Vision
To improve the lives of children and their families as a global leader in multidisciplinary, translational research.

Mission
Through discovery, we seek to prevent and cure disease while improving the health outcomes of children and their families.
Dear colleagues and friends,

When looking back at the accomplishments of 2011, Children’s Research Institute experienced another year of incredible growth. Our team of talented investigators, research trainees and technicians continues to forge ahead to produce innovative research. Additionally, we’ve enhanced existing relationships and developed new partnerships with local and national institutions to collaborate on progressive research. Throughout our growth, we’ve stayed true to our mission of striving to prevent and cure diseases while improving the health outcomes of children and their families.

The pages of this annual report showcase a sampling of the innovative research being conducted. Every day, we are making strides toward possible life-saving discoveries and cures for diseases that affect children. We are proud of our 2011 accomplishments and look forward to future discoveries and advancements.

- There are more than 1,000 active clinical trials being conducted at Children’s Research Institute, an increase of 42 percent in five years.

- Resources are provided to hundreds of investigators, their research trainees and technicians to improve the lives of children through translational bench-to-bedside research.

- In eight years, the department of Pediatrics at the Medical College of Wisconsin, a partner with Children’s Research Institute, has risen in National Institutes of Health funding ranking from No. 37 to No. 21.
GETTING to know Children’s Research Institute

Children’s Research Institute is the only entity of its kind in the region advancing pediatric medical research for children in Wisconsin and beyond. Focusing on translational research, we are taking discoveries from the laboratory and converting them to new therapies at patients’ bedsides. Our researchers collaborate with experts and organizations regionally and nationally to provide the most advanced care available and enhance the health care possibilities for children everywhere.

Children’s Hospital of Wisconsin annually invests significant funds in translational research to help improve the lives of children and their families. Advancements in pediatric research not only improve lives, but they also reduce overall health care costs. By treating, preventing and eliminating childhood diseases, we can reduce the costs of care impacting families and other payors.

Children’s Research Institute and its research partners utilize 10 cores that provide an infrastructure to support study execution.

<table>
<thead>
<tr>
<th>CORES</th>
<th>Description</th>
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<tbody>
<tr>
<td>Pediatric Translational Research Unit</td>
<td>Provides support for investigators and staff including study coordination, research nurses, assessments, specimen collection and storage.</td>
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<tr>
<td>Quantitative Health Sciences</td>
<td>Provides statistical support for study design, data management and analysis for research studies.</td>
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<tr>
<td>Grants Development Office</td>
<td>Supplies resources to identify and apply for external funding to support research, educational activities and programs.</td>
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<tr>
<td>Imaging</td>
<td>Provides investigators fee-based assisted and unassisted access to a variety of state-of-the-art microscopic imaging systems.</td>
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<tr>
<td>Histology</td>
<td>Offers a range of high-quality histological and immunohistochemical services available to all investigators and collaborating institutions.</td>
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<tr>
<td>Nucleic Acid Extraction</td>
<td>Provides investigators with DNA extraction from tissue, blood and saliva samples.</td>
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<tr>
<td>Sequencing</td>
<td>Sequences large regions of genomic DNA to be used in research studies.</td>
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<tr>
<td>Flow Cytometry</td>
<td>Provides access to instrumentation for flow cytometric analysis and fluorescence-activated cell sorting of single cell suspensions.</td>
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<tr>
<td>Drug Discovery</td>
<td>Identifies drug treatments that will alleviate pediatric diseases.</td>
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<tr>
<td>Zebrafish</td>
<td>Provides zebrafish, an important tool for clinical research, and equipment for use in the study of developmental biology.</td>
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ACTIVE clinical studies

Year        2003    2004    2005    2006    2007    2008    2009    2010    2011
[577 629 726 741 826 923 943 1,020 1,053]

TOTAL extramural funding

Year               2008                  2009                 2010                           2011
[$27,729,051 $29,995,578 $35,644,029* $30,340,611]

MANIPULATION of immune responses provides further understanding of childhood cancer

Research being conducted by Bryon Johnson, PhD, professor of Pediatrics (Hematology/Oncology) at the Medical College of Wisconsin and researcher at Children’s Research Institute; and Jill Gershan, PhD, assistant professor of Pediatrics (Hematology/Oncology) at the Medical College and researcher at Children’s Research Institute, is investigating immune responses to cancer cells. Specifically, Drs. Johnson and Gershan are studying neuroblastoma, a form of childhood cancer that appears as a tumor mass, and multiple myeloma, an adult cancer that forms in the bone marrow. These two cancers are very different, yet both are difficult to detect by the immune system. Their research is focused on interfering with the “tricks” these cancers use to avoid detection by the immune system.

