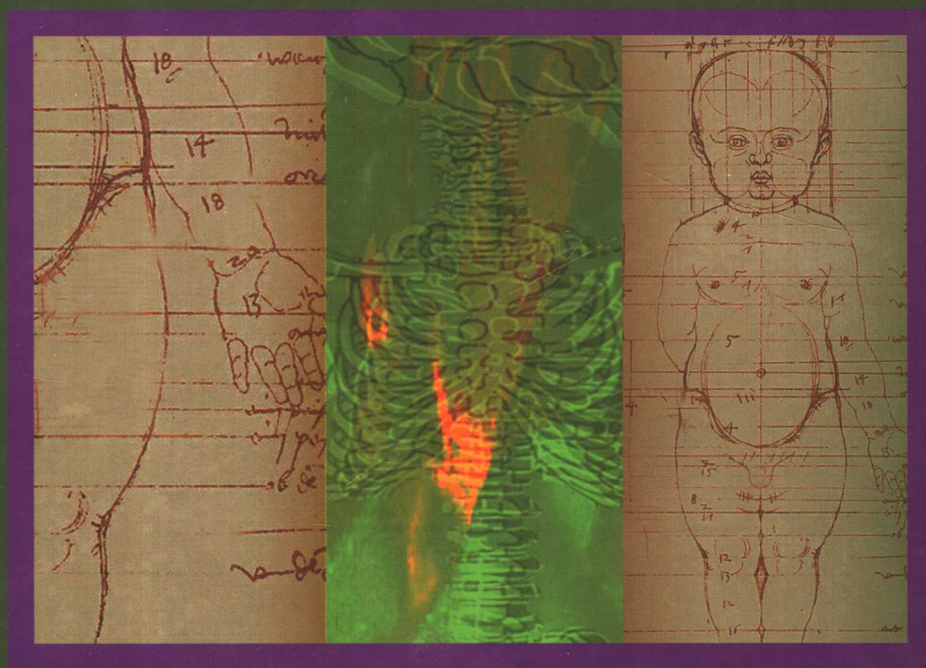


# 尼尔森儿科学

## NELSON TEXTBOOK OF PEDIATRICS

第17版·下卷



主编 BEHRMAN KLIEGMAN JENSON

主译 沈晓明 朱建幸 孙 锐



北京大学医学出版社

# 尼尔森儿科学

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PEDIATRICS

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# 主 译

沈晓明、朱建幸、孙锟

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秘书 朱晓东

## 译 者

(按姓氏笔画排序)

上海交通大学医学院附属新华医院、上海儿童医学中心

新生儿科	贝 斐	王 蓓	孙建华	朱建幸	朱晓东
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	杨健萍	肖婷婷	武育蓉	孟祥春	柏 屏
	姚莉萍	姚渭清	洪雯静	赵鹏军	高 伟
	郭 颖	黄美蓉	傅立军	薛海虹	
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	宋小青	俞宏真	葛 欣		
消 化 科	杜惠敏	陈颖虹	周 莎	徐亚珍	储 波
	蒋丽蓉				
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风湿/免疫科	王 玺	王美红	杨 珍	陈同辛	周 纬
	金燕樑	郝轶群	殷 蕾		

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血液科	王耀平 李娟	叶辉 罗长缨	叶启东	江华	汤静燕
肾脏科	卫敏江 杨珍 殷蕾	沈加 吴伟岚 徐卯生	陈妍 沈涤华 耿红全	陈敏怡 苏婉华 谢华	陈慧敏 周纬
内分泌科	朱天闻 张惠文 韩连书	李进 张静敏	邱文娟 顾学范	余永国 黄成娇	杨培蓉 黄晓冬
眼科	王于蓝 蔡克波	胡毅倩	徐巍华	盛耀华	辜臻晟
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皮肤科	陈仁贵	郭一峰			
检验科	王静 蒋黎敏	张蓓	李怀远	沈立松	袁立亮
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## 著者名单

