to unanswered questions associated with preterm labor, preeclampsia, small for gestational age fetuses, fetal death and other adverse pregnancy outcomes.

**The C.S. Mott Center for Human Growth and Development**

The C.S. Mott Center for Human Growth and Development is the primary research facility for the Department of Obstetrics and Gynecology located on the medical campus of Wayne State University School of Medicine. After 35 years of successful basic and applied research in the reproductive sciences, the 35,000
sq. ft. of laboratory and research space housed within the 78,879 sq. ft. physical plant of the Mott Center was renovated to accommodate recent advances in research technology and methodologies. The renovation, valued at approximately $20 Million, including modernization of laboratories, with a complete state of the art Genomics and Bioinformatics facility featuring the latest in massive parallel sequencing and array technologies, the Vivarium and general upgrade to the building ensures that the Mott Center remains at the forefront of human development research. The renovation was funded with university, state and federal funds in recognition of the Mott Center's proven track record. All research in the Mott Center focuses one or more aspects of human growth and development, with overarching themes of reproductive biology and perinatal health. Consistent with the Mott Center Charter, the research portfolio encompasses life-long reproductive health – from sperm, oocyte, and embryos, through birth to menopause. Major funding for the Mott Center's research endeavors has been obtained consistently from several institutes and initiatives within the NIH and commercial sources.

This center is also home to the leading-edge, emerging Systems Biology program in reproductive health that is directed towards understanding Fetal Onset of Adult Disease. The Systems Biology approach holds great promise in translational personalized medicine. It was initiated to help researchers explore pre-term labor and develop strategies to intercede in other perinatal and reproduction health problems.

DEPARTMENT OF OBSTETRICS & GYNECOLOGY

The Wayne State University Department of Obstetrics and Gynecology has been an internationally recognized academic center in women’s health and child development for the past 50 years. This department has made numerous pioneering contributions to the field of Obstetrics and Gynecology, such as fetal surgery, molecular testing for male factor effects on fertility; was the leading center in the study of the use of vaginal progesterone for the prevention of preterm birth in women with a sonographic short cervix; and together with the Division of Neonatal-Perinatal Medicine, antenatal phenobarbital to prevent Neonatal Intracranial Hemorrhage and whole body hypothermia to reduce death and disability following acute Perinatal Asphyxia.

WSU Department of Obstetrics and Gynecology is consistently ranked within the top ten Obstetrics and Gynecology departments for research funding in the country (often within the top five), averaging $17-20 million/year from federal, foundational, and pharmaceutical funding. The departmental research portfolio encompasses life-long reproductive health, from sperm, oocyte, and embryos, through birth, to menopause. Genomic systems in sperm, molecular mechanisms of embryo implantations, and human placental physiology represent some current areas of research concentration. This funding has not only been with investigator initiated grants within the NIH including: NICHD, NIA, NIAAA, NIDA, NHLBI, but also the Reproductive Medicine Network, Women’s Reproductive Health Research Training grant, Gynecologic Oncology Group (GOG) trials, National Children’s Study, AIDS in Pregnancy, National Cancer Institute Infertility Research Women’s Health Initiative and previously, the Maternal-Fetal Medicine Units Network. The Department works closely with the Department of Pediatrics and specifically with the Neonatology Division who has been funded for nearly 30 years with the NICHD Neonatal Research Network and the Department of Psychology from the College of Science (a nationally prominent department) and the Merrill Palmer Skillman Institute, a leader in child development throughout the 20th and into the 21st century. Research is conducted within the freestanding Mott Center research building (described above), as well as the Hutzel Women’s Hospital and the Hudson-Webber Cancer Research Center.

The Department consists of 34 faculty members, composed of 30 clinical faculty, 14 doctoral level basic research faculty, and 21 midwives. This department is divided into five divisions (Maternal-Fetal Medicine, General Obstetrics and Gynecology, Gynecologic Oncology, Reproductive Endocrinology and Infertility, and Nurse-Midwifery) with fellowships in Maternal-Fetal Medicine (7), combined Maternal-Fetal Medicine/Genetics (2), Reproductive Endocrinology and Infertility (3) and Gynecologic Oncology (4). The Department, in conjunction with the Department of Physiology, also sponsors a PhD degree granting program in Physiology with a concentration in Reproductive Sciences.
The Obstetrics and Gynecology residency program is an accredited four-year program sponsored by the Detroit Medical Center and consists of 10 residents per year (total 40 residents), making this residency program one of the largest in the country. Over the past year, the Department has implemented one of the largest, leading edge surgical simulation training programs for Obstetrics and Gynecology residents in the country (1/2 day per week over 5 months), in addition to numerous other educational activities within the 80-hour/week duty hour restriction.