Neuroblastoma
To further understand neuroblastoma, researchers are interfering with regulatory T-lymphocytes (T cells) that inhibit the cancer immune response. Studies are showing better immune responses to the cancer cells and cancer-free survival in preclinical studies. Researchers hypothesize successful immune therapies for neuroblastoma will require targeting one or more of these immune avoidance mechanisms.

Multiple myeloma
Researchers understand that multiple myeloma, like neuroblastoma, utilizes T cells to avoid destruction. However, multiple myeloma uses a protein that interacts with another protein found on T cells. This interaction prevents the T cells from attacking the myeloma. Drs. Johnson and Gershan have conducted research showing that blocking this protein interaction dramatically improves cancer-free survival in animals when combined with other immune therapies.

While multiple myeloma is an adult disease, identifying the protein and how it interacts with the protein on the T cells appears to be an important finding for many other cancers, including those that can occur in children such as leukemia, Hodgkin’s and non-Hodgkin’s lymphomas, brain tumors and melanoma. Drs. Johnson and Gershan believe the knowledge learned from their research in multiple myeloma also will be relevant to these and other cancers that affect children.
PHASE 1 distinction raises the bar in pediatric cancer treatment and research

The MACC Fund Center for Cancer and Blood Disorders at Children’s Hospital of Wisconsin was selected as a Phase 1 Center by Children’s Oncology Group. The designation is an elite award given to only 21 centers in the world. This outpatient clinic is the only site in Wisconsin offering early-phase clinical research to children suffering from cancer.

This designation is a great benefit to the children being treated at Children’s Hospital and their families. Patients who no longer benefit from traditional cancer treatments now have the opportunity to participate in a clinical study with their trusted health care team close to home.

“We want to offer the best treatments to our patients, and being able to offer these cutting-edge therapies puts us at the forefront of treating childhood cancer,” said Michael E. Kelly, MD, PhD, program director of Cancer at Children’s Hospital, associate professor of Pediatrics (Hematology/Oncology) at the Medical College of Wisconsin and researcher at Children’s Research Institute.

Dr. Kelly’s team of physicians, nurse practitioners and researchers were the driving force in achieving this distinction. The continuous financial support of cancer research by the MACC Fund is a key resource that helps in the advancement of clinical research.

Four-year-old Tisha walks with Dr. Kelly to her bell-ringing ceremony. When patients finish treatment, they ring a bell to signify their move into survivorship.
IMMUNE regulation linked as new therapy for autoimmune conditions

More than 500,000 children in the U.S. are affected by Crohn’s disease, diabetes, arthritis and other conditions involving misdirected immune responses. Many of these patients cannot be stabilized with the current therapeutic options. Children’s Research Institute researchers Stephen Gauld, PhD, assistant professor of Pediatrics (Allergy/Immunology) at the Medical College of Wisconsin; James Verbsky, MD, PhD, rheumatologist at Children’s Hospital of Wisconsin and associate professor of Pediatrics (Rheumatology) at the Medical College; and Calvin Williams, MD, PhD, rheumatologist at Children’s Hospital and professor and chief of Pediatrics (Rheumatology) at the Medical College, are investigating new forms of therapy for these debilitating autoimmune conditions.

Their recently published studies in *The Journal of Immunology, Journal of Clinical Immunology* and *Immunity* focused on a type of white blood cell called a regulatory T cell and the ways these essential suppressive cells maintain immune balance. The goal of their research is to find a durable cure for autoimmunity by enhancing immune regulation.

Cross-section of an entire mouse lymph node after immunization. The blue is the T cell zone and the red is the B cell zone. Green dots are regulatory T cells. The lines roughly mark the T and B cell zones, as well as the T/B border. Regulatory T cells expand in the lymph node to control the immune response.
WISCONSIN first to implement newborn SCID screening

Jack Routes, MD, medical director of Allergy/Clinical Immunology at Children’s Hospital of Wisconsin, professor and chief of Pediatrics (Allergy and Immunology) at the Medical College of Wisconsin and researcher at Children’s Research Institute; and James Verbsky, MD, PhD, rheumatologist at Children’s Hospital, associate professor of Pediatrics (Rheumatology) at the Medical College and researcher at Children’s Research Institute, have pioneered large-scale screening of newborn infants for Severe Combined Immunodeficiency (SCID). This life-threatening disease is curable by bone marrow transplantation if detected early.

