2001-2002
Annual Report

Department of Pediatrics

Saint Louis University
School of Medicine
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Welcome to the Annual Report of the Department of Pediatrics at Saint Louis University School of Medicine.

I have just completed my first year as Chairman of the Department. It has been an interesting and challenging time, and one that my family and I have enjoyed. We appreciate the warmth shown by the faculty and the other staff of the university in welcoming us to St. Louis.

The year has been marked by a number of major events. The early part was overshadowed by the events of September 11th, yet we moved on with our planning and implementation of positive changes. In November, we held a faculty retreat where we planned all areas of our program; clinical, education, research, administrative, advocacy and others. We have since begun to implement these initiatives in many areas.

Clinically, we have had success with recruitment and retention. Faculty turnover rates are significantly below the national and local rates, and we welcome our new colleagues in Child Protection, Genetics, Cardiology and Neonatology.

Our residents and student educational programs continue to thrive. Congratulations to Dr. Jay Noffsinger for receiving the Golden Apple Award from the graduating class.

Our plans in research involve rejuvenating the Pediatric Research Institute and initiating a new program in clinical research. We welcome Vikki Kociela, RN, who has joined the Department to merge a new Clinical Trials Unit that will provide logistical and material support for the clinical investigators.

With regards to administration, recruitment is now the major focus. We have performed well financially and continue to this year. We look forward to moving into our new clinical facility and then creating new divisional facilities in the renovated Glennon Hall building.

We have made excellent progress in the last year and the next year promises to be at least as eventful with continued expansion, new facilities, and the development of our clinical research program.
INTRODUCTION AND DESCRIPTION

The Division of Adolescent Medicine continues to grow and offer a diversity of services to the adolescent population of the St. Louis region. The division’s goals are to improve the health of adolescents in the St. Louis region as well as educate health care providers about adolescent health issues.

Clinical services are provided at the main hospital location on a daily basis. These services include care for all health issues with a focus on routine preventive care, high-risk behaviors, gynecological evaluation and treatment, and care of teens with chronic illness. The Eating Disorder Program has grown over the past year and offers care for individuals as young as 8 years old through adolescence. Dr. Ohlemeyer continues to provide evaluation and management of obese children and adolescents in the Weight Management Program along with Sarah Barlow, MD, Joel Nadler, PhD, Nancy Lawson, RD, and Mary Kay Brasken, MSW. New this year for the division is the participation in the Myelodysplasia Clinic with provision of care addressing specific adolescent issues in this population. In October 2002, Dr. Dunstan began providing health services to 2 Division of Youth Services sites here in St. Louis.

CLINICAL SERVICES 2001-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Outpatient Visits</th>
<th>Wt Mgmt Visits</th>
<th>Admissions/Consults</th>
<th>Total Pt Encounters</th>
<th>Chg Over Past Yr.</th>
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<tbody>
<tr>
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<td>96</td>
<td>21</td>
<td>568</td>
<td>—</td>
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<tr>
<td>2001-2</td>
<td>717</td>
<td>107</td>
<td>44</td>
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The division provides educational opportunities to medical students and residents. Each intern of the Pediatric Residency program and each 2nd year Internal Medicine/Pediatrics Residency program spends a month with the division. Sites for education include: Adolescent Clinic, Eating Disorders Clinic, Sports Medicine Clinic, Weight Management Clinic, and Sports Medicine at McKendree College with Dr. Jay Noffsinger. Each resident has the opportunity to observe teens in the school environment by visiting the health services at Clayton High School and by observing and then teaching a Health Education class at a middle school of Parkway School District.
**DIVISION OF ADOLESCENT MEDICINE**

**FACULTY**

Chris L. Ohlemeyer, MD, Associate Professor in Pediatrics and Director of Adolescent Medicine  
Marianne Dunstan, MD, Assistant Clinical Instructor in Pediatrics  
Victoria Cornelius, MD, Clinical Instructor in Pediatrics  
Theresa Forsythe, Medical Secretary

**RESEARCH HIGHLIGHTS**

Poster presentation of the 2001 Annual Meeting of North American Association for the Study of Obesity, Quebec City, Quebec, Canada Ohlemeyer C, Barlow SE. Medical Profiles of Children and Adolescents Evaluated in a Multidisciplinary Weight Management Program.

**HONORS**

Ohlemeyer C: Vice Chairman of the Council for Adolescent and School Health (CASH), Missouri Department of Health and Senior Services  
Ohlemeyer C: Saint Louis University Women’s Commission Award, YWCA Women in Leadership, December 1999.

**PRESENTATIONS**


INTRODUCTION AND DESCRIPTION

The Allergy/Immunology Division in the Department of Pediatrics provides clinical care of allergic and immunologic diseases, including:

- Asthma
- Allergic and non-allergic rhinitis
- Allergic conjunctivitis
- Atopic dermatitis (eczema)
- Urticaria, angioedema
- Food allergy
- Drug allergy
- Latex allergy
- Adverse reaction to vaccines
- Anaphylaxis
- Insect allergy
- Allergic bronchopulmonary aspergillosis
- Hypersensitivity pneumonitis
- Sinusitis, fungal sinusitis
- Congenital immunodeficiency diseases
  - T-cell, e.g. SCID, DiGeorge anomaly, MCC
  - B-cell, e.g. Bruton’s, CVID, THI
  - Phagocytic, e.g. CGD, Hyper-IgE, LAD
  - Complement, e.g. C2, C5-9 (MAC), C1 esterase inhibitor
- Acquired immunodeficiency diseases, e.g. PAIDS

Asthma Center for Children. The Divisions of Allergy/Immunology and Pulmonology formed an Asthma Center to provide care for pediatric asthma patients.

Immunodeficiency Treatment Clinics. The Immunodeficiency Treatment Clinic is located in the Costas Center to treat immunodeficiency patients. The Division works with the Bone Marrow Transplantation Division in transplantation of severe T-cell immunodeficiencies.

Allergy Challenge Clinic. The Allergy/Immunology Division has developed special clinics to perform food and drug challenges to evaluate these allergic diseases.

A/I Fellowship Training Program. The Pediatric and Internal Medicine Allergy/Immunology Divisions provide an Allergy/Immunology Fellowship Training Program. In addition, the Division regularly provides electives for Pediatric residents and medical students. Division members are active in the AAAAI serving on committees, presenting talks and abstracts.

The Allergy/Immunology Divisions maintain a Clinical Immunology Laboratory as a reference laboratory to Pathology that performs diagnostic cellular functional studies, including lymphocytes proliferation, cellular cytotoxicity and cytokine synthesis. In addition, specialized studies to analyze T-cell signaling, CD40L expression and NBT are available.
DIVISION OF ALLERGY/IMMUNOLOGY

FACULTY
Alan P. Knutsen, MD, Professor of Pediatrics, Director of the Division of Allergy/Immunology
Bradley A. Becker, MD, Assistant Professor of Pediatrics, Co-Director, Asthma Center for Children
Cori Coplivetz, MD, Fellow
Manoj Warrier, MD, Fellow
Theresa Forsythe, Medical Secretary
Chris Fultz, RN, BSN
Geri Sanders, RN, MSN, CPNP

RESEARCH HIGHLIGHTS
Dr. Knutsen’s current research focuses on Th2 T-cells, IL-4, and IL-4R in ABPA. Previous A/I fellows, Jim McClellan and Seema Khan, have participated on this project. Manoj Warrier is currently participating on this project.

Dr. Becker participated in a study that determined the safety of influenza vaccine in patients with asthma.

PUBLICATIONS

HONORS

PRESENTATIONS
1. Becker BA: “Asthma and Allergies: Why Are Their Prevalence Increasing?” Saint Louis University School of Medicine, Department of Pediatrics, Grand Rounds, 6/7/01
2. Becker BA: “Current Management of the Child with Asthma”, Pediatric Grand Rounds, Hannibal Regional Hospital, Hannibal, MO, 11/16/01

GRANTS
Bradley A. Becker, MD
Site investigator
Asthma Clinical Research Center (multicenter clinical trials)
Source: American Lung Association
Period: 1999-present.

Alan P. Knutsen, MD - PI
Immunopathogenesis of ABPA
Source: Cystic Fibrosis Foundation
Effort: 10%
Direct Cost: $240,000
Period: 2-1-01 to 2-28-04
Project ARK (AIDS/HIV Resources for KIDS)
Source: Ryan White Title IV
PI: Gregory Storch, MD (Washington University)
Direct Cost: $3,487
Indirect Cost: $279
Period: 8-1-01 to 7-31-02

PI: Gary Albers, MD
Co-Investigator: Alan P. Knutsen, MD
A Multicenter Randomized Controlled Open-labeled Study to Evaluate the Safety of Omalizumab in Moderate to Severe Persistent Asthma Subjects Already Treated with Other Therapies
Source: Genentech
Period: 1-1-01 to 12-31-01
INTRODUCTION AND DESCRIPTION

The Division of Cardiology provides care, teaching and research with regard to cardiovascular diseases in fetuses, neonates, children, adolescents and adults with heart disease. The Fetal Cardiology Services are provided by one dedicated cardiologist along with support from Neonatology, Perinatology and Cardiovascular Surgery. The clinics cover all spectrums of ages, which include infants, children, adolescents and adults with congenital heart disease. The outreach clinics cover wide areas in Missouri and Illinois and provide expertise to areas that are void of such experts. The Cardiac Catheterization Laboratory covers both diagnostic and wide spectrum of interventional therapeutic procedures, which include valvuloplasties and device closures of defects. Electrophysiology covers a wide spectrum of diagnostic and therapeutic interventions for cardiac arrhythmias. In-patient services cover patient admitted for various cardiac related conditions and post operative management of heart disease. The Lipid Clinic covers preventive aspect of cardiology and is run by a dedicated team. The Cardiac Transplantation Service covers the preparation for the cardiac transplantation procedure and then the immediate and late management of patients who underwent cardiac transplantation.

Teaching of Cardiology is performed through the members of cardiology and covers education of Medical Students, Interns, Residents and Community Physicians. It also provides education to Nurses and other Allied Health providers. Education of other cardiologists includes presentations of our research data in National and International meetings.

The research aspect of Cardiology is provided by each of the cardiologist who has specific areas of interest. Our research has focused on important clinical aspects of Cardiology and resulted in improved care of individuals with congenital heart disease.

FACULTY
Ian C. Balfour, MD, Professor of Pediatrics, Division of Pediatric Cardiology
Su-chiang Chen, MD, Professor of Pediatrics, Division of Pediatric Cardiology
Barbara R. Ferdman, MD, Assistant Professor of Pediatrics, Division of Pediatric Cardiology
Saadeh B. Jureidini, MD, Professor of Pediatrics, Interim Director, Division of Pediatric Cardiology
Gautam K. Singh, MD, Associate Professor, Division of Pediatric Cardiology
Mary Kay Thompson, Medical Secretary
Angela Riehn, Medical Secretary
Mike Heffner, Cardiology Clinic Manager

Colleen Puers, RN
Donna Marshall, RN
MaryPat Spillane, RN
Jan Lutman, RN

Cath Lab:
Kathy Tinker, LPN
David Bash, RT
Lisa Bade, RT

Echo Lab:
Cindy Marino, RDCS
Chrissy Seithel
Lisa Hohmann

Clinic Support Staff:
Dorothy Cavanaugh
Barbara Stewart
Charlotte Manning
Kim McHenry
Ermina Keric
RESEARCH HIGHLIGHTS

Dr. Ian Balfour: Interaction of Volume and Era on Survival of Pediatric Heart Transplant Patients

Dr. Su-chiung Chen: Analyzed the changes in destruction and regurgitation in children with subaortic stenosis in respect to intervention or non-intervention.