### *Jon S. Abramson, MD*

Professor and Chair, Department of Pediatrics, Wake Forest University School of Medicine; North Carolina Baptist Hospital, Winston-Salem, North Carolina  
*Streptococcus pneumoniae* (Pneumococcus)

### *Mark J. Abzug, MD*

Professor of Pediatrics (Pediatric Infectious Diseases), University of Colorado School of Medicine; The Children's Hospital, Denver, Colorado  
Nonpolio Enteroviruses

### *William G. Adams, MD*

Assistant Professor of Pediatrics, Boston University School of Medicine, Boston, Massachusetts  
Rabies

### *John J. Aiken, MD*

Assistant Professor of Pediatric Surgery, Medical College of Wisconsin, Milwaukee, Wisconsin  
Inguinal Hernias

### *Hassan H. A-Kader, MD*

Associate Professor of Pediatrics, University of Arizona, Tucson, Arizona  
Cholestasis

### *Ramin Alemzadeh, MD*

Associate Professor of Pediatrics, Section of Endocrinology and Diabetes, Medical College of Wisconsin; Director, Diabetes Program, Children's Hospital of Wisconsin, Milwaukee, Wisconsin  
Diabetes Mellitus in Children

### *Alia Y. Antoon, MD*

Assistant Clinical Professor, Harvard Medical School; Chief of Pediatrics, Shriners Burns Hospital; Pediatrician, Massachusetts General Hospital, Boston, Massachusetts  
Burn Injuries; Cold Injuries

### *Carola A. S. Arndt, MD*

Associate Professor, Mayo Medical School; Department of Pediatrics, Division of Pediatric Hematology-Oncology, Mayo Clinic and Foundation, Rochester, Minnesota  
Soft Tissue Sarcomas; Neoplasms of Bone

### *Stephen S. Arnon, MD*

Senior Investigator and Chief, Infant Botulism Treatment and

Prevention Program, California Department of Health Services, Berkeley, California

Botulism (*Clostridium botulinum*); Tetanus (*Clostridium tetani*)

### *Stephen C. Aronoff, MD*

Professor and Chair, Department of Pediatrics, Temple University School of Medicine, Philadelphia, Pennsylvania  
*Candida*; *Cryptococcus neoformans*; *Aspergillus*; Histoplasmosis (*Histoplasma capsulatum*); Blastomycosis (*Blastomyces dermatitidis*); *Paracoccidioides brasiliensis*; Sporotrichosis (*Sporothrix schenckii*); Zygomycosis; Primary Amebic Meningoencephalitis; Nonbacterial Food Poisoning

### *David M. Asher, MD*

Chief, Laboratory of Bacterial, Parasitic, and Unconventional Agents, Division of Emerging and Transfusion-Transmitted Diseases, Office of Blood Research and Review, Center for Biologics Evaluation and Research, U. S. Food and Drug Administration, Kensington, Maryland  
Transmissible Spongiform Encephalopathies

### *Joann L. Ater, MD*

Associate Professor of Pediatrics, University of Texas M. D. Anderson Cancer Center, Houston, Texas  
Brain Tumors in Childhood; Neuroblastoma

### *Dan Atkins, MD*

Associate Professor of Pediatrics, University of Colorado Health Sciences Center; Director, Ambulatory Pediatrics, National Jewish Medical Research Center, Denver, Colorado  
Diagnosis of Allergic Disease; Principles of Treatment of Allergic Disease

### *Marilyn Augustyn, MD*

Assistant Professor, Boston University School of Medicine; Boston Medical Center, Boston, Massachusetts  
Impact of Violence on Children