In 2008, Wisconsin started a pilot program to screen all newborns for SCID. This program was made possible through funding from the Jeffrey Modell Foundation and Children’s Hospital. Over the past four years, nearly 270,000 infants in the state have been screened, resulting in four cases of SCID and four cases of severe immune deficiency detected, all needing urgent treatment.

Newborn screening for SCID has been adopted by several additional states in the U.S., with more than 50 percent of infants born in the U.S. currently being screened for this disease. Europe and the Middle East are considering a similar newborn screening program for SCID.
LIFE-SAVING bridge to transplant device receives FDA approval

In 2007, Children’s Hospital of Wisconsin was selected as one of 15 sites around the country to participate in the Berlin Heart EXCOR® pediatric ventricular assist device (VAD) study. The three-year study was the first clinical trial conducted to investigate a VAD in the pediatric population. In late 2011, the FDA’s panel of 16 experts voted unanimously to approve humanitarian use of the device.

James S. Tweddell, MD, medical director of Cardiothoracic Surgery at Children’s Hospital of Wisconsin, professor and chief of Cardiothoracic Surgery and Pediatrics at the Medical College of Wisconsin and researcher at Children’s Research Institute, was selected as one of 13 physician experts to serve on an advisory panel to address inquiries from the FDA about the device.

Colin benefitted from the Berlin Heart while waiting for his heart transplant. Now, several months later, he is an active 4-year-old and loves playing outside.

The Berlin Heart is a mechanical cardiac support system for critically ill pediatric patients suffering from severe heart failure. This is the only device designed and approved to support pediatric patients of all age groups, from newborns to adolescents, and is intended to bridge patients awaiting heart transplantation, from days up to several months, until a donor heart becomes available.
HUMAN stem cells provide patient-specific analysis of pediatric heart failure

What makes stem cells unique is their ability to produce any type of human tissue. Initial research to create stem cells focused on utilizing embryonic cells. Most recently, stem cells are being created from a sampling of cells from an adult human. The benefit to harvesting adult cells, in particular with genetic diseases, is the ability to capture and resemble the disease characteristics of the patient. This exciting property offers unique opportunities for diagnosis, the development of new treatment options and potential tissue replacement therapy.

In 2011, Ulrich Broeckel, MD, principal investigator and associate director of Children's Research Institute and professor of Pediatrics (Genomics) at the Medical College of Wisconsin, was awarded a $6.3 million National Institutes of Health grant to study human heart cells. The study aims to understand the genetic factors leading to an increase in the size and weight of the heart, known as left ventricular hypertrophy (LVH).

LVH is common in patients with high blood pressure, obesity, diabetes and kidney failure and is an independent risk factor for heart failure. Making this research even more important is the aging population and an increasing number of children with kidney disease, obesity, diabetes and complex cardiac problems. For the first time, we have the opportunity to utilize human stem cells to further understand and investigate the mechanisms that lead to LVH. The goal of this research is to identify new drugs and improve treatment for LVH. Recent findings from this study have been published in Frontiers in Applied Genetic Epidemiology.
Children’s Research Institute hosted its fifth annual Discovery Symposium featuring Elena Gostjeva, PhD, research scientist in the department of Biological Engineering at Massachusetts Institute of Technology in Cambridge, Mass.; and William Thilly, PhD, professor of Biological Engineering at Massachusetts Institute of Technology. Research conducted by Drs. Gostjeva and Thilly on the impact of the Chernobyl nuclear disaster on plant and human life has led to the discovery of metakaryotic stem cells.

Children’s Research Institute and MIT have partnered to form the Metakaryotic Biology Project. Physicians at Children’s Hospital of Wisconsin and scientists at the Medical College of Wisconsin from Oncology to Genetics are involved in conducting translational research on metakaryotic stem cells. Children’s Research Institute will be participating in the international research effort comprised of hospitals and research universities around the world.

“We firmly believe that harnessing the positive, regenerative affect of these cells, as well as controlling their activity, will drastically change multiple aspects within the practice of medicine,” said Aoy Tomita-Mitchell, PhD, researcher at Children’s Research Institute and associate professor of Cardiothoracic Surgery and Research at the Medical College. “This work will open the door to researching a cure for cancer. It is the first completely unique approach in decades.”

The initial research goals are to understand congenital heart disease as it relates to metakaryotic stem cell activity. However, researchers are hopeful their research will reveal key insights that will go far beyond the realm of pediatric cardiology.