Barbara R. Ferdman: 1) Cardiac graft dysfunction, rejection and apoptosis; 2) Cytokine interaction and cardiac function; 3) Heterotaxy syndrome and associated anomalies

Dr. Saadeh Jureidini: Assessment of the coronary artery normal flow dynamics by Doppler echocardiography and abnormal variations in the coronary artery in congenital and acquired heart disease, which have resulted in numerous publications. 1) Effect of thrombolysis on clots in the heart and great vessels which also have resulted in several publications. 2) Pulmonary hypertension and its influence on the pulmonary artery pulsatility and size as assessed by echocardiography. 3) Interventional Cardiology, which is a new innovative field and has resulted in several publications. (The above clinical research has resulted in improvement in the management of children affected with heart conditions.)


PUBLICATIONS


HONORS

1. Ian C. Balfour, MD: Co-chaired, Organizing Committee for 2002 Annual Scientific Meeting of the Association of Black Cardiologists. Chaired Congenital Heart Disease Session of the March 2002 Meeting of the Association of Black Cardiologists.


PRESENTATIONS


4. Singh GK. 2001, Guest Lecture, Fetal Cardiac Evaluation, Continuing Medical Education for Cardiac Sonographers, St. Louis, MO.

INTRODUCTION AND DESCRIPTION

The Division of Child Protection utilizes a multidisciplinary approach while providing expert assessment of victims and suspected victims of child maltreatment including physical abuse, sexual abuse, and neglect. Both inpatient and outpatient consultative services are provided at Cardinal Glennon Childrens Hospital. Outpatient clinical services are also provided through the Childrens Advocacy Center of Greater Saint Louis. In addition, expert medical consultation and testimony is provided to the legal community.

Educational responsibilities include medical students and faculty at Saint Louis University School of Medicine as well as residents, fellows, and staff at Cardinal Glennon Childrens Hospital. Preceptorship is provided to Forensic Pediatric fellows at Washington University School of Medicine. Educational opportunities are available to the medical, legal, child protective services, and law enforcement communities. Education and crisis intervention are provided families on a regular basis.

**Faculty**

- **Timothy J. Kutz, MD**, Assistant Professor of Pediatrics, Director, Child Protection
- **Theresa Forsythe**, Medical Secretary
- **Cara Christianell, MSN, RN CPNP**, Nurse Practitioner
- **Karen Bly, RN**, Nurse Counselor

**Honors**

- **Kutz, TJ**: Reviewer, Journal of Pediatrics; member, Ray Helfer Society (honorary society recognizing contribution to the field of child maltreatment)

**Presentations**


5. **Kutz, TJ**: “Sexual Abuse Evaluation and Management.” Cardinal Glennon Childrens Hospital Community Outreach. Cape Girardeau, Missouri, May, 2002


**Grants**

- **T. Kutz, MD - PI**
  - Deaconess Foundation Support of Nurse Practitioner position
  - 01 yr $5,000 09/01/01 - 06/30/02
  - 02 yr $25,000 07/01/02 - 05/30/02
DIVISION OF CRITICAL CARE MEDICINE

INTRODUCTION AND DESCRIPTION
The Division of Pediatric Critical Care provides patient care, multidisciplinary education, community service, and biomedical research. Our intent is to provide state of the art medical management for critically ill children while improving the care of future patients through our education and research efforts. We provide community service through the individual specialized interests of our members.

The Critical Care Division provides intensivists staffing for the Pediatric Intensive Care Unit at Cardinal Glennon Children’s Hospital. We also on occasion provide care in the Emergency Room, Operating Room, Transitional Care Unit, as well as responding to codes wherever they may occur in the hospital.

Increasingly, the division provides sedation services for patients with airway risk factors as well as providing vascular access services for difficult patient situations.

Our particular role in the PICU centers around state of the art respiratory management and hemodynamic management of critically ill children. In addition we facilitate the care provided by multiple divisions and services whose patients are cared for in the ICU. In particular, we are involved in the care of complex cardiac post-operative patients and solid organ transplant patients. The Division of Pediatric Critical Care provides education to pediatric residents, medicine/pediatric residents, emergency pediatric fellows, nursing personnel, medical students, and post graduate continuing medical education. Residents rotate through the ICU 3 at a time and form the Critical Care Service along with the pediatric attending, any fourth year medical student also rotating, and the advanced practice critical care nurse.

Fellows in Pediatric Emergency Medicine routinely spend 1 month in the Pediatric Intensive Care Unit becoming familiar with management issues and procedures related to critical care. Historically, the division has provided continuing medical education on a local, regional, national, and international basis.

Dr's Loftis and Andreone are heavily involved in basic research as collaborators in the laboratories of George Matuschak and John Corbett, respectively. Dr. Ream and Dr. Lynch perform clinical research and have been institutional PI's for multiple clinical studies.
Faculty

Teresa Louise Andreone, MD, PhD, Assistant Professor of Pediatrics
Laura Lynn Loftis, MD, Associate Professor of Pediatrics
Robert E. Lynch, MD, PhD, Professor of Pediatrics, Director, Division of Pediatric Critical Care
Robert Stephen Ream, MD, Associate Professor, Assistant Director, Division of Pediatric Critical Care
Georgene Menshouse, RHIT, Medical Secretary
Kelly Murawski, RN, MSN, CS, PNP

Research Highlights

The basic science laboratories in which Drs. Loftis and Andreone work have both received competitive renewal funding during this past year. Dr. Ream has been the local investigator for the pediatric observational study of activated Protein C in sepsis and has been accepted as the institutional lead investigator for the upcoming randomized control trial of activated Protein C in pediatric septic patients.

Publications


Honors

Robert Ream, M.D., President Elect, Cardinal Glennon Children’s Hospital Medical Staff.

Laura Loftis, M.D., ad hoc reviewer; Journal of Intensive Care Medicine.

Robert Lynch, M.D., Ph.D., ad hoc reviewer and invited editorialist; Critical Care Medicine.

Presentations

Teresa Andreone1,2, John Corbett1, and Alvin Denenberg3, Paul Hake2, Michael O’Conner2, and Basilia Zingarelli2, St. Louis, MO1 and Cincinnati, OH2, Poly(ADP-Ribose) Polymerase (PARP) Regulates Activator Protein-1 (AP-1) through Jun Terminal Kinase. Poster Presentation at 62nd Annual Scientific Meetings for American Diabetes Association, June 14-18, 2002, San Francisco, CA.


Grants

Laura Loftis, M.D.
Effects of glutathione depletion on the activation of NF-KappaB and CREB following sequential gram-negative bacteremia and hypoxia in isolated perfused rat liver and lung. $9,500.00, Fleur-de-Lis Foundation.
INTRODUCTION AND DESCRIPTION

The Division of Developmental Pediatrics, Department of Pediatrics, Saint Louis University School of Medicine is housed in the Knights of Columbus Developmental Center, SSM Cardinal Glennon Children's Hospital. The Knights of Columbus organization, with their mission of identifying programs supporting children and families with mental retardation, began continuous funding of the center in April, 1980.

The clinical goal of the division is to provide diagnostic evaluation, follow-up, and support and advocacy in the community for children and their families with concerns regarding a broad range of neurodevelopmental disabilities, behavioral, and psychosocial issues. This includes young children with global developmental delay and mental retardation, prematurity, genetic and metabolic disorders, cerebral palsy, speech and language concerns, specifically autism spectrum disorders, and school age children and adolescents with attention deficit disorder and learning disabilities, and accompanying psychiatric and behavioral concerns, including sleep disorders.

Within the Department of Pediatrics, the teaching goal of the division is to support the educational needs of a wide variety of trainees, at different levels of their undergraduate and professional education. We have published a comprehensive curriculum of developmental and behavioral pediatrics, geared to the primary care physician and the problems they may encounter in their office or clinic setting. In addition, we participate in the core lecture series for the third year medical students and pediatric residents and have established our own subspecialty lecture series during the developmental/behavioral pediatrics rotation. Finally, we have developed a three-hour didactic and case-based seminar for the intern orientation program. Each month we have 2 to 5 trainees rotating with us. This includes 4th year medical students, 2nd and 3rd year pediatric, combined medicine/pediatric, and general psychiatry residents. Over the last several years we have supported one to two summer internships for college students interested in pursuing postgraduate careers in medicine and allied health fields.

Outside of the department, each faculty member participates in a wide range of educational venues, including invited lectures, professional panels, and CME programs to physicians and allied health professionals, professional pediatric societies, special education school districts, and support and advocacy groups, both in the greater St. Louis region, and nationally and internationally.
autism in normal children between six months and three years, in conjunction with Parents as Teachers in St. Louis, and collaborating with the Department of Psychiatry at Saint Louis University (Raymond Tait, Ph.D., Director, Medical Trials Unit) and McNeil Pharmaceutical Company in developing medication trials for children with autism spectrum disorder.

Dr. Sam Zinner is pursuing his project, “Developmental-Behavioral Pediatrics- Resource and Referral Directory: Impact of a Unique and Comprehensive and Comprehensive Guide on the Management Practices of Pediatric Primary Care”. The design of the study entails a two part survey (before and six months after distribution of the directory). Dr. Zinner has recruited 132 regional general pediatrians as qualified study participants. Pediatricians were self-selected through a mass mailing to approximately 500 general pediatricians in Eastern Missouri. Exclusion criteria included familiarity with the directory, less than half-time employment in general pediatrics, and subspecialty focus outside of general pediatrics. Each of these participating pediatricians received a copy of the Directory in November 2001 after submitting the first of two surveys, and each has now received the follow-up survey. The study design requires the participation of 112 pediatricians in the completion of the pre- and post-surveys. Survey data will be analyzed using a SPSS program, in collaboration with two faculty members in the School of Public Health, Drs. Terry Tomazic and Randy Richter.

In collaboration with Dr. Timothy Fete, Division Director of General Academic Pediatrics, Drs. Maxim and Zinner are examining the psychoeducational profile of children with hypohidrotic ectodermal dysplasia.

Other areas of interest include identifying screening instruments for autism in normal children between six months and three years, in conjunction with Parents as Teachers in St. Louis, and collaborating with the Department of Psychiatry at Saint Louis University (Raymond Tait, Ph.D., Director, Medical Trials Unit) and McNeil Pharmaceutical Company in developing medication trials for children with autism spectrum disorder.

Dr. Sam Zinner is pursuing his project, “Developmental-Behavioral Pediatrics- Resource and Referral Directory: Impact of a Unique and Comprehensive and Comprehensive Guide on the Management Practices of Pediatric Primary Care”. The design of the study entails a two part survey (before and six months after distribution of the directory). Dr. Zinner has recruited 132 regional general pediatrians as qualified study participants. Pediatricians were self-selected through a mass mailing to approximately 500 general pediatricians in Eastern Missouri. Exclusion criteria included familiarity with the directory, less than half-time employment in general pediatrics, and subspecialty focus outside of general pediatrics. Each of these participating pediatricians received a copy of the Directory in November 2001 after submitting the first of two surveys, and each has now received the follow-up survey. The study design requires the participation of 112 pediatricians in the completion of the pre- and post-surveys. Survey data will be analyzed using a SPSS program, in collaboration with two faculty members in the School of Public Health, Drs. Terry Tomazic and Randy Richter.