### *Ellis D. Avner, MD*

The Gertrude Lee Chandler Tucker Professor and Chair, Department of Pediatrics, Case Western Reserve University School of Medicine; Chief Medical Officer, Rainbow Babies and Children's Hospital, University Hospitals of Cleveland, Cleveland, Ohio  
Glomerular Disease; Conditions Particularly Associated with Hematuria; Conditions Particularly Associated with Proteinuria; Tubular Function; Proximal (Type II) Renal Tubular Acidosis; Distal (Type I) Renal Tubular Acidosis; Hyperkalemic (Type IV) Renal Tubular Acidosis; Nephrogenic Diabetes Insipidus; Bartter/Gitelman Syndromes and Other

Inherited Tubular Transport Abnormalities; Tubulointerstitial Nephritis; Toxic Nephropathy; Cortical Necrosis; Renal Failure

*Parvin Azimi, MD*

Clinical Professor of Pediatrics, University of California, San Francisco, School of Medicine; Director, Infectious Diseases, Children's Hospital and Research Center at Oakland, Oakland, California

Chancroid (*Haemophilus decreyi*); Syphilis (*Treponema pallidum*); Nonvenereal Treponemal Infections; Leptospirosis; Relapsing Fever (*Borrelia*)

*William F. Balistreri, MD*

Professor of Pediatrics, University of Cincinnati School of Medicine; Director, Division of Gastroenterology, Hepatology, and Nutrition, Children's Hospital Medical Center, Cincinnati, Ohio

Development and Function of the Liver and Biliary System; Manifestations of Liver Disease; Cholestasis; Metabolic Diseases of the Liver; Liver Abscess; Liver Disease Associated with Systemic Disorders; Reye Syndrome and the Mitochondrial Hepatopathies

*Robert S. Baltimore, MD*

Professor of Pediatrics and of Epidemiology and Public Health, Yale University School of Medicine; Associate Hospital Epidemiologist, Yale-New Haven Hospital; Attending Pediatrician, Yale-New Haven Children's Hospital, New Haven, Connecticut

*Listeria monocytogenes*; *Pseudomonas*, *Burkholderia*, and *Stenotrophomonas*

*Fred F. Barrett, MD*

Professor of Pediatrics, University of Tennessee Center for Health Sciences; Associate Medical Director, Le Bonheur Children's Medical Center, Memphis, Tennessee

Infection Associated with Medical Devices

*Dorsey M. Bass, MD*

Associate Professor of Pediatrics, Stanford University School of Medicine; Attending Physician, Lucile Salter Packard Children's Hospital, Palo Alto, California

Rotavirus and Other Agents of Viral Gastroenteritis

*Michael D. Bates, MD, PhD*

Assistant Professor of Pediatrics, Division of Gastroenterology, Hepatology, and Nutrition, Division of Developmental Biology, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Development and Function of the Liver and Biliary System

*Mark L. Batshaw, MD*

Professor and Chair of Pediatrics, George Washington University; Chief Academic Officer, Children's National Medical Center, Washington, DC

Mental Retardation

*Howard Bauchner, MD*

Professor of Pediatrics and Public Health, Boston University School of Medicine; Director, Division of General Pediatrics, Boston Medical Center, Boston, Massachusetts

Failure to Thrive

*Richard E. Behrman, MD*

Clinical Professor of Pediatrics, Stanford University School of Medicine and University of California, San Francisco, School

of Medicine; Executive Chair, Federation of Pediatric Organizations, Inc., Pediatric Education Steering Committee, Palo Alto, California

Overview of Pediatrics; Children at Special Risk

*Daniel Bernstein, MD*

Professor of Pediatrics, Stanford University School of Medicine; Chief, Division of Pediatric Cardiology, Co-Director, Children's Heart Center, Lucile Packard Children's Hospital, Palo Alto, California

Developmental Biology of the Cardiovascular System; Evaluation of the Cardiovascular System; Congenital Heart Disease; Acquired Heart Disease; Diseases of the Myocardium and Pericardium; Cardiac Therapeutics; Diseases of the Peripheral Vascular System

*Ronald Blanton, MD*

Associate Professor of Medicine, Case Western Reserve University School of Medicine; Wade Park Veteran's Administration Hospital, Cleveland, Ohio