What’s so exciting about metakaryotic stem cells? By identifying and understanding their behavior, researchers hope to derive therapies for disease progression and possible prevention. If metakaryotic stem cells are everything they seem to be, our understanding of embryo development will completely change.

Metakaryotic stem cells are the cells that drive organ development. These cells are involved in both healing and harm to the body. Working positively, they have a regenerative ability that promises amazing potential for damaged tissue. On the other hand, the quick, active development promoted by these cells can lead to congenital defects and other diseases such as cancer.

The extraordinary aspect of metakaryotic stem cells is that they don’t behave the same way as other cells. They don’t divide to multiply, as we have come to understand cell behavior. Rather, these cells produce other cells without undergoing mitosis, the classical form of cell division. Additionally, these cells are not harmed by radiation but thrive on it. This presents incredible opportunities to harness the positive power of these cells for healing and great possibility for new ways to treat cancer.
FiVe-YEAR grant advances research and treatment of pediatric kidney disease

It has been almost five years since Ellis D. Avner, MD, founding director of Children's Research Institute and professor of Pediatrics (Nephrology) and associate dean for Research at the Medical College of Wisconsin, was awarded a $4.7 million grant from the National Institutes of Health to develop the Research Center of Excellence in Pediatric Nephrology. The center is one of only two NIH-funded centers in the U.S. focusing on pediatric kidney disease, and it supports unparalleled opportunities for training and well-mentored research.

Accomplishments to date include:

- Children's Hospital of Wisconsin opened the only clinic in the U.S. focusing specifically on treating children with polycystic kidney disease (PKD). The clinic provides care to children from diagnosis to developing a comprehensive and individualized care plan.
- Researchers have turned the basic science findings about the molecular and cellular biology of PKD into new therapies for affected children and their families. These findings have resulted in prevention and possible disease-specific therapy for PKD. Data has provided the rationale for three new active phase I/II clinical trials of new therapies for PKD. This genetic disorder currently has no treatment.
- Of the 15 pilot and feasibility grants awarded by the center, 11 have successfully evolved into independent, NIH-funded awards generating new scientific direction in the field.
- Two postdoctoral fellows have been supported for up to 24 months of mentored research, stimulating future work as clinicians and researchers.
- More than 25 undergraduate students have completed a 10-week laboratory mentorship supported by the center.

A patient since the PKD Clinic opened, Ellie hasn’t let her rare kidney disease slow her down. Now a teenager and lover of the arts, she can be seen on stage acting in plays and musicals at her high school.
HUMAN brain tissue provides insight to understand and treat epilepsy

Epilepsy afflicts 50 million people worldwide. Unfortunately, only about half of epilepsy patients gain complete seizure control with currently available therapies. The other half live with intractable seizures throughout their lives. Some of these patients choose epilepsy surgery to suppress their seizures. In many cases, outcomes are not successful because the area in the brain triggering the seizures is difficult to define.

A better understanding of the cellular and molecular mechanisms of epilepsy is required to further develop innovative therapeutic strategies that could lead to improved seizure-free outcomes. Children’s Research Institute is one of only a handful of centers around the world performing research on human brain tissue removed from patients undergoing epilepsy surgery. Researchers have demonstrated significant differences in the electrical properties of brain cells in the epileptic focus, where the seizure begins, compared to cells in the surrounding region.

Led by Charles Marcuccilli, MD, PhD, pediatric neurologist at Children’s Hospital of Wisconsin, associate professor of Pediatrics (Neurology) at the Medical College of Wisconsin and researcher at Children’s Research Institute; and Andrew Tryba, PhD, assistant professor of Physiology at the Medical College and researcher at Children’s Research Institute, research is being conducted on brain tissue from pediatric patients to further understand and define normal and abnormal brain areas. This information could then be used to determine if the entire seizure focus has been successfully removed in surgery or whether additional surgery is required to improve clinical outcomes. “This research has the potential to immediately help millions of people with epilepsy worldwide,” said Dr. Marcuccilli.

Additional studies led to the identification of specific neurons that play an important role in seizure initiation. This information enables researchers to develop novel pharmaceutical agents in the treatment and, possibly, prevention of epilepsy, particularly following head trauma and other forms of brain injury.