In collaboration with Dr. Timothy Fete, Division Director of General Academic Pediatrics, Drs. Maxim and Zinner are examining the psychoeducational profile of children with hypohidrotic ectodermal dysplasia.

**Publications**

1. **Zinner SH**, Directory of Resources and Referral Information: St. Louis Regional Access Guide to Developmental and Behavioral Pediatric, Adolescent and Family Services. Saint Louis: Saint Louis University, 2002. 610 pages Copyright File No.: 022103/02 001CO02/2

**Honors**


2. **Zinner, SH**: Bronze Medal, National Health Information Award for Metropolitan St. Louis Developmental/Behavioral Pediatrics Community Referral Directory.

**Presentations**


5. **Zinner, SH**: “Attention Deficit/Hyperactivity Disorder: Medication Management”, CHADD, South County Health Center, St. Louis, Missouri, October, 2001.


8. **Zinner, SH:** “Office-Based Assessment/Referral for Behavioral Issues” given at Community Office-Based Preceptors Practicum, Saint Louis University School of Medicine, St. Louis, Missouri, January, 2002.


10. **Zinner, SH:** “Attention Deficit/Hyperactivity Disorder: New Guidelines”, Panel Presentation, St. Louis Pediatric Society, St. Louis Children’s Hospital, March, 2002.


12. **Zinner, SH:** “Behavior Management: 0 to 3 years”, “Learning Disabilities”, and “ Tourette’s Disorder and Comorbidity” given to 3rd Congress of Pediatrics, Evangelical University Hospital of Curitiba, Parana, Brazil, May, 2002.

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**Grants and Contracts**

**M.H. Ultmann, MD**

Developmental Pediatric Consultant, Southern Illinois Medical Diagnostic Network/ Child and Family Connection

State of Illinois, Department of Human Services, Division of Community Health and Prevention, Community Service Agreement #211G2581000

$ 36,000

**R.A. Maxim, MD-PI**

“Influence of the Early Introduction of Age-Appropriate Toys on the Development of Children From Low-Income Families”

Fleur-de-Lis Grant, Initially awarded in 2000, extended through 2003

$10,000

**R.A. Maxim, MD- PI (in collaboration with S.H. Zinner, MD and T.J. Fete, MD)**

“Psychoeducational Characteristics in Children with Hypohidrotic Ectodermal Dysplasia”

National Foundation for Ectodermal Dysplasias awarded in 2002

$14,229

**S.H. Zinner, MD - PI**


Fleur-de-Lis Grant Initially awarded in July, 2001

$10,000

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**Advocacy/Community Service**

**M.H. Ultmann:**

Developmental Pediatric Consultant, Child and Family Connections, Southern Illinois Medical Diagnostic Network


High School Building Representative, Clayton Special School District

Education Parent Advisory Council, May, 2002 (ongoing)

Parent Representative, Early Childhood Education Parent Advisory Council, May, 2002 (ongoing)

**R.A. Maxim:**

Member, First Steps Health Advisory Group, Missouri Department of Elementary and Secondary Education

2001 (ongoing)

Speaker and Saint Louis University Representative, Educational and Policy Symposium on Autism, Missouri Department of Education, Jefferson City, Missouri, May 2002

**S.H. Zinner:**

Medical Advisor and Ad-Hoc Reviewer for Grants and Articles, National Tourette Syndrome Association

Medical Advisor, Missouri Tourette Syndrome Association

Medical Advisor, St. Louis CHADD (Children and Adults with ADD)

Group Organizer and Facilitator, Missouri Tourette Syndrome Association Youth Support Group

Medical Editor, Focus on Pediatrics

Facilitator, Developmental/Behavioral Pediatrics Focus Group
INTRODUCTION AND DESCRIPTION

The Division of Pediatric Endocrinology in the Department of Pediatrics is dedicated to improving the health of children through clinical care, teaching, and research. The faculty in the Division currently includes four pediatric endocrinologists. An experienced clinical nurse specialist provides education in endocrine disorders and coordinates the clinical research studies of the Division. A second clinical nurse performs specialized endocrine function testing and provides in- and out-patient diabetes education. A third master’s-level diabetes nurse, who is also a pediatric nurse practitioner and Certified Diabetes Educator, provides patient and family education and maintains a high level of in-patient diabetic care through education of the hospital nursing staff. In addition, two dietitians/nutritionists, a social worker, and a child psychologist are available to offer nutritional guidance and psychosocial evaluation and advice.

Clinical care for infants, children, and adolescents with growth disorders, complex endocrine system disorders, diabetes, and metabolic bone disease is comprehensive and state-of-the-art. The Division is an official referral center for the newborn screening programs for the states of Missouri and Illinois. In calendar year 2001, over 4000 new and return out-patient visits were made to the Division's clinics in the Ambulatory Care Center at Cardinal Glennon Children’s Hospital and in the Glennon Care facility at St. Joseph’s Hospital in Kirkwood. Out-patient visits have increased dramatically over the last 5 years, and the 9.0% increase from 2000 to 2001 reflects our ongoing growth in clinical services. Children are also seen every other month in a rapidly-expanding outreach program at Southeast Missouri Hospital in Cape Girardeau, MO. In addition, one faculty member is responsible each month for patient care on the in-patient service. Most newly-diagnosed diabetic children are hospitalized for a brief period to initiate therapy and education. Consultations to assess and assist in the management of complex in-patients are also provided, as requested by other services.

The teaching programs of the Division of Pediatric Endocrinology are closely intertwined with both the Department of Pediatrics and the Division of Endocrinology in the Department of Internal Medicine. In addition to departmental conferences, which include Grand Rounds, Practical Pediatrics, and Noon Case Conferences, nine lectures in the 18-month Core Curriculum lecture series for residents and a lecture every 8-weeks for third year medical students are given by Division faculty. A popular elective is offered to residents, and third and fourth year medical students are supervised in the out-patient clinics. Finally, the Division assists in the training of fellows from the Division of Endocrinology in the Department of Internal Medicine by its supervision of fellows in a one-month rotation and its participation in a combined case conference.

Members of the Division of Pediatric Endocrinology have participated in clinical trials of growth hormone (GH) therapy and have contributed patient information to post-marketing surveillance programs for many years. Division members also conduct the clinical research studies discussed in detail below.
**RESEARCH HIGHLIGHTS**

The research studies of Dr. Susan E. Myers in the Division of Pediatric Endocrinology, Dr. Barbara Y. Whitman, and their collaborators at the University of Wisconsin have contributed significantly to our understanding of the effect of GH treatment in children with Prader-Willi syndrome (PWS). A major research highlight this year has been the further elucidation of the benefits of long-term GH therapy in children with PWS. As Dr. Myers and her colleagues reported in the Journal of Clinical Endocrinology and Metabolism (2002 Apr; 87(4):1581-1585), continued beneficial effects on body composition, bone mineral density, growth velocity, and resting energy expenditure occurred during months 24-48 of GH therapy in children with PWS. In addition, prior improvements in strength and agility were sustained. In a second publication (Pediatrics 2002 Feb; 109(2):e35), Drs. Myers and Whitman and their collaborators reported that behavioral improvement, including a lack of predictable behavioral deterioration, occurred in children with PWS during the first 24 months of GH treatment. Dr. Myers and her colleagues are currently examining the benefits of GH therapy in infants with PWS and participating in a multi-center study of GH treatment in adults with PWS.

Another research highlight has been the Division’s participation in a randomized trial to compare weekly Nutropin Depot with daily Nutropin AQ for the treatment of short stature due to GH deficiency in pediatric subjects. Nutropin Depot, a sustained-release formulation of recombinant GH, was recently developed to provide a means to reduce the frequency of injections in children with GH deficiency. The growth rates achieved using currently-approved dosing regimens of Nutropin Depot are generally lower than those historically observed for daily dosing of GH. Two GH-deficient children were treated in the Division’s Endocrine clinics with weekly Nutropin Depot injections by Dr. Sherida E. Tollefsen, PI of the Saint Louis University center in this multi-center trial. Comparison of the two regimens is underway and initiation of the second phase of the trial is anticipated within the next year.

The Division of Pediatric Endocrinology participates in three large programs that address issues related to the safety and efficacy of recombinant GH therapy: the Genentech National Cooperative Growth Study (NGCS); the Pharmacia and Upjohn Kabi International Growth Study (KIGS); and the Genetics and Neuroendocrinology of Short Stature International Study (GeNeSIS), a program recently initiated by Lilly Research Laboratories. The Division is one of 27 centers in the U.S. and the only center in Missouri to be invited to participate in GeNeSIS. GeNeSIS has a similar primary objective as the aforementioned programs but also has the following secondary objectives: (1) the characterization of gene defects associated with GH deficiency and hypopituitarism, (2) the characterization of clinical features and defects in the SHOX gene in patients with Turner syndrome, Leri-Weill syndrome, and Langer syndrome, and (3) the characterization of the natural history of neoplastic disease in children evaluated or treated for growth disorders. Dr. Sherida E. Tollefsen is the PI and Colleen Weber, RN, is the study coordinator for these programs.

Dr. Whitman’s research in defining and managing behavioral components of Prader-Willi syndrome has been seminal in the field. Following her initial work, she, along with Dr. Susan Myers, conducted the first controlled research regarding both the physiologic and behavioral impact of growth hormone replacement therapy in this population, leading to an FDA indication for this therapy. A corollary to this work has been the intersection of research in autistic spectrum disorders and attention disorders and research in Prader-Willi syndrome. Dr. Whitman was the first to describe ADHD in persons with Prader-Willi syndrome and the first in this country to conduct systematic investigation into the incidence of autistic spectrum disorders in this population. This broad spectrum of work has resulted in a number of invitational presentations at international meetings including a recent memorial conference for Dr. Andrea Prader.

Ongoing research in both attention disorders and autistic spectrum disorders is underway. At least two books have resulted from this work.

In conjunction with Dr. Susan E. Myers in the Division of Endocrinology, additional studies on the use of growth hormone in infants and adults with Prader-Willi syndrome are currently underway. Additional studies regarding the range of developmental concerns in children with congenital hypothyroidism are also underway.
**PUBLICATIONS**


**HONORS**

1. **Dempsher, DP:** Selection to The Best Doctors in St. Louis 2002

2. **Tollefsen, SE:** Selection to The Best Doctors in St. Louis 2002; ad hoc reviewer for The Journal of Pediatrics

**PRESENTATIONS**

1. **Dempsher DP:** “Systemic Effects of Inhaled Glucocorticoids.” CME presentation at the Cape Girardeau County Area Medical Society, Cape Girardeau, MO, October, 2001.

2. **Dempsher DP:** “Genital Ambiguity and Gender Assignment.” Grand Rounds, Department of Pediatrics, Cardinal Glennon Children’s Hospital, St. Louis, MO, February, 2002.

3. **Eddy MC:** “Spectrum of Rachitic Disorders in Children.” CME presentation at the Cape Girardeau County Area Medical Society, Cape Girardeau, MO, February, 2002.

4. **Myers SE:** “Type II Diabetes Mellitus in Adolescents.” Practical Pediatrics, Department of Pediatrics, Cardinal Glennon Children’s Hospital, St. Louis, MO, September, 2001.

5. **Myers SE:** “Update on Diabetes.” SSM Cardinal Glennon Children’s Hospital CME Practical Pediatrics Conference at the Sheraton - St. Louis City Center, St. Louis, MO, November, 2001.

6. **Myers SE:** “Type II Diabetes Mellitus in Adolescents.” St. Louis Association of Diabetes Educators, St. Louis, MO, March, 2002.