Adult Tapeworm Infections; Cysticercosis; Echinococcosis (*Echinococcus granulosus* and *E. multilocularis*)

*Archie Bleyer, MD*

Professor and Mosbacher Chair of Pediatrics, University of Texas; Director, Community Clinical Oncology Program, University of Texas M. D. Anderson Cancer Center, Houston, Texas

Principles of Diagnosis; Principles of Treatment; The Leukemias

*Steven Boas, MD*

Associate Professor of Pediatrics, Feinberg School of Medicine, Northwestern University; Pediatric Pulmonologist, Children's Memorial Hospital, Chicago, Illinois

Emphysema and Overinflation;  $\alpha_1$ -Antitrypsin Deficiency and Emphysema; Other Distal Airway Diseases; Skeletal Diseases Influencing Pulmonary Function

*Thomas F. Boat, MD*

Professor and Chair, Department of Pediatrics, University of Cincinnati College of Medicine; Director, Research Foundation, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Chronic or Recurrent Respiratory Symptoms; Cystic Fibrosis

*Mark Boguniewicz, MD*

Professor of Pediatrics, Division of Allergy-Immunology, University of Colorado School of Medicine; National Jewish Medical and Research Center, Denver, Colorado

Adverse Reactions to Drugs; Ocular Allergies

*Melissa L. Bondy, PhD*

Professor of Epidemiology, University of Texas M. D. Anderson Cancer Center, Houston, Texas

Epidemiology of Childhood and Adolescent Cancer

*Robert A. Bonomo, MD*

Associate Professor of Medicine, Case Western Reserve University School of Medicine; Section Chief, Division of Infectious Diseases, Veterans Administration Medical Center, Cleveland, Ohio

African Trypanosomiasis (Sleeping Sickness; *Trypanosoma brucei* complex); American Trypanosomiasis (Chagas Disease; *Trypanosoma cruzi*)

*Neil W. Boris, MD*

Assistant Professor of Community Health Sciences, Tulane University School of Public Health and Tropical Medicine; Co-Director, Child Psychiatry Consultation Service, Tulane University Hospital and Medical Center of Louisiana, New Orleans, Louisiana

The Clinical Interview (History); Psychiatric Considerations of Central Nervous System Injury; Psychosomatic Illness; Rumination Disorder; Pica; Enuresis (Bed-wetting); Encopresis; Habit Disorders; Anxiety Disorders; Mood Disorders; Suicide and Attempted Suicide; Disruptive Behavioral Disorders; Pervasive Developmental Disorders and Childhood Psychosis

*Laurence A. Boxer, MD*

Professor of Pediatrics, University of Michigan School of Medicine; Director, Pediatric Hematology/Oncology, C. S. Mott Children's Hospital, Ann Arbor, Michigan  
Neutrophils; Eosinophils; Disorders of Phagocyte Function; Leukopenia; Leukocytosis

*David T. Breault, MD, PhD*

Clinical Fellow in Pediatrics, Harvard Medical School; Fellow in Endocrinology, Children's Hospital Boston, Boston, Massachusetts  
Diabetes Insipidus; Other Abnormalities of Arginine Vasopressin Metabolism and Action

*W. Ted Brown, MD, PhD*

Chair, Department of Human Genetics, Director, George A. Jervis Clinic, NYS Institute for Basic Research in Developmental Disabilities, Staten Island, New York  
Progeria

*Rebecca H. Buckley, MD*

J. Buren Sidbury Professor of Pediatrics, Professor of Immunology, Duke University School of Medicine; Chief, Division of Allergy and Immunology, Department of Pediatrics, Duke University Medical Center, Durham, North Carolina  
Evaluation of the Immune System; The T-, B- and NK-Cell Systems

*Cynthia Budek, MS*

Pediatric Nurse Practitioner, Pulmonary Medicine, Children's Memorial Hospital, Chicago, Illinois  
Chronic Severe Respiratory Insufficiency