Research support has been received from the Clinical and Translational Science Institute of Southeast Wisconsin to determine if pharmacogenomic testing can be used to define drug efficacy in the treatment of pediatric epilepsy. The novel approach involves a multidisciplinary team, including Tara Sander, PhD, scientific director of Molecular Diagnostics at Children’s Hospital and associate professor of Pediatric Pathology at the Medical College; and Tracy Zembles, RPh, pharmacist at Children’s Hospital.
ReSEARCH improves care for Children’s Hospital patients

In July 2011, the Center for Clinical Effectiveness Research (CCER) was created to leverage existing resources at Children’s Research Institute and synthesize research findings that lead to the best and safest care for the children treated at Children’s Hospital of Wisconsin.

According to the Agency for Healthcare Research and Quality, clinical effectiveness research is defined as what works best, for whom and under what circumstances. Clinical effectiveness research is not defined by a disease, organ or by any one recognized scientific area. It aims to advance the quality and relevance of research impacting clinical practice and evaluate the effect on patient outcomes.

The CCER is involved in many research studies focusing on patient reported outcomes with various conditions, from sickle cell disease to congenital heart disease. These types of studies examine the impact of disease and its treatment on the health and well-being of the patient and family, from their perspective.

The CCER’s overall goal is to improve health outcomes by providing evidence to enhance medical decisions made by patients and their medical providers. The center stimulates, facilitates and supports high-quality, high-impact clinical effectiveness research through:

- Increased awareness of this research at Children’s Hospital.
- Resources that expand the breadth and depth of this research.
- Greater collaboration and networking among investigators.
- Mentorship of fellows and faculty in this research.
- Leveraging and coordinating existing resources within and beyond Children’s Research Institute.

“The CCER is all about collaboration with other groups on the Children’s Hospital and the Medical College of Wisconsin campus. I meet regularly with key leaders to help provide a voice for clinical effectiveness research,” said Julie Panepinto, MD, MSPH, CCER director, hematologist at Children’s Hospital, professor of Pediatrics (Hematology/Oncology) at the Medical College and researcher at Children’s Research Institute.
SAFE sleep initiative combats infant mortality

According to the City of Milwaukee Health Department, 100 babies died before their first birthday in 2011. The causes varied from premature birth to unpreventable birth defects. However, it is estimated that almost 20 percent of infant deaths before age 1 are a result of an unsafe sleep environment. Many of these deaths are due to accidental suffocation and are potentially preventable.

Children’s Research Institute and Children’s Hospital of Wisconsin are funding efforts to further understand this community issue. “We are trying to change many years of engrained or cultural behaviors that can lead to an unsafe sleep environment,” said Jason Jarzembowski, MD, PhD, co-leader of the initiative, director of Perinatal Pathology at Children’s Hospital, assistant professor of Pathology and Pediatrics at the Medical College of Wisconsin and a researcher at Children’s Research Institute. “Studies have shown that role modeling is one of the most effective ways to change parent behavior, and we need to remember it will take time to change this behavior.”

To further understand caregivers’ knowledge of what is considered an unsafe sleep environment, Angela Rabbitt, DO, child protection specialist at Children’s Hospital and assistant professor of Pediatrics (Child Protection) at the Medical College; and Deborah Bretl, MSN, APNP, child protection advanced practice provider at Children’s Hospital and the Medical College, are interviewing caregivers to gauge their knowledge of sudden infant death syndrome prior to safe sleep education. The information gathered from the study will improve teaching methods to help provide the best care for babies.

The safe sleep initiative aims to educate parents and the community about the ABCs of safe sleep. Babies should sleep:

- Alone (without another person or objects in the bed).
- On their Back.
- In a Crib.
Researchers discover link between parenting style and children’s weight

A recent study led by Michele Polfuss, PhD, RN, CPNP-AC/PC, pediatric gastroenterology advanced practice provider at Children’s Hospital of Wisconsin and the Medical College of Wisconsin and researcher at Children’s Research Institute, found that parents who were concerned for their child’s weight or had an overweight child used increased controlling feeding behaviors and parenting styles. The research was published in Journal of Pediatric Nursing and Western Journal of Nursing Research.

The study examined more than 175 pairs of African-American and Caucasian parents to further understand the relationship between feeding and parenting styles and children’s weight. In addition, the study examined parents’ ability to accurately identify their children’s weight and the level of agreement between the children’s and parents’ assessment of the parenting behaviors.

The research found parents who were concerned about their children’s weight or had an overweight child used increased authoritarian or controlling behaviors such as rejection of the children, restriction of food and pressuring the children to eat. There was a significant difference in the children’s and parents’ assessment of the parenting behaviors used. The final finding concluded the majority of parents in this study were able to accurately identify their children’s weight. The clinical significance of the findings reinforced the need for health care providers to individualize care, include the child when asking questions and educate parents on how to support their children through positive parenting and eating behaviors.