7. **Tollefsen SE:** “New Indications for Growth Hormone Therapy.” Practical Pediatrics, Department of Pediatrics, Cardinal Glennon Children’s Hospital, St. Louis, MO, September, 2001.

8. **Tollefsen SE:** “Short Stature.” SSM Cardinal Glennon Children’s Hospital CME Practical Pediatrics Conference at the Sheraton-St. Louis City Center, St. Louis, MO, November, 2001.

9. **Tollefsen SE and Myers SE:** “Advances in Pediatric Endocrinology.” Grand Rounds, Department of Pediatrics, Cardinal Glennon Children’s Hospital, St. Louis, MO, January, 2002.


16. **Whitman, BY**: Attention Disorders Revisited and Revisited and Revisited. 24th Annual Pediatrics at the Beach Primary Care Conference, Virginia Beach, Virginia July 2002


### GRANTS

**S. Myers, MD - PI**

The Diagnosis and Genotropin Treatment of Growth Hormone Deficiency in Adult Prader-Willi Syndrome Patients
Pharmacia and Upjohn
1/1/02-12/31/03
$58,446

**S.E. Tollefsen - PI**

A Multi-center Trial of Genotropin Treatment of Children Born Small for Gestational Age (SGA): Evaluation of Predictors of / Correlates with First Year Growth Response
2/1/02 - completion
$4,500/subject x 10 subjects

**S.E. Myers and B.Y. Whitman - PI**

Clinical Quality Assessment Project: The Examination of the Characteristics Related to Disease Control and Compliance Issues in Patients with Congenital Hypothyroidism
Pharmacia and Upjohn
5/1/01-4/30/03
$50,000

**S.E. Myers, A.L Carrel - PI**

The Metabolic Effects of Growth Hormone on Body Composition in Infants and Toddlers with Prader-Willi Syndrome
Pharmacia and Upjohn
5/3/02-8/31/03
$6,877/subject x 12 subjects

**S.E. Tollefsen - PI**

A Phase IIIb, Open-Label, Randomized Trial to Compare Weekly Nutropin Depot with Daily Nutropin AQ for the Treatment of Short Stature due to Growth Hormone Deficiency in Pediatric Subjects
Genentech
2/15/00 - completion of phase 1 $3,375/subject phase 2 - $3,200/subject

**S.E. Tollefsen** is also the PI, Saint Louis University, of the following contracts:

Genentech
National Collaborative Growth Study: Post-Marketing Surveillance Program
Pharmacia and Upjohn
KABI International Growth Study: Post-Marketing Surveillance Program
Lilly Research Laboratories
GeNeSIS (The Genetics and Neuroendocrinology of Short Stature International Study)
INTRODUCTION AND DESCRIPTION

Through quality patient care, innovative education, creative research, and vigorous advocacy, the Division of General Academic Pediatrics of the Saint Louis University School of Medicine partners with patients, parents and the community to assure that the physical, emotional, and spiritual needs of this and future generations of children will be met with competence, dignity, justice and compassion.

Division members provide a wide variety of medical services to patients at SSM-Cardinal Glennon Children’s Hospital. University Pediatrics is the primary care practice of the Department of Pediatrics, serving as the medical home for approximately 6,000 patients with 15,000 visits per year. The patients cared for at University Pediatrics have more serious acute and chronic medical problems, and more social/economic problems than patients in a typical community practice.

The General Academic Pediatrics faculty are actively involved in inpatient care of patients at Cardinal Glennon, accounting for one half of the inpatient faculty attending positions on the ward services. The Medical Director of the Rehabilitation Services is a member of the division.

The Medical Diagnostic Clinic, a consultation service offered to referring physicians, is operated by the General Academic Pediatrics faculty. Division members have broad expertise, with special interest in failure to thrive; adoption medicine; community pediatrics; advocacy; urinary tract infections; voiding dysfunction; adolescent health care; sports medicine; the effect of media on children; health care needs of gay and lesbian youth; international child health; endocrinology; developmental delay; attention deficit hyperactivity disorder; and care of the child with special health care needs.

Members of General Academic Pediatrics are recognized for their interest and expertise in the education of students at all levels of pediatric education: PA students; medical students; residents (Pediatrics, Med-Peds, Family Medicine, and others); and community physicians. Dr. Jay Noffsinger, the Medical Student Education Coordinator, has been awarded the last four Golden Apple Awards by the graduating classes from the School of Medicine, and the Division has won six of the last seven such awards. Members of the Division have been awarded innumerable teaching awards by the residents in pediatrics, and have been cited as excellent teachers by several other disciplines. Teaching is provided at University Pediatrics; on the general ward services; through formal and informal conferences for students and residents; in specialty clinics staffed by General Academic Pediatrics faculty; and through coordination of Continuing Medical Education seminars for community physicians.

Advocacy for the needs of all children, but particularly for the underserved, is a major focus of the Division of General Academic Pediatrics. Division members serve on countless community boards, including the State of Missouri Child Abuse and Neglect Review Board, Vision for Children at Risk, Catholic Charities, Missouri Chapter of the American Academy of Pediatrics, Special School District, Headstart, and many others. Dr. Sarah Legett has developed a model program for immersion of residents in the community, through the Community Health Elective.
Sarah M. Legett, MD is investigating the etiologies of conjunctivitis in children, in conjunction with the Department of Pediatric Ophthalmology. She is studying the impact of medical practitioner spiritual and religious beliefs on the care of patients, in collaboration with the Department of Psychology. A third area of investigation for Dr. Legett is the health status of Bosnian refugee children, a study on which she is working with the Division of Neonatology.

M. Susan Heaney, MD, MPH is working with Chief Resident Jean Wagner, MD, presented a poster at the Pediatric Academic Societies Meeting in May of 2002, “Adolescent Health Care in a University-Based Resident Continuity Clinic.” She is also pursuing an interest in Data Base Management of Resident Continuity Clinics.

Mark C. Eddy, MD is a co-investigator on several studies related to the management of short stature with growth hormone, including small for gestational age children and growth hormone deficient children.

David P. Dempsher, MD, PhD is preparing background information for research projects related to medications in Type II Diabetes Mellitus and related to long-term outcomes of gender assignment.

Shahida R. Naseer, MD is actively involved in several studies related to voiding dysfunction syndromes, particularly evaluation of vesico-ureteral reflux in infants. These studies are in collaboration with the Saint Louis University Department of Urology.

Honors

1. Fete, TJ: Featured for excellence in teaching in “Grand Rounds”, a publication for Saint Louis University Medical Alumni in “Teaching to Learn”; Reviewer National Foundation for Ectodermal Dysplasias research fund.


4. Legett, SM: Community Service Award, St. Louis Children’s Home Society.

5. Noffsinger, JE: Golden Apple Award, Saint Louis University School of Medicine School of Medicine (4th consecutive year!); Inducted into the Saint Louis University Chapter of the Alpha Omega Alpha Honorary Medical Society, Faculty Member; Keynote speaker Saint Louis University School of Medicine Class of 2005 White Coat Ceremony; Listed in 2002 America’s Top Doctors Guide, published by Castle Connely Medical Ltd; featured for excellence in teaching in “Grand Rounds”, a publication for Saint Louis University Medical Alumni in “Teaching to Learn.”

Presentations


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INTRODUCTION AND DESCRIPTION

The Division of Medical Genetics provides genetic evaluation and counseling for families and individuals with a known or suspected genetic disorder. Genetic services are provided through the following clinics/services:

- Medical Genetics Clinic (CGCH)
- Multidisciplinary Clinics (CGCH)
  - Cleft Lip and Palate Clinic
  - Neurofibromatosis Clinic
- Outreach Clinics
  - Cape Girardeau, MO: St. Francis Center for Health and Rehabilitation
  - Sikeston, MO: Missouri Delta Medical Center
  - Edwardsville, IL: Madison County Health Department
- Inpatient Genetic Consultation Service
- Prenatal and Post-Conceptional Genetics Clinic (SMHC)

Primary reasons for referral to the Medical Genetics and Outreach Clinics include developmental delay, dysmorphic features, failure to thrive, suspected metabolic disorder, abnormal newborn screen, and genetic counseling for diagnosed genetic disorders. Referrals for evaluation of abnormal newborn screens are anticipated to increase significantly due to the recent expansion in the scope of the screens mandated by the states of Missouri and Illinois. While most patients evaluated in the Medical Genetics Clinics are children, adults are also seen for diagnostic evaluation/presymptomatic screening for genetic disorders such as Marfan Syndrome and Huntington Disease, in which symptoms may appear later in life. The Genetic Division also operates the Gaucher Disease Treatment Center in the Costas Center.

The molecular cytogenetics laboratory at SSM-Cardinal Glennon Children's Hospital offers a comprehensive, state of the art test menu, which includes testing on chorionic villus samples, amniotic fluid, products of conception, peripheral blood, bone marrow and solid tumors. The lab also offers fluorescence in situ hybridization testing. The laboratory currently completes approximately 300 prenatal, 800 bone marrow and 500 blood and tissue analyses per year. The laboratory is staffed by seven full-time cytogenetic technologists. The director, Jacqueline Batanian, PHD., is board certified in clinical cytogenetics.

Members of the Division of Medical Genetics are actively involved in education at many levels. The first year medical student lecture series on Genetics is primarily taught by members of the division. Medical students, pediatric residents and college students rotate through the Medical Genetics Clinic. Lectures are provided for the third year medical student pediatric clerkship, for the pediatric residency curriculum and for the neonatology fellows. Many presentations are provided throughout the year in the Bi-State area for students, health professionals and family support groups. Visits are made to referring physician offices in Madison County, IL and in Southeast Missouri, to promote outreach clinics and to educate staff regarding appropriate referrals to the clinics.
**FACULTY**

**Timothy J. Fete, MD, MPH,**
Professor of Pediatrics and Interim Division Director, Medical Genetics

**Jacqueline Batanian, PhD,**
Professor of Pediatrics, Director Molecular Cytogenetics

**Meg Hefner, MS, CGC,** Assistant Clinical Professor of Pediatrics

**Kathy Morris, MS, CGC,** Instructor of Pediatrics

**Laura Waldman, MS, CGC,** Instructor of Pediatrics

**RESEARCH HIGHLIGHTS**

The Division of Medical Genetics is involved in a broad array of research projects.

1. **Jacqueline Batanian, PhD** is currently investigating cancer breakpoints in Fanconi anemia; complex chromosome rearrangement in osteosarcoma, using regular G-banding plus FISH plus GH; and identification of the gene responsible for trisomy 8 in leukemia.

2. **Timothy J. Fete, MD, MPH** is participating in two studies related to patients with ectodermal dysplasia syndromes. One is assessing growth parameters and the other is assessing cognitive function in children affected by ectodermal dysplasia.

3. **Meg Hefner, M.S., C.G.C.** is involved with research on the natural history of CHARGE syndrome, with a new interest in growth and behavior in CHARGE syndrome.

4. **Kathy Morris, M.S., C.G.C.** has recently been working on chromosome 8 deletion studies, as well as mosaic trisomy 16.

**PUBLICATIONS**


4. **Batanian JR, Vadlamani I, Ma E, Brink DS.** Trisomy 15 in a case of pediatric hemangioendothelioma and a review of the literature. Accepted in Cancer Genetics and Cytogenetics, accepted 2002 April.

5. **Batanian JR, Zahed L, Darwiche N, Awad J.** Homologous telomere association of 19q in a female with premature ovarian failure. Accepted in Clinical Genetics and Cytogenetics, accepted 2002 June.