The educational and research efforts of the Department are supported by 8 endowed chairs, and most recently, has received support from the University’s Perinatal Initiative to fund additional tenure lines within the department.

Obstetrics and Gynecology is divided into five distinct yet interrelated divisions: General Obstetrics and Gynecology, Gynecologic Oncology, Maternal-Fetal Medicine, Reproductive Endocrinology/Infertility, and Nurse Midwifery.

In terms of clinical services, OB/GYN has multiple clinical sites. These include the main downtown facility on Woodward Avenue, Hutzel Women's Hospital, the Barbara Ann Karmanos Cancer Institute and a clinical practice site in Oakland County where gynecology, gynecologic ultrasound, maternal fetal medicine, and reproductive endocrinology and infertility clinical programs exist. This blend of urban and suburban locations enables physicians to serve the metropolitan community. It also ensures that students are able to experience the full spectrum of cases from high-risk obstetrics to reproductive endocrinology. Additionally, the variety of case types and patient demographics provide an unsurpassed research population.

The Division of Neonatal-Perinatal Medicine collaborates closely with the Division of Maternal-Fetal Medicine and Obstetrics as evidenced by the formation of a joint Clinical Trials Unit and numerous peer-reviewed funded initiatives. The Division has a 32 bed NICU at the DMC Children's Hospital of Michigan and a 55 bed NICU/Special Care Nursery at Hutzel Women's Hospital along with rooming-in facilities for 100 healthy neonates.

The Graduate Program in the Reproductive Sciences is an integrated Ph.D. program incorporating the teaching, research and physical resources of two departments, Obstetrics & Gynecology and Physiology. This Graduate Program offers interdisciplinary doctoral training in the Reproductive Sciences with the degree earned through the Department of Physiology. A major benefit to students is the program's integration into the Department of Obstetrics & Gynecology, allowing them the unique opportunity to obtain a Ph.D. degree in a clinical environment. This close association of basic science with clinical medicine affords our students a better exposure to and comprehension of translational research opportunities directed toward ultimately benefiting reproductive medicine and health.

The curriculum represents an academic focus directed toward graduate education and research training in reproduction and development including genomics, proteomics, molecular biology and bioinformatics. Dissertation research is typically performed in basic science laboratories located at the C.S. Mott Center for Human Growth and Development under the mentorship of Ob/Gyn graduate teaching faculty.

THE TRAINING AND CLINICAL SETTING

Ten hospitals provide an outstanding range of clinical clerkship experiences in fulfillment of the learning objectives of the clerkships; 15 hospital training sites offer sub internships in Year 4. Together, these inpatient training sites have inpatient beds of 5,484; annual admissions of approximately 300,115; annual emergency room visits of 838,887; and annual outpatient visits of 4,600,349. A patient population that is representative of the heterogeneous demographics of our community is treated at these facilities. These facilities and the patients provide an outstanding clinical educational experience.
The WSU Physician Group practice at 5 primary hospital systems; the Detroit Medical Center, the Barbara Ann Karmanos Cancer Center, the Veterans Administration Hospital, with which the School of Medicine shares its downtown campus, and Oakwood Healthcare, Inc. and Crittenton Hospital Medical Center.

**Detroit Medical Center**

The Detroit Medical Center includes a 110-acre campus located in Midtown Detroit as well as three additional hospital sites in Southeast Michigan. Its hospitals include Children’s Hospital of Michigan; Detroit Receiving Hospital and University Health Center; Harper University Hospital; Huron Valley-Sinai Hospital; Hutzel Women’s Hospital; the Kresge Eye Institute; Surgery Hospital; Rehabilitation Institute of Michigan; and Sinai-Grace Hospital. The system accounts for approximately 15 percent of the total inpatient days of the major hospitals in Southeast Michigan and approximately 22 percent of the total inpatient days within Wayne County. The WSU faculty physicians and its training programs provide approximately 80 percent of all patient care provided through DMC facilities.