*Brenda Bursch, PhD*

Assistant Professor of Psychiatry and Behavioral Sciences, Assistant Professor of Pediatrics, David Geffen School of Medicine, University of California, Los Angeles; Associate Director, Pediatric Pain Program, Mattel Children's Hospital at UCLA, Los Angeles, California  
Pediatric Pain Management

*Bruce M. Camitta, MD*

Professor of Pediatrics, Medical College of Wisconsin; Children's Hospital of Wisconsin, Milwaukee, Wisconsin  
Polycythemia (Erythrocytosis); The Spleen; The Lymphatic System

*James T. Cassidy, MD*

Professor of Pediatrics, Department of Child Health; Chief, Pediatric Rheumatology, University of Missouri, Columbia, Missouri  
Treatment of Rheumatic Diseases; Juvenile Rheumatoid Arthritis; Postinfectious Arthritis and Related Conditions

*Ellen Gould Chadwick, MD*

Associate Professor of Pediatrics, Northwestern University Medical School; Co-Director, Division of Pediatrics, Adolescent and Maternal HIV Infection, Children's Memorial Hospital, Chicago, Illinois  
Acquired Immunodeficiency Syndrome (Human Immunodeficiency Virus)

*Yuan-Tsong Chen, MD, PhD*

Professor and Chief, Division of Medical Genetics, Duke University Medical Center, Durham, North Carolina; Director, Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan  
Glycogen Storage Diseases; Defects in Galactose Metabolism; Defects in Fructose Metabolism; Defects in Intermediary Carbohydrate Metabolism Associated with Lactic Acidosis; Deficiency of Xylulose Dehydrogenase (Essential Benign Pentosuria)

*Russell W. Chesney, MD*

LeBonheur Professor and Chair of Pediatrics, University of Tennessee Health Sciences Center; Senior Vice President for Academic Affairs, LeBonheur Children's Medical Center, Memphis, Tennessee  
Rickets Associated with Renal Tubular Acidosis; Metabolic Bone Disease

*Joseph N. Chorley, MD*

Assistant Professor of Pediatrics, Sports Medicine, Baylor College of Medicine; Staff Member, Texas Children's Hospital, Houston, Texas  
Sports Medicine

*Robert D. Christensen, MD*

Professor and Chair, Department of Pediatrics, University of South Florida College of Medicine, St. Petersburg, Florida  
Development of the Hematopoietic System

*Robin B. Churchill, MD*

Assistant Professor of Pediatrics, Eastern Virginia Medical School; Attending Physician, Pediatric Infectious Diseases Division, Children's Hospital of The King's Daughters, Norfolk, Virginia  
Blastomycosis (*Blastomyces dermatitidis*); *Paracoccidioides brasiliensis*; Sporotrichosis (*Sporothrix schenckii*); Zygomycosis

*Theodore J. Cieslak, MD*

Clinical Associate Professor, Uniformed Services University, Bethesda, Maryland; University of Texas Health Science Center, San Antonio, Texas; Chairman, San Antonio Military Pediatric Center, Brooke Army Medical Center, Fort Sam Houston, Texas  
Biologic and Chemical Terrorism

*Thomas G. Cleary, MD*

Professor and Director, Division of Pediatric Infectious Diseases, University of Texas Health Science Center, Houston; Memorial Hermann Children's Hospital, Houston, Texas  
*Salmonella*; *Shigella*; *Escherichia coli*

*Pinchas Cohen, MD*

Professor of Pediatrics, David Geffen School of Medicine, University of California, Los Angeles; Chief of Endocrinology, Mattel Children's Hospital, Los Angeles, California  
Hyperpituitarism, Tall Stature, and Overgrowth Syndromes

*F. Sessions Cole, MD*

Park J. White, MD, Professor of Pediatrics, Washington University School of Medicine; Director, Division of Newborn Medicine, St. Louis Children's Hospital, St. Louis, Missouri  
Pulmonary Alveolar Proteinosis; Inherited Disorders of Surfactant Protein Metabolism