**PRESENTATIONS**


**GRANTS**

**T. Fete, MD-PI**

Missouri Department of Health #502503
Tertiary Genetic Center Grant 02 yr $164,421

**T. Fete, MD-PI**

Illinois Department of Public Health #500441
Genetic Counseling Clinical Services Program Grant 02 yr $46,000

**HONORS**


2. **Fete, TJ:** Reviewer. National Foundation for Ectodermal Dysplasias research fund.

3. **Hefner, MA:** Recognized at the International CHARGE Syndrome Conference for dedication and service, July 2001. Reviewer: Clinical Medicine and Research; Editor, CHARGE Accounts, the quarterly newsletter of the CHARGE Syndrome Foundation.
INTRODUCTION AND DESCRIPTION

The Division of Pediatric Gastroenterology and Hepatology cares for infants, children, and adolescents with a variety of gastrointestinal and liver diseases. The largest percentage of our patients have various complications due to gastroesophageal reflux disease. Gastroesophageal reflux disease is a common reason for referral because of infants having intractable regurgitation or colicky pain or both. It is also a common reason for a referral because of recurrent abdominal pain in childhood and adolescence. Our Division also treats a wide variety of motility problems ranging from constipation in younger children to irritable bowel syndrome in older children and adolescents. We also have more than 150 patients with inflammatory bowel disease, Crohn's disease and ulcerative colitis that are followed in our gastroenterology clinics. We have an active service caring for infants and children with short bowel syndrome, many of whom end up on long term total parenteral nutrition and some of whom have had small and liver transplants. We have a very active liver transplant program.

Our Division has a very successful liver transplant program for infants and children with chronic liver disease as well as acute fulminant liver failure. In the past five years we have had a 95% survival in infants and children receiving their first liver transplant, which is one of the best success rates in the country.

The Weight Management Program at Cardinal Glennon Children’s Hospital is a very novel multidisciplinary approach to the treatment of overweight children and adolescents. The Weight Management Programs includes an integrated approach to the care of these children with nutritionists and psychologists. Cardinal Glennon is one of the few children’s hospitals in the Midwest to have established the Weight Management Program.

We also have very active outpatient services in South County, Kirkwood, St. Charles and Jefferson City.

Kathleen Spranaitis, RN, PNP, has joined the Division as a Pediatric Nurse Practitioner, in June 2002, she will significantly help expand our capacity to see outpatients with gastrointestinal problems. Mrs. Spranaitis has over 20 years of experience as a nurse and 8 years as a Pediatric Nurse Practitioner. This wealth of experience will serve her well in her new responsibilities caring for our gastroenterology patients at Cardinal Glennon.
DIVISION OF GASTRONENTEROLOGY & HEPATOLGY

FACULTY

Robert E. Kane, MD, Professor of Pediatrics and Director of the Division of Pediatric Gastroenterology and Hepatology

Thomas M. Foy, MD, Associate Professor of Pediatrics

Sarah E. Barlow, MD, Assistant Professor of Pediatrics

Chenitra Akridge, Medical Secretary

Stefanie Moore, Senior Patient Coordinator

Karen Avant, RN

Kathleen Spranaitis, PNP

RESEARCH HIGHLIGHTS

Dr. Robert Kane has participated in a multicenter study on safety and efficacy of Prevacid in the treatment of gastroesophageal reflux disease in infants, children and adolescents. These studies which involved ten children’s hospitals validated the safety and efficacy of Prevacid. A series of six articles were published in the November issue of Pediatric Gastroenterology and Nutrition. Dr. Kane is one of the principle investigators in the studies for Pediatric Liver Transplantation (SPLIT). This is a registry of Liver Transplant patients that includes collaboration from 38 Pediatric Liver Transplant Centers. The registry was used as a database to devise and validate a new priority system for allocation of livers for pediatric transplant patients.

Dr. Thomas Foy has recently revised his chapter in the textbook “Pediatric Gastrointestinal Diseases”. This chapter deals with feeding disorders in infants and children. Dr. Foy is Chairman of the Nutrition Advisory Committee and directs the Nutrition Support Service at Cardinal Glennon Hospital.

Dr. Sarah Barlow is a nationally recognized authority in the field of childhood obesity. She has been the senior author on a series of six articles that were published as a supplement to the journal of pediatrics. She has currently submitted an application to the national institute of health for a Mentored Career Award.

PUBLICATIONS


HONORS

1. Kane, RE: Listed in the 2002 guide and only one of a thousand “Best Doctors in America”; Dr. Kane was a member of the Medical Advisory Board of the St. Louis Chapters of the American Liver Foundation and the Crohn’s and Colitis Foundation of America.

2. Barlow, SE: Advisory committee for the Commission on Dietetic Registration’s “Certificate of Training in Pediatric and Adolescent Weight Management”, American Dietetic Association 2002; General Clinic Research Center Advisory Committee, Saint Louis University School of Medicine, 2002

PRESENTATIONS

1. Barlow, SE “Pediatric weight management for the primary provider” Pediatric Academic Societies annual meeting; May 2002, Baltimore, MD

INTRODUCTION AND DESCRIPTION

Members of the Division of Hematology and Oncology diagnose and treat children with cancer, sickle cell disease, other hematologic diagnoses, and disorders of platelets and granulocytes. Care ranges from outpatient consultation to stem cell transplantation. Members of the division participate in educational activities at multiple levels within the School of Medicine, Cardinal Glennon Children's Hospital and a two hundred mile hospital referral area.

The Division is a full member of the Children's Oncology Group and actively participates in national protocols investigating new therapies as well as the biologic behavior of childhood malignancies. The Saint Louis Cord Blood Bank collects, processes and preserves cord blood derived stem cell for use in stem cell transplantations here and throughout the world. A regional co-operative program with other caregivers is being established to improve treatment and foster needed research for children with sickle cell disease.

Research Highlights

Richard Cahill, MD - We are investigating a new method of bone marrow transplant. Our aim is to replace the bone marrow stroma, which is not replaced with a conventional bone marrow transplant or with cultured mesenchymal cells. Animal studies have demonstrated that bone fragments and/or osteoblast-like cells placed intraperitoneally or directly into bone can replace the stroma. The cells can enhance engraftment and tolerance. Also these cells have the potential to develop into cells of ectoderm and endodermal origin as well as mesoderm and therefore could potentially replace abnormal or damaged tissues. An IRB protocol is pending to treat children with fatal and deforming bone diseases (Osteogenies imperfecta, hypophosphatasia and osteopetrosis) with this new method.

Cord blood has been used extensively to treat malignant and genetic diseases without increasing the incidence of GvHD. We have applied for an NIH grant to study the potential of cord blood to treat bone diseases using a mouse model (SCID/SCID). Our hypothesis is based on work that was done in part at the St. Louis Cord Blood Bank showing that cord blood contains more primitive osteoprogenitors than bone marrow. If they are placed directly into bone or IP, the primitive cells can migrate to bone and correct the osteoblast-osteoclast deficiency. Because they can develop into other tissues including endothelial cells this potentially could be used to treat other genetic diseases.

Michael Creer, MD - At the St. Louis Cord Blood Bank and at St. Louis University Coagulation Consultants, we are also actively involved in basic and applied clinical research in the areas of stem cell biology, general hematology and hemostasis/thrombosis. We are currently engaged in several collaborative projects to study the
processes of hematopoietic stem cell (HSC) differentiation and engraftment kinetics in xenotransplant models, stem cell trafficking, atherogenesis, platelet-endothelial cell interactions and to develop and implement new laboratory approaches to the diagnosis of bleeding and thrombotic disorders.

One of the primary goals of our research at the St. Louis Cord Blood Bank is to investigate the potential of hematopoietic stem cells in the treatment of chronic vascular diseases related to abnormal lipid metabolism such as atherosclerosis, to investigate the role of endothelial cells as stromal elements capable of supporting the hematopoietic stem cell compartment and the role of phospholipid-derived second messenger molecules in the unique biology of stem cells.

Jen-Yih Chu, MD, PhD - Children’s Oncology Group clinical pediatric ematology/oncology studies. Sickle cell clinical studies related to cerebral vascular accidents.

Analysing published hematology data to probe the ethnic relationship between Taiwanese (aboriginal groups/Chinese immigrants), Chinese, and Southeast Asians.

**Publications**


13. Puetz J, Patty the Platelet 2001


15. Puetz J, and Thrower M, Thrombophilia, a guide for patients and their families 2002

**Cord Blood Bank**


**ABSTRACTS**


Presentations


2. Cahill RA, “Importance of stromal cell in hematopoiesis.” Stem Cell Conference, Department of Hematology-Oncology, Saint Louis University School of Medicine, Nov 2001.


5. Cahill RA, Treatment of hypophosphatasia with bone marrow transplantation. Shriner’s Hospital, Jan 02.


8. Chu JY, “Biomedical Aspect of Taiwanese Ethnicity” at San Jose Community Center to group of Taiwanese physicians, professors and others 11/10/01

9. Chu JY, “Early Taiwanese Bioscientist’s Studies in Europe and North America” San Diego, Convention Center at Taiwanese Bioscientists of America annual meeting during National Neuroscience Convention (as keynote speech after receiving Annual Service Award from Taiwanese Bioscientists of America)

10. National Hemophilia Meeting: Comprehensive Care 2001

11. NIH Hemophilia Region VII Meeting: Laboratory Analysis during Comprehensive Care 2002

12. HTC First Steps Program: Factor Update; Von Willebrand Disease 2001/2002

13. APON: Von Willebrand Disease 2002

Cord Blood Bank


Grants

R. Cahill, MD - PI
Potential of unrelated cord blood for repair or regeneration of skeletal tissue
Fleur-De-Lis $10,000

M. Kelly, MD, PhD - PI
Increasing Blood and Cord Blood Donations in Blacks. R01 DK062619-01 (Principal Investigator M. DeBaun)
9/22/02 - 6/15/07 NIH $ 150,000

M. Kelly, MD, PhD - PI
State of Missouri, Principle Investigator Michael DeBaun, Hemoglobinopathy (Sickle Cell) Resource Center, 07/22/02 - 06/30/07 $130,000 direct costs

MH Creer - PI
(30% effort), Mechanisms and Functional Coupling of a Ca-Independent PLA2 with Thrombin-Receptor Stimulation in Endothelial Cells, 2002-2004, American Heart Association (Heartland Affiliate) $130,000

MH Creer. PhD Co-Investigator, (10% effort)
Plasmalogen metabolism by iPLA2 in Ischemic Myocardium 10/1/01 - 9/30/06, National Institutes of Health $1,104,000

MH Creer. PhD Co-Investigator, (10% effort)
Tryptase-stimulated phospholipase A2 in the bladder, 4/1/02 - 3/30/96 National Institutes of Health $1,036,000

MH Creer. PhD Co-Investigator, (5% effort)
Novel PLA2 in Oxidant-Induced Renal Cell Oncosis. 12/01/01 - 11/30/04 National Institutes of Health 390,989
INTRODUCTION AND DESCRIPTION

The purpose of the Division of Hemostasis and Thrombosis is to provide multidisciplinary care and to facilitate clinical research for patients with the chronic disorders of inherited coagulopathies, thrombophilia, and HIV exposure/infection. A team approach utilizing a specialized staff of nurses, social workers, physical therapists, and physicians work with patients and their families to promote independence, understanding and prevention of long term disabilities.