**Karmanos Cancer Institute (KCI) and Center (KCI)**

The Barbara Ann Karmanos Cancer Institute (KCI) is one of 40 National Cancer Institute designated comprehensive cancer centers in the United States. It is the only hospital in Michigan solely dedicated to fighting cancer and is also one of only eleven free standing cancer centers in the country. Research is conducted across five major core grant programs (Breast Biology, Proteases and Cancer, Molecular Oncology and Genetics, Developmental Therapeutics and Population Sciences) and is supported by nearly $40 million in annual peer reviewed direct funding. The clinical side of KCI is known as the Karmanos Cancer Center and cares for nearly 7,000 newly-diagnosed cancer patients annually on a budget of $216 million, conducting more than 700 cancer-specific scientific investigation programs and clinical trials. All care is provided via fourteen multidisciplinary teams where physicians from all specialties collaborate to provide exemplary patient care. Karmanos was recently ranked as southeastern Michigan’s most preferred hospital for cancer care.

The Gynecologic Oncology program at KCI treats 650 new gynecologic cancer patients per year. The Gynecologic Oncology team has an approved gynecologic oncology fellowship training program by the American Board of Obstetrics and Gynecology.

**Oakwood Healthcare, Inc**

Oakwood Healthcare, Inc. is a comprehensive regional network of hospitals, healthcare centers, skilled nursing centers and related healthcare facilities. Oakwood has a medical staff of more than 1,200 doctors, and provides service to more than 1.2 million people in 35 southeastern Michigan communities.

**Crittenton Hospital Medical Center**

Crittenton Hospital Medical Center provides health care service to the communities of Oakland, Macomb and Lapeer counties with its team of highly skilled specialists and primary care physicians.

**Veterans Administration Hospital**

The John D. Dingell Veterans Administration Hospital is a 106-bed full service medical center that provides primary, secondary and tertiary care, with 45 research laboratories, and is located adjacent to the DMC and WSU School of Medicine. The VA hospital serves approximately 464,000 veterans in Wayne, Oakland, Macomb and St. Clair counties. It supports 74 resident FTEs and has an affiliation agreement with the School in support of patient care, teaching, and research to share delivery services, facilities, equipment, and other resources.
METROPOLITAN DETROIT

Located in the very center of the Great Lakes Region, Metropolitan Detroit is characterized as an international community. It has a population of approximately 4.7 million people, ranking the region among the nation’s leading metro centers. The Metropolitan Detroit area, which sits along the Detroit River and Lake St. Clair, serves as a gateway to Canada. Detroit boasts the largest foreign trade zone in the nation in geographic terms as well as sheer volume of goods. A steadily growing economy promises the region a bright economic forecast. Detroit’s impressive skyline is testimony to the area’s enduring economic strength as one of the nation’s leading centers for manufacturing, trade and commerce.

Distinguished and steeped in rich 300+ year history, Detroit offers multiple museums, art galleries and historical sites. A diverse medley of performing arts – symphony, opera, dance and theatre – maintain permanent companies in Downtown Detroit with some offering specialized arts programs for talented children.

Sports fans find action in every corner of Southeastern Michigan, from professional teams to the exciting Big Ten collegiate competition. Teams like the NBA Detroit Pistons and Women’s WNBA Shock basketball, Lions football, Red Wings hockey and Tigers baseball combined with horse racing and hydroplane races on the Detroit River bring sports enthusiasts from everywhere.

All four seasons are distinguished by vivid colors and bring spectacular change in the landscape. Michigan’s state park system has nearly 100 national parks and recreational areas covering over 142 miles of Great Lakes frontage and 462 miles of inland lakes, rivers and streams. From the rolling terrain of Southern Michigan to the breathtaking scenery of Northern Michigan, the state is perhaps one of the most underrated golf destinations in the country. Whether it’s horseback riding, hiking, skiing, sailing, fishing, or golf, the Detroit region provides recreational opportunities for children and adults.