*John L. Colombo, MD*

Professor of Pediatrics, Pediatric Pulmonology, University of Nebraska Medical Center; Attending Physician, Nebraska Health Systems and Children's Hospital of Omaha, Omaha, Nebraska  
Aspiration Syndromes; Chronic Recurrent Aspiration; Gastroesophageal Reflux and Respiratory Disorders

*Kenneth L. Cox, MD*

Professor of Pediatrics, Chief, Pediatric Gastroenterology and Nutrition, Stanford University School of Medicine; Medical Director, Pediatric Liver Transplant Program, Lucile Salter Packard Children's Hospital, Palo Alto, California  
Liver Transplantation

*Richard Dalton, MD*

Professor of Child and Adolescent Psychiatry, Clinical Professor of Pediatrics, Tulane University Health Sciences Center, New Orleans; Medical Director, East Jefferson Mental Health Center, Metairie, Louisiana  
Psychosocial Problems; Psychosomatic Illness; Rumination Disorder; Pica; Enuresis (Bed-wetting); Encopresis; Habit Disorders; Anxiety Disorders; Mood Disorders; Suicide and Attempted Suicide; Disruptive Behavioral Disorders; Sexual Behavior and Its Variations; Pervasive Developmental Disorders and Childhood Psychosis; Psychologic Treatment of Children and Adolescents; Separation and Loss

*Alan D. D'Andrea, MD*

Professor of Pediatrics, Harvard Medical School; Dana-Farber Cancer Institute, Boston, Massachusetts  
The Constitutional Pancytopenias

*Gary L. Darmstadt, MD*

Assistant Professor of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland; Senior Research Advisor, Saving Newborn Lives Initiative, Save the Children Federation USA, Washington, DC  
The Skin

*Jorge H. Daruna, PhD*

Associate Professor of Psychiatry, Division of Child and Adolescent Psychiatry, Department of Psychiatry and Neurology, Tulane University School of Medicine, New Orleans, Louisiana  
The Clinical Interview (History); Psychiatric Considerations of Central Nervous System Injury

*Toni Darville, MD*

Associate Professor of Pediatrics and Microbiology/Immunology, University of Arkansas for Medical Sciences, Little Rock, Arkansas  
*Neisseria gonorrhoeae* (Gonococcus)

*Robert S. Daum, MD*

Professor of Pediatrics, University of Chicago; University of Chicago Children's Hospital, Chicago, Illinois  
*Haemophilus influenzae*

*Ira D. Davis, MD*

Associate Professor of Pediatrics, Case Western Reserve University School of Medicine; Chief, Division of Pediatric Nephrology, Rainbow Babies and Children's Hospital, Cleveland, Ohio  
Glomerular Disease; Conditions Particularly Associated with Hematuria

*Peter S. Dayan, MD*

Assistant Professor of Clinical Pediatrics, Columbia University College of Physicians and Surgeons; Fellowship Director, Pediatric Emergency Division, Children's Hospital of New York-Presbyterian, New York, New York  
Acute Care of the Multiple Trauma Victim

*Dorr G. Dearborn, MD, PhD*

Professor of Pediatrics, Case Western Reserve University School of Medicine; Attending Pediatrician, Rainbow Babies and Children's Hospital, Cleveland, Ohio  
Pulmonary Hemosiderosis

*Katherine MacRae Dell, MD*

Assistant Professor of Pediatrics, Case Western Reserve University School of Medicine; Attending Pediatric Nephrologist, Rainbow Babies and Children's Hospital, University Hospitals of Cleveland, Cleveland, Ohio  
Tubular Function; Proximal (Type II) Renal Tubular Acidosis; Distal (Type I) Renal Tubular Acidosis; Hyperkalemic (Type IV) Renal Tubular Acidosis; Nephrogenic Diabetes Insipidus; Bartter/Gitelman Syndromes and Other Inherited Tubular Transport Abnormalities; Tubulointerstitial Nephritis

*Robert J. Desnick, MD, PhD*

Professor of Human Genetics and Pediatrics, Mount Sinai School of Medicine; Attending Physician, Pediatrics, Mount Sinai Hospital, New York, New York  
Lipidoses; Mucopolidoses; Disorders of Glycoprotein Degradation and Structure

*Joseph V. DiCarlo, MD*

Assistant Professor of Pediatrics, Stanford University School of Medicine, Palo Alto, California  
Scoring Systems and Predictors of Mortality; Renal Stabilization; Nutritional Stabilization; Neurologic Stabilization; Acute (Adult) Respiratory Distress Syndrome (ARDS); Continuous Hemofiltration

*Angelo M. DiGeorge, MD*

Emeritus Professor of Pediatrics, Temple University School of Medicine, Philadelphia, Pennsylvania  
Disorders of the Parathyroid

*Patricia A. Donohoue, MD*

Professor of Pediatrics, Division of Endocrinology and Diabetes, University of Iowa, Roy J. and Lucille A. Carver College of Medicine, Iowa City, Iowa  
Obesity

*Mary K. Donovan, RN, MS, PNP*

NP Preceptor, Northeastern University; Pediatric Nurse Practitioner, Shriners Burns Hospital, Boston, Massachusetts  
Burn Injuries; Cold Injuries

*M. Denise Dowd, MD, MPH*

Associate Professor of Pediatrics, University of Missouri, Kansas City; Section Chief, Injury Prevention, Children's Memorial Hospital, Kansas City, Missouri



## Emergency Medical Services for Children

### *Daniel A. Doyle, MD*

Assistant Professor of Pediatrics, Thomas Jefferson University, Philadelphia, Pennsylvania; A. I. duPont Hospital for Children, Wilmington, Delaware  
Disorders of the Parathyroid

### *Anne Dubin, MD*

Associate Professor of Pediatrics, Stanford University School of Medicine; Arrhythmia Service, Lucile Salter Packard Children's Hospital, Palo Alto, California  
Cardiac Arrhythmias

### *J. Stephen Dumler, MD*

Associate Professor, Division of Medical Microbiology, Department of Pathology, Graduate Program in Cellular and Molecular Medicine, Department of Molecular Microbiology and Immunology, The Johns Hopkins University School of Medicine, The Bloomberg School of Public Health; Director, Laboratory of Parasitology, Co-Director, Molecular Microbiology Laboratory, Johns Hopkins Hospital, Baltimore, Maryland  
Rickettsial Infections

### *Paul H. Dworkin, MD*

Professor and Chair, Department of Pediatrics, University of Connecticut School of Medicine; Physician-in-Chief, Connecticut Children's Medical Center; Director and Chair, Department of Pediatrics, St. Francis Hospital and Medical Center, Hartford, Connecticut  
Child Care

### *Jack S. Elder, MD*

Carter Kissell Professor of Urology, Professor of Pediatrics, Case Western Reserve University School of Medicine; Director, Pediatric Urology, Rainbow Babies and Children's Hospital, Cleveland, Ohio  
Urologic Disorders in Infants and Children

### *Jonathan D. Finder, MD*

Assistant Professor of Pediatrics, University of Pittsburgh; Pediatric Pulmonologist, Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
Bronchomalacia and Tracheomalacia; Congenital Disorders of the Lung

### *Margaret C. Fisher, MD*

Professor of Pediatrics, Drexel University College of Medicine, Philadelphia; Chair, Department of Pediatrics, Monmouth Medical Center, Long Branch, New Jersey  
*Clostridium difficile*-Associated Diarrhea; Other Anaerobic Infections; Infection Control and Prophylaxis

### *Patricia M. Flynn, MD*

Professor of Pediatrics, University of Tennessee Center for Health Sciences; Member, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, Tennessee  
Infection Associated with Medical Devices; Spore-Forming Intestinal Protozoa

### *J. Julio Pérez Fontán, MD*

Alumni Endowed Professor of Pediatrics and Professor of Anesthesiology, Washington University School of Medicine; Director, Division of Pediatric Critical Care Medicine and Pediatric Intensive Services, St. Louis Children's Hospital,

St. Louis, Missouri

Development of the Respiratory System; Respiratory Pathophysiology; Defense Mechanisms and Metabolic Functions of the Lung

### *Joel A. Forman, MD*

Vice-Chair for Education, Assistant Professor of Pediatrics, Mount Sinai School of Medicine; Director, Pediatric Residency Program, Mount Sinai Hospital, New York, New York  
Chemical Pollutants

### *Marc A. Forman, MD*

Emeritus Professor of Psychiatry and Pediatrics, Tulane University School of Medicine, New Orleans; Senior Medical Consultant for Clinical Research, SARAH Network of Hospitals of the Locomotor System, Brasilia, Brazil  
Assessment and Interviewing; Psychiatric Considerations of Central Nervous System Injury; Mood Disorders; Pervasive Developmental Disorders and Childhood Psychosis

### *Norman Foster, MD, MPH*

Professor of Pediatrics and History of Medicine, University of Wisconsin; Director, Program in Bioethics, University of Wisconsin Hospital, Madison, Wisconsin  
Ethics in Pediatric Care

### *Lorry R. Frankel, MD*

Associate Professor of Pediatrics, Stanford University School of Medicine; Director, Critical Care Services, Lucile Salter Packard Children's Hospital, Palo Alto, California  
Pediatric Critical Care: An Overview; Interfacility Transfer of the Critically Ill Infant and Child; Effective Communication with Families in the PICU; Monitoring Techniques for the Critically Ill Infant and Child; Scoring Systems and Predictors of Mortality; Pediatric Emergencies and Resuscitation; Shock; Respiratory Distress and Failure; Mechanical Ventilation; Neurologic Stabilization; Acute (Adult) Respiratory Distress Syndrome (ARDS); Transplantation Issues in the PICU; Withdrawal or Withholding of Life Support, Brain Death, and Organ Procurement

### *James French, MD*

Children's Medical Center, Dayton, Ohio  
The Spleen

### *Madelyn Freundlich, MSW, MPH, JD*

Policy Director, Children's Rights, New York, New York  
Adoption; Foster Care

### *Peter Gal, PharmD*

Clinical Professor, School of Pharmacy, University of North Carolina at Chapel Hill; Director, Pharmacy Division, Greensboro Area Health Education Center, Director, Neonatal Pharmacotherapy Fellowship, Women's Hospital of Greensboro, Moses Cone Health System, Greensboro, North Carolina  
Principles of Drug Therapy; Medications

### *Manuel Garcia-Careaga, MD*

Assistant Professor of Pediatrics, Stanford University School of Medicine; Lucile Salter Packard Children's Hospital, Palo Alto, California  
Malabsorptive Disorders

### *Paula Gardiner, MD*

Tufts University School of Medicine, Boston; Resident, Hallmark Family Health Center, Malden, Massachusetts  
Herbal Medicines

*Luigi Garibaldi, MD*

Director, Pediatric Endocrinology, Saint Barnabas Medical Center, Livingston, New Jersey; Children's Hospital of New Jersey at Newark Beth Israel Medical Center, Newark, New Jersey

Physiology of Puberty; Disorders of Pubertal Development

*Abraham Gedalia, MD*

Professor and Head, Division of Pediatric Rheumatology, Department of Pediatrics, Louisiana State University Health Sciences Center; Head, Division of Pediatric Rheumatology, Children's Hospital, New Orleans, Louisiana

Behçet Disease; Sjögren Syndrome; Familial Mediterranean Fever; Amyloidosis

*Michael A. Gerber, MD*

Professor of Pediatrics, University of Cincinnati College of Medicine; Attending Physician, Division of Infectious Diseases, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Group A Streptococcus; Non-Group A or B Streptococci

*Fayez