Types of treatments offered include care for the acute and chronic manifestations of the coagulopathies, thrombophilia and HIV/AIDS. Special services include a Comprehensive Hemophilia Clinic which provides the multidisciplinary care for patients with chronic disorders of inherited coagulopathies, and the HIV/AIDS clinic which provides comprehensive care including pediatrician/hematologist, immunologist and nursing coordination for the individual patient's care.

EDUCATIONAL PROGRAM

The Division of Hemostasis and Thrombosis, being a tertiary specialty, relies on extramural as well as intramural referrals to maintain the scope of services necessary to maintain their center of excellence designation.

Lecture series are given to the following groups

1) Physical therapy students  
2) Nursing personnel  
3) Dental students (SIU Southern Illinois University Alton, Illinois Campus)  
4) Noon Conferences for house staff  
5) Lecture series for industry

Conferences Outreach Programs, etc.

1) Hemostasis Rounds (Pediatrics)  
2) Multiple Lectures to Lay and Professional groups on Hemostasis and AIDS  
3) Outreach Program Presentations to schools, parent groups, paternal organizations, and professional organizations, etc. on Hemophilia/AIDS  
4) Combined adult/pediatric Hemostasis Conference Weekly  
5) Quarterly Newsletter Re: Hemophilia Center Activities

Student and Resident Electives for Hemophilia/AIDS Services Weekly

Preceptorships

1) Junior medical students  
2) Senior medical students  
3) Pharmaceutical and industry representatives
RESEARCH HIGHLIGHTS
Therapy of Chronic Persistent Hepatitis: Chronic persistent hepatitis, due to hepatitis C, has been recognized in approximately 95% of hemophiliacs who were treated with factor concentrates prior to 1988. Therapy at the Division of Hemostasis and Thrombosis with Interferon had a very poor outcome giving a persistent improvement in only 6% of the patients treated. Subsequently, therapy including Ribavirin and Interferon Alpha was initiated through a study supported in part by Shearing Plow Pharmaceutical Companies and showed a marked increase in the resolution of the hepatitis on long term follow-up to approximately 30%. Recent reports in the literature have shown that the use of pegalated Interferon without Ribavirin has been seen to give a sustainable response of between 40 to 52 percent. These studies have been performed primarily in adult males and not in pediatric or adolescent children. A post marketing stage four study has been initiated with the former patients who had no response to the Interferon and Ribavirin, with the combination of pegalated Interferon and Ribavirin. It is estimated that 60 to 70 percent of these individuals will have a beneficial response. An ongoing grant funded by the office of Maternal and Child Health and in combination with the Center for Disease Control relative to the benefits of comprehensive care of children with bleeding disorders and the prevention of complications of hemophilia has been ongoing since 1982. Data relative to hospitalizations and their length of stay, surgical procedures, outcomes of complications such as inhibitors, hepatitis and the arthropathies, and outcome data relative to HIV and deaths, sexual activities, heterosexual spread to significant others, number of pregnancies among HIV positive and at risk couples, and the number of HIV positive infants with their outcome were collected and collated. A recent report by J. M. Soucie of the Center for Disease Control has shown that those patients with hemophilia who had received care in a Hemophilia Treatment Center had a significantly decreased risk of death (40%) as compared to individuals who received their medical care in other setting including care given by hematologists.

PUBLICATIONS
2. Puetz, J. MD; Bouhasin, J. MD, Use of Recombinant Factor VIIa to control bleeding in an adolescent male with severe hemophilia A, HIV, Thrombocytopenia, Hepatitis C, and End Stage Liver Disease. American Journal of Hospice and Palliative Care 2002 July/August; Vol. 19, No. 4, pp. 277-282

PRESENTATIONS
4. Bouhasin JD. “Recognition of Bleeding Episodes, Appropriate Response”. Presented at the Hemophilia Update Seminar for Patients with Mild/Moderate Hemophilia or Patients on Prophylaxis, Cardinal Glennon Children’s Hospital St. Louis, MO, April 27, 2002
5. Puetz JJ. “von Willebrand’s Disease 101”. Presented at a First Steps Seminar St. Mary’s Hospital, St. Louis, MO, July 2001.
GRANTS

1. **J. Bouhasin, M.D.** PI. Prevention of Complications of Hemophilia
   Competitive Renewal
   10/01/01 - 09/30/02 ($60,642)
   10/01/02 - 09/30/03 ($60,642)

2. **J. Bouhasin, M.D.** PI. Great Plains Regional Hemophilia Center (MCHB)
   Competitive Renewal
   06/01/01 - 05/30/02 ($58,063)
   06/01/02 - 05/30/03 ($58,063)

3. **J. Bouhasin, M.D.** PI. Bi-State Hemophilia Association Grants:
   Award for ancillary laboratory charges ($50,000) funded and open-ended
   Habilitative and rehabilitative program for hemophiliacs ($36,000) funded and open-ended

4. **J. Bouhasin, M.D.** PI. Caremark Home Health Agency Grant:
   For salary and center support ($37,500) funded and open-ended

5. **J. Bouhasin, M.D.** PI. Saint Louis Hemophilia Association Grant:
   Comprehensive hemophilia funding ($17,500) funded and open-ended

6. **J. Bouhasin, M.D.** PI. National Hemophilia Foundation:
   HIV risk reduction ($3,000) funded and open-ended

7. **J. Bouhasin, M.D.** PI. Hill Foundation:
   Hemophilia Center Grant for support and education,
   11/01/01 - 10/31/02 ($38,425)
   11/01/02 - 10/31/03 ($30,715)

8. Nicholas Barr Foundation: (gift)
   10/16/00 ($7,136.92)
   5/13/02 ($150)

9. Dana Brown Foundation: (endowment)
   09/16/97 - 09/16/99 ($600,000) funded
   Earnings from endowment to 6/30/02 ($98,481)

10. Hemophilia Research
    Funded and Open-ended ($51,892)

11. Bi-State Hemophilia Health Care for Hemophilia Patients
    Funded and Open-ended ($16,891)

N. B. Grants 1, 2, and 7 are competitive renewal grants and rely on performance and application yearly. Grant 9 is a permanent endowment for which we receive the greater of 5% of the principle or all income derived from investment of the endowment. The rest of the grants listed have all been funded and are open-ended until completely utilized (letter from grantors as to this fact on file).
INTRODUCTION AND DESCRIPTION

The purpose of the Pediatric Infectious Disease Division is to provide state-of-the-art care to pediatric patients with acute and chronic infectious diseases, to educate medical students, residents, and community physicians on the latest advances in the field, and to perform leading edge research in our chosen areas of specialization.

Treatment is offered for all varieties of pediatric infectious disease problems for patients ranging in age from the newborns to young adults.

FACULTY
Stephen J. Barenkamp, MD, Professor of Pediatrics; Director of the Pediatric Research Institute; Director of Pediatric Infectious Diseases; and Vice Chair for Academic Affairs
Theresa Forsythe, Medical Secretary
Linda Winter, Laboratory Assistant

RESEARCH HIGHLIGHTS
Immunization with Nontypable Haemophilus influenzae (NTHI) High Molecular Weight (HMW) Adhesion Proteins Induces Opsonophagocytic Antibodies (Abs) against Both Homologous and Heterologous Strains was presented by Stephen J. Barenkamp at the 39th Annual Meeting of the Infectious Diseases Society of America, San Francisco, CA, 2001.

PUBLICATIONS

HONORS
Ad Hoc Manuscript Reviewer: Journal of Infectious Diseases, New England Journal of Medicine, Pediatrics, Pediatric Infectious Diseases Journal, Vaccine; Study Section Member, Integrative, Functional and Cognitive Neuroscience 6 (IFCN-6) Study Section [Hearing Research], National Institutes of Health; Ad Hoc Study Section Member, Special Emphasis Panel for NIDCD R21 Grants, National Institutes of Health, November, 2001; Ad Hoc Study Section Member, Special Emphasis Panel for NIDCD R03 Grants, National Institutes of Health, March, 2002; Ad Hoc Study Section Member, IFCN-4 Special Emphasis Panel, National Institutes of Health, April, 2002.

PRESENTATIONS

GRANTS
Stephen J. Barenkamp, MD - PI
NIH R01 AI 48066-02
Title: Role of Haemophilus influenzae HMW adhesion proteins in host immunity
02 yr $175,00000/01/01-06/30/02
03 yr $175,00000/01/02-06/30/03
The purpose of the Division is to provide exemplary neonatal care, continue to build outstanding programs of public and professional education, contribute a wide variety of productive research, and to help fulfill the mission of the Department of Pediatrics.

Venues of neonatal care include the Neonatal Intensive Care Units at St. Mary's Health Center and Cardinal Glennon Children's Hospital, the Neonatal Transport Team of Cardinal Glennon Children's Hospital, the pre and perinatal consultation services at St. Mary's Health Center, consultation services at Forest Park, DePaul, St. Joseph's Health Center; St. Charles, St. Joseph's Hospital; Kirkwood and Belleville Memorial Hospitals and the Multidisciplinary High Risk Infant Follow-Up Clinics. The faculty lead and participate in quality improvement efforts for each of these clinical efforts.

Education opportunities and/or didactic sessions are provided for Saint Louis University undergraduates, medical students, SLU residents in Pediatrics, Pediatrics, Pediatrics/Internal Medicine, Obstetrics and Neonatal Perinatal Medicine. Members of the Division participate in a variety of educational opportunities for undergraduate and graduate nurses and respiratory therapists. An important educational effort is the regional perinatal education program. In cooperation with faculty of Obstetrics and Cardinal Glennon/St. Mary's nursing leadership, the faculty regularly engage members of the medical and nursing staffs of forty referring maternity services in educational and quality improvement exercises.

Divisional research includes public health, clinical and bench research. Included are understanding mother's motivation for and obstacles to prenatal care services, examination of language and other social barriers to effective care, defining obstacles to regional education and exploring important intensive care topics such as sedation, pain control, disturbances of respiratory rhythm and treatment of pulmonary hypertension.

Currently major investments of time and effort are devoted to outcomes research with a major emphasis on long term well being of NICU survivors. Bench research including iron homeostatis and pulmonary development are key portions of the Divisional research profile.

The residency program in Neonatal Perinatal Medicine deserves special attention. Currently there are four GME funded positions. These individuals will be key policy, educational and research leaders of the future. Formal courses in epidemiology, statistics and physiology, intensive bedside instructions in research and close mentoring relationship with the faculty are key ingredients in this preparation.
**FACULTY**

William J. Keenan, MD, Professor of Pediatrics and Director of the Division of Neonatal-Perinatal Medicine  
Akihiko Noguchi, MD, Professor of Pediatrics  
Suzanne S. Toce, MD, Professor of Pediatrics  
H. Farouk Sadiq, MD, Professor of Pediatrics  
Gregory J. Mantych, MD, Associate Professor of Pediatrics  
Robert E. Fleming, MD, Associate Professor of Pediatrics  
Corinne Walentik, MD, Professor of Pediatrics  
Vijay K. Nama, MD, Assistant Professor of Pediatrics  
Ayoob Ali, MD, Assistant Professor of Pediatrics  
John Ahmann, DO, Fellow  
Nancy Apsey, MD, Fellow  
Vicki Shipp, Administrative Secretary  
Lisa McNeil, Medical Secretary  

**RESEARCH HIGHLIGHTS**

F. Sadiq, MD - Research study of inhaled nitric oxide for persistent pulmonary hypertension in the newborn (PPHN) has been completed. The manuscript for the randomized portion of the study was submitted to the Journal of Pediatrics but was not accepted. It has been resubmitted with revisions to the Journal of Perinatology. Data for the rescue patients is in the process of being analyzed and should be ready for submission soon.

S. Toce, MD - With our research team headed by Elena Andersen, PhD, I am completing the analysis and manuscript preparation for the following projects supported by RWJF:
1. Provider’s perceptions of pediatric palliative care education and service needs.
2. Conducting focus groups of bereaved parents.
4. Hospital charges in the last 6 months of life for children.
5. FOOTPRINTS model of pediatric palliative care.
6. Assessment of care around the time of death: A physician and nurse survey.
7. Results of post death interviews of bereaved parents.

R. Fleming, MD performs laboratory-based research investigating the molecular basis for iron homeostasis. Iron is an important co-factor in the cellular injury associated with increased oxidant stress (e.g., inflammation, use of supplemental oxygen). His primary focus is characterizing the role for a recently discovered second transferring receptor (TfR2) in regulating the intestinal uptake of dietary iron and the distribution of tissue iron between sites of storage and utilization. His laboratory has generated a murine: knockout of the TfR2 gene. This transgenic mouse model is being studied and compared with mice in which the HFE gene (responsible for hereditary hemochromatosis) has been knocked out. Interactions between TfR2 and JFE are being studied in cell culture systems. The roles for TfR2 and the iron regulatory hormone hepcidin in the altered iron metabolism observed during inflammation are also being investigated. These studies will allow for a better understanding of the means by which the body regulates the dietary uptake and cellular distribution of iron in normal and pathologic states. Dr. Fleming’s laboratory in the Pediatric Research Institute works closely with the Iron Research Group at Saint Louis University.

**PUBLICATIONS**


**Presentations**


2. **Fleming RE**: “Characterization of a Second Transferrin Receptor” Pediatric Grand Rounds-University of Missouri School of Medicine, 2001.


15. **Toce S.** “To Cure Sometimes, To Comfort Always.” Advances in Pediatric Palliative Care Conference, Naperville, IL 9/19, 9/20/01.


17. **Toce S.** “Respiratory distress in the term newborn”. Practical Pediatrics, 3/13/02.


20. **Walentik CA**: Presentation on early intervention to Illinois 0-3 program personnel through the Perinatal outreach grant, 2001.


23. **Walentik CA**: Presentation on health care access at St. Louis Ethical Society, 2002.


27. **Walentik CA**: Housestaff orientation lecture - Managed care
Grants

R. Fleming, MD

- RO1-DIC 53405-01, Co-Investigator
  - Principal Investigator: William S. Sly
  - Functional Studies of the Gene Defective In Hereditary Hemochromatosis
  - 25% effort, $927,787 (total awarded)
  - 3/1/98-2/29/03

R. Fleming, MD

- R01 HL 62491-01, Subcontract
  - Principal Investigator: David Carlton
  - Lung Epithelial Transport After Premature Birth
  - $316,605
  - 9/1/99-8/31/03

R. Fleming, MD

- R01 HL 6625-01, Principal Investigator
  - Iron Transport in a Murine Model of Hereditary Hemochromatosis
  - 7/2/00-6/30/05
  - $750,000 (direct costs)

W. Keenan, MD

- Southern Illinois Perinatal Education and Administration - Illinois
  - Department of Health - $358,000/year
  - Southeastern Missouri Perinatal Outreach Education
  - 1987-Present

W. Keenan, MD

- Co-Investigators Greg Mantych, MD, Carol Hoeman, Jeff Mayer
  - Development and Evaluation of an Intervention to Improve Utilization of Prenatal Care
  - Source: March of Dimes
  - $50,612

W. Keenan, MD

- Principal Investigator
  - Source: Fleur de Lis
  - Non-Pharmacologic Interventions for Procedural Pain in Neonates
  - 2002 - 2003
  - $3,000

S. Toce, MD

- Robert Wood Johnson Foundation, 2001. $15,000
INTRODUCTION AND DESCRIPTION

The Division of Pediatric Nephrology in the Department of Pediatrics of Saint Louis University provides comprehensive care for infants, children, and adolescents with various forms of kidney or urologic disorders. Care is provided for both acute and chronic disorders with a multidisciplinary team, including physicians, renal nursing, renal dietician, renal social worker, and play therapist. Members of the division are involved in teaching of medical students, residents, community physicians, and families, and participate in various clinical research studies. The division is housed at Cardinal Glennon Children’s Hospital.

Types of treatment offered include renal biopsy, acute and chronic hemodialysis, acute and chronic peritoneal dialysis, including a peritoneal training program, acute hemofiltration, renal transplantation, and ambulatory blood pressure monitoring, in addition to inpatient and outpatient care and consultative services.

Services are provided for a variety of kidney disorders, including congenital and hereditary disorders involving the kidney and urinary tract, urinary tract infections, kidney stones, hypertension, acute and chronic glomerular and tubular disorders and renal diseases that occur secondary to a variety of systemic diseases, such as systemic lupus erythematosus, diabetes mellitus, and vasculitis. The division provides primary management of renal transplant recipients along with members of the Transplant Surgery service.

The division began a renal transplant program in 1983. Since that time, approximately 90 transplants have been performed. The division currently follows approximately 40 renal transplant recipients of cadaver/living donation. Cadaveric, living related and living unrelated donation is currently performed.

The division has a special interest in hypertension, and has a weekly clinic for patients with primary hypertension.

Educational programs address training of pediatric residents, family practice residents, and medical students, as well as community programs for families of children with renal disease and CME activities for community physicians.
RESEARCH HIGHLIGHTS
The division participates in the Southwest Pediatric Nephrology Study Group, a multicenter group of institutions with the purpose of improving care of infants and children with kidney disease. During the past year, the division has participated in 2 clinical studies: (1) A Randomized, Placebo-Controlled Multicenter Trial Evaluating A) Alternate-Day Prednisone vs B) Fish Oil Supplements in Young Patients with IgA Nephropathy: (2) Pilot Study of Mycophenolate Mofetil in Children with Steroid-Dependent Nephrotic Syndrome.

The division participates in the North American Pediatric Renal Transplant Cooperative Study, a registry for Transplant, Dialysis, and Chronic Renal Insufficiency patients. Numerous studies are ongoing from registry data.

The division also participates in the International Pediatric Hypertension Association Study Group.

PUBLICATIONS


HONORS

1. Belsha, CW: Reviewer for Pediatric Nephrology, American Journal of Hypertension; Community service: renal camp for children with end stage renal disease and post renal transplant, patient education day for families of children with kidney disease, cosponsored with St. Louis Children’s Hospital and the National Kidney Foundation.
2. Wood EG: Best Doctors in America; Reviewer for American Journal of Kidney Disease, Pediatric Nephrology; Community service: renal camp for children with end stage renal disease and post renal transplant; patient education day for families of children with kidney disease cosponsored with St. Louis Children’s Hospital and the National Kidney Foundation.

PRESENTATIONS


GRANTS

E Wood, MD - PI
A Pilot Trial of Mycophenolate Mofetil (MMF) in Children with Steroid Dependent Nephrotic Syndrome
Medical City Dallas Hospital/Merck
4/6/01 - 4/6/03 $4200.00/patient
INTRODUCTION AND DESCRIPTION

The Division of Pediatric Emergency Medicine has primary responsibility for the care of patients at Cardinal Glennon Children’s Hospital Emergency Department and is a Level I Pediatric Trauma Center. In the past year over 37,000 children were seen in our Emergency Room including 181 trauma stats. 12% of our visits result in 50% of the yearly admissions to the hospital including 439 PICU admissions. The PEM Division coordinates and is responsible for medical control to our transport team for all referrals that need our team’s assistance. 24 hours a day a member of the department is on site and available for assistance in patient care, discussion for the need to transfer, and needed transport team support.

As an institution of medical education numerous trainees of varying levels of pediatric exposure receive training in our Emergency Room. We are proud to have offered over 16 years of PACTS/PALS courses to over 4788 physicians, nurses, EMT’s, paramedics, respiratory therapists. Most recently we have initiated a WEB PALS course, making onsite time commitment and access to this educational venue much more user friendly to the health care provider. It should be noted that observational experiences are available in our emergency room.

FACULTY
Richard C. Barry, MD, Professor of Pediatrics, Director of Pediatric Emergency Medicine, Director of Pediatric Residency Training Program
Faye E. Doerhoff, MD, Assistant Professor of Pediatrics, Associate Director of Pediatric Emergency Medicine
James M. Gerard, MD, Assistant Professor of Pediatrics
Steven P. Laffey, MD, Associate Professor of Pediatrics
Albert K. Nakanishi, MD, Associate Professor of Pediatrics, Co-Director of Pediatric Emergency Medicine Fellowship Program
John R. Peter, MD, Associate Professor of Pediatrics, Co-Director of Pediatric Emergency Medicine Fellowship Program, Associate Director Emergency Medicine Transport Team
Ann D. Ricci, MD, Assistant Clinical Professor
Anthony J. Scalzo, MD, Professor of Pediatrics, Medical Toxicologist & Medical Director of the Regional Poison Control Center, Director of Toxicology
Scott O. Davis, MD, Fellow
Asha Kumar-Verraswamy, MD, Fellow
Diliane C. Pelikan, MD, Fellow
Danette Kurtzeborn, Medical Secretary

RESEARCH HIGHLIGHTS
Dr. James Gerard’s research into Web Based PAL’s is an internet-based course designed to teach the didactic portion of the AHA’s Pediatric Advanced Life Support Course via the internet. Students who complete the on-line portion of the PALS course must then complete a 1-day practical skills and testing session at Saint Louis University School of Medicine.

Dr. James Gerard is participating in a joint study to be carried out at Saint Louis University School of Medicine and Washington University School of Medicine. The purpose of the study is to collect data on School Bus Related Injuries in the St. Louis area. The information will be used to create a database of collision and injury data. Data will be analyzed for trends in conditions correlated with collisions, for types and outcomes of injuries related to school buses, and for cost of associated medical care. Finally, collision locations will be geographically mapped in order to identify high incidence areas. The study is currently under IRB review at both institutions. Upon IRB approval, subject enrollment into the study will commence in the ED’s at both Cardinal Glennon Children’s Hospital and St. Louis Children’s Hospital.

Diliane Pelikan, MD, Anthony Scalzo, MD, Albert Nakanishi, MD, John Peter, MD, Jim Gerard, MD, are conducting a feasibility study for Universal Screening of Lead Poisoning in about 200 patients/children aged 6 months to 6 years.
PEDIATRIC EMERGENCY MEDICINE DIVISION

PUBLICATIONS

HONORS
Barry, RC: Faculty Recognition Award; for outstanding contribution to the Housestaff by a Faculty Physician.

PRESENTATIONS
3. Davis, SO: “Radiographs for the Primary Care Physician”, Saint Louis University Department of Pediatrics, Pre-Grand Rounds - February 2002
8. Laffey, SP: “The Septic Appearing Infant” Resident Noon Conference, Cardinal Glennon Children’s Hospital

GRANTS
J. Gerard, MD
Web PALS HRSA grant awarded March 2000 3-year /$300,000 An Additional stipend of $20,000 to test the educational efficacy of the Web-PALS program has been provided by the AHA
INTRODUCTION AND DESCRIPTION

The Division of Pulmonary Medicine cares for children with a variety of acquired and congenital respiratory disorders. The members of the division are actively involved in educational teaching activities for CME programs locally and nationally, medical students, residents, and students in other disciplines including nursing and respiratory therapy. An active clinical research program is an integral part of the activities of the division and includes work in SIDS, asthma, and cystic fibrosis. Members of the division have active leadership roles in administrative responsibilities for the hospital, university, and national organizations including the American Thoracic Society (ATS) and the SIDS Alliance.

The division has an active outpatient program with multidisciplinary clinics caring for children with cystic fibrosis, asthma, sleep disorders, and for children who are “dependent” on technology (e.g. children receiving home mechanical ventilation). In addition, children with more routine pulmonary disorders are seen as outpatient consultations. Finally, division members see patients in very busy outreach clinics located in Centreville, Illinois (Southern Illinois Healthcare Foundation), Poplar Bluff and Jefferson City, Missouri.

FACULTY
Blakeslee E. Noyes, MD, Associate Professor of Pediatrics and Director of the Division of Pulmonary Medicine
Gary M. Albers, MD, Associate Professor of Pediatrics, Co-director of the Asthma Center for Children and Director of Bronchoscopy
James S. Kemp, MD, Associate Professor of Pediatrics and Interim Director of Clinical Research
Anthony J. Rejent, MD, Clinical Professor Pediatrics and Director of the Cystic Fibrosis Center
Robert W. Wilmott, MD, IMMUNO Professor of Pediatrics and Chair for the Department of Pediatrics.
Michele White, Medical Secretary
Judy Consolino, CNS
Mary Howell, CNS
Susan Mason, CNS
Diane Roth, RN

RESEARCH HIGHLIGHTS
Dr. James Kemp’s research into SIDS and the relationship of sleep environment and positioning as risk factors for SIDS has continued to be a source of considerable importance in the scientific community as well as in the lay press. Recent work this past academic year has focused on the incidence of crowding and the availability of “safe” (as recommended by the Consumer Products Safety Commission) cribs to African-American infants born to mothers of lower socioeconomic status at high risk for dying from SIDS. An additional aspect of the study was to provide safe cribs to these mothers at no cost. Preliminary work in this area has assessed the acceptability of this intervention and the ultimate use of cribs provided to families. This work has been the subject of two presentations at national meetings.

A corollary to this work has been investigation into the rate of infant death in adult beds and the recognition that this rate has increased over the past decade. This research has also demonstrated the very high risk for sudden death among infants who do not sleep in cribs.

In conjunction with the Neonatology division, Dr. Kemp has teamed with Drs. Keenan and Apsey to pilot a project examining the mechanisms of severe hypoxemic spells in neonates recovering from hyaline membrane disease. This research is ongoing and will be presented in national forums this coming academic year.

Dr. Gary Albers has participated as the local principal investigator in a study of an agent that blocks IgE in children with asthma; that study has recently been completed. He has also been involved in the study of the use of high dose aerosolized tobramycin in cystic fibrosis.

Dr. Blake Noyes is the local P.I. for a Phase I/II study in children and adults with cystic fibrosis analyzing the impact of gamma-interferon administered subcutaneously on a variety of serum and sputum inflammatory markers.

Dr. Anthony Rejent remains involved in an ongoing data collection protocol sponsored by Genentech, Inc. in cystic fibrosis patients.

Dr. Robert Wilmott is involved in ongoing studies examining the use of a new delivery device for high dose tobramycin aerosols in cystic fibrosis and is completing publication of studies for the CF Therapeutic Development Network.


HONORS

1. Albers, GM: Midwest Cystic Fibrosis Consortium Meeting April 26-27, 2002, Organization and Elected Director, St. Louis, Missouri; Facilitator Pediatric Asthma Poster Review 98th International Conference American Thoracic Society, Atlanta, Georgia, May 22, 2002; Chair, Patient Care Committee, Medical Staff Cardinal Glennon Children’s Hospital, 1999 - present; Advisor to Resident Brandon Triplett, MD; Reviewer Journal of Pediatrics.

2. Kemp, JS: Interim Director of Clinical Research, Pediatric Research Institute, Saint Louis University, April 1998 - present; Medical Director, Respiratory Care, Cardinal Glennon Children’s Hospital, April 1998 - present; Member, Saint Louis University Institutional Review Board for Human Studies, September 1999 - present; Voting member, University General Clinical Research Advisory Committee, February 2002 - present: Program Committee SIDS Alliance National Conference, September 2000 - present: Chair of Medical Track, June 2001 - present.

3. Blakeslee E. NoYES, MD: “Best Doctors in America”; Reviewer: Chest, Am J Resp Crit Care Med; Member, Medical Executive Committee, Cardinal Glennon Children’s Hospital, 1997 - present; Member, Compensation Committee, University Medical Group, 2000 - present; Chairman, Quality Improvement Committee, Cardinal Glennon Children’s Hospital, 2001 - present; Co-Chair, Clinical Chest Rounds, American Thoracic Society, 2001 - 2002; Member, Governing Board, University Medical Group, 2002 - present; Member, Executive Committee, University Medical Group, 2002 - present; Co-Chair, Post Graduate Course, ATS “The Impact of Environmental Tobacco Smoke Exposure on Children”, 2002; Chair-Elect, Pediatric Program Committee, ATS, 2002.

4. Robert W. Wilmott, MD: Award of Endowed Chairman, IMMUNO Professor, Department of Pediatrics, Saint Louis University Health Sciences Center, 2001; “Hall of Honor” Award, Historical Committee Society of the Children’s Center Medical Center, Cincinnati, Ohio, 2001; Award of Appreciation, Cystic Fibrosis Foundation, Cincinnati, Ohio, 2001

PRESENTATIONS

1. Albers, GM: Instructor/Invited Lecturer Seventh International European Pediatric Flexible Bronchoscopy Course, Davos, Switzerland (November 12 - 16, 2001)


9. Wilmott, RW: “Results of Phase 3 Tobi(r) Study Using New Delivery Device”, Saint Louis University School of Medicine Clinical Research in Progress, April 2002


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**GRANTS**

G. Albers, MD - PI
- **Airway Secretion Clearance in Cystic Fibrosis**
  - Cystic Fibrosis Foundation and The Children’s Hospital of Denver
  - $25,000

G. Albers, MD - PI
- **A Multicenter, Randomized, Controlled, Open-Labeled Study to Evaluate the Safety of XolairTM in Moderate to Severe, Persistent Asthma Subjects Already Treated with other Therapies (ALTO)**
  - Genentech
  - $60,000

G. Albers, MD - PI
- **An Open-Label Extension Study of Xolair (Omalizumab) in Moderate to Severe, Persistent Asthma Subjects Who Completed Study Q2143g**
  - Genentech
  - $60,000

G. Albers, MD - PI
- **An Open-Label Randomized Trial with Tobramycin Solution for Inhalation (Tobi(r)) in Cystic Fibrosis Patients with Mild Lung Disease. PC-TNDS-009**
  - Chiron Corporation
  - $30,000

J. Kemp, MD - PI
- **Available Space for Safe Beds in Sleep Environment Used by African American Infants**
  - Group Health Foundation
  - $30,000 yr. current

B. Noyes, MD - PI
- **A Phase I/II Study of Interferon-gamma-1b by Subcutaneous Injection for the Treatment of Cystic Fibrosis**
  - Intermune, Inc.
  - $15,000
INTRODUCTION AND DESCRIPTION

The Division of Toxicology is composed of two physician toxicologists (Dr. Anthony Scalzo, Dr. Rebecca Tominack), a forensic and environmental toxicologist (Dr. Christopher Long PhD) and two clinical pharmacists (Michael Thompson, Julie Weber).

The main purposes of the division are: 1) to assist the Missouri Regional Poison Center in providing quality-assured triage and treatment information on toxic exposures and poisonings to all the hospitals, practitioners and public in the state of Missouri; 2) to provide direct or telephone consultation to physicians caring for poisoned patients; and 3) to educate health care professionals and the public about toxicology and related issues.

The Missouri Regional Poison Center provides poisoning information, treatment strategies, and followup-management 24 hours a day. It is directed by Michael Thompson with the assistance of Julie Weber. The Center is staffed by pharmacists, Pharm Ds and nurses who are Certified Specialists in Poison Information. In addition to advice on virtually any type of exposure, over 190 full management guidelines are available for facsimile or computer fax transmission to all hospitals in the state of Missouri including Saint Louis University and SSM Cardinal Glennon Children’s Hospital. Medical toxicology consultation is accessed by first calling these specialists at the Poison Center. They will then contact one of the physician toxicologists as appropriate. Consultation ranges from simple triage advice to complex toxicology information and medical management. The two medical toxicologists have complementary fields of expertise. Dr. Scalzo is board certified in Pediatrics and Pediatric Emergency Medicine in addition to Medical Toxicology and Dr. Tominack is boarded in Internal Medicine and Medical toxicology. She also has much experience in industrial and occupational toxicology.

Forensic and analytical toxicology services can be obtained either at contracted reference laboratories or through Dr. Chris Long. He is also director of the Forensic and Environmental Toxicology Laboratory at Saint Louis University.

The Division of Toxicology maintains a strong commitment to education. For Saint Louis University School of Medicine, we provide 13-hours of toxicology lecture and case discussions in the first year curriculum, teach toxicology in a lecture cycle throughout the year for third year medical students, and provide one-month toxicology rotations at the Poison Center for selected senior students. One-month electives are also provided to the Pediatric Emergency Medicine Fellows from Saint Louis University and Washington University and to selected externs and residents in the fifth and sixth years at St. Louis College of Pharmacy. Each of 12 Emergency Medicine residents per year from Washington University is given a 1-day introduction to the function and capabilities of a Regional Poison Center. Finally, we teach the entire masters level course in human toxicology at the SLU School of Public Health each year.
**Faculty**

Anthony J. Scalzo, MD, FAAP, FACMT, Professor of Pediatrics and Internal Medicine, Director, Division of Toxicology, Full-time faculty, Division of Emergency Medicine, Medical Director, Missouri Regional Poison Center

Rebecca L. Tominack, MD, FAACT, FACMT, Clinical Assistant Professor of Pediatrics Division of Toxicology, and Internal Medicine Adjunct Associate Professor of Community and Family Medicine, Assistant Professor of Community Health, School of Public Health, Assistant Medical Director, Missouri Regional Poison Center

Christopher Long, PhD, DABAT, Assistant Professor of Pathology, Saint Louis University School of Medicine, Director, Forensic and Environmental Toxicology Laboratories

Julie B. Weber, BS Pharm, Poison Information Pharmacist, Coordinator of Professional Education, Missouri Regional Poison Center at Cardinal Glennon Children’s Hospital and Division of Toxicology, Adjunct Clinical Instructor in Pharmacy, St. Louis College of Pharmacy

Barb Austermann, Secretary

Patrice Seratti, Secretary

**Research Highlights**

Currently, we are conducting a feasibility study for universal screening of lead poisoning in children aged 6 months to 6 years. Anthony Scalzo, MD, is working with Pediatric Emergency Medicine fellow, Diliane Pelikan, MD, Principal Investigator, to conduct this study of 200 patients.

Currently, the Regional Poison Center is conducting a prospective study of outcomes of snake envenomation in Missouri and the use of antivenom.

Completed a retrospective study of 596 snake envenomations over a 6 1/2-year period and reported results at annual scientific meetings in toxicology, the North American Congress of Clinical Toxicology, in October 2001 in Montreal, Canada.

Dr. Scalzo is also involved in researching educational methods for teaching Pediatric Advanced Life Support. He has attended the American Heart Association Emergency Cardiovascular Care Committee (ECC) Fall Conference in Dallas Texas, October 2001 and participated in the Pediatric Subcommitte of the ECC.

**Publications**


**Presentations**


**Poster Presentations**


**Special Services**