Additional investigators include Rachel Neff Greenley, PhD, assistant professor in the Psychology Department of Rosalind Franklin University of Medicine and Science in Chicago; Marilyn Frenn, PhD, RN, CNE, ANEF, associate professor in the College of Nursing at Marquette University; Raymond Hoffmann, PhD, professor of Pediatrics (Quantitative Health Services) at the Medical College; and Maureen O’Brien, PhD, RN, PCNS-BC, associate dean for Graduate Programs and clinical associate professor in the College of Nursing at Marquette University.
Ulrich Broeckel, MD, associate director of Children’s Research Institute and professor of Pediatrics (Genomic) at the Medical College of Wisconsin, received a $6.2 million National Institutes of Health grant for the study titled: Functional GWAS for LVH Using iPSP-derived Cardiomyocytes: The HyperGEN iPSC Study.

David Brousseau, MD, emergency medicine specialist at Children’s Hospital of Wisconsin, professor of Pediatrics (Emergency Medicine) at the Medical College and researcher at Children’s Research Institute, in partnership with University of Cincinnati, received a $500,000 federal grant for the study titled: EMSC Network Development Demonstration Project.

Julie Panepinto, MD, MSPH, hematologist at Children’s Hospital, professor of Pediatrics (Hematology/Oncology) at the Medical College and researcher at Children’s Research Institute, received a $1 million National Institutes of Health grant for the study titled: Health-related Quality of Life and Short-term Outcomes After Intravenous Magnesium Treatment for Acute Sickle Cell Pain Episodes.

Ramani Ramchandran, PhD, associate professor of Pediatrics (Developmental Biology/Human Molecular Embryology) at the Medical College and researcher at Children’s Research Institute, received a $2.6 million National Institutes of Health grant for the study titled: Targeting DUSP-5 to Treat Vascular Anomalies.

Ramani Ramchandran, PhD, also received a $1.5 million National Institutes of Health grant for the study titled: Snrk-1 and Dusp-5 Co-ordinately Regulate Vascular Development in Vertebrates.

Ramesh Sachdeva, MD, PhD, MBA, JD, corporate vice president of National Quality Agenda and Critical Care physician at Children’s Hospital, professor of Pediatrics (Critical Care) at the Medical College and researcher at Children’s Research Institute, received a $7.3 million federal grant for the study titled: Pediatric Measurement Center of Excellence.

Nita Salzman, MD, PhD, associate professor of Pediatrics (Gastroenterology) at the Medical College and researcher at Children’s Research Institute, received a $1.3 million National Institutes of Health grant for the study titled: Bacterial-host Dynamics at the Intestinal Mucosal Interface.

Elena Semina, PhD, professor and chief of Pediatrics (Developmental Biology and Human Molecular Embryology) at the Medical College and researcher at Children’s Research Institute, received a $1.9 million National Institutes of Health grant for the study titled: Molecular Mechanisms of Axenfeld-Rieger Syndrome.

Rodney Willoughby, MD, infectious disease specialist and director of Antibiotic Stewardship at Children’s Hospital, professor of Pediatrics (Infectious Disease) at the Medical College and researcher at Children’s Research Institute, received a $1 million National Institutes of Health grant for the study titled: Virus Clearance from the CNS.
NURSING consortium advisory board in 2011

Children's Hospital of Wisconsin continues to participate in a multi-institutional consortium whose objectives include promoting and conducting nursing research, enhancing the capacity to use evidence-based practice and soliciting extramural funds to support clinical research on the care of children.

Margaret Callahan, PhD
Dean and professor, College of Nursing, Marquette University

Karen Gralton, MS, PhD(c), PCNS, BC
Clinical practice leader, Children's Hospital of Wisconsin

Kathleen J. Sawin, DNS, CPNP, FAAN
Research chair in the Nursing of Children, Children's Hospital and University of Wisconsin-Milwaukee College of Nursing

Rachel Schiffman, PhD, RN, FAAN
Associate dean for Research, University of Wisconsin-Milwaukee

Julia Snethen, PhD, RN
Associate professor, University of Wisconsin-Milwaukee

Marianne E. Weiss, DNS(c), RN
Associate professor, Marquette University
View hundreds of publications from Children’s Research Institute investigators at chw.org/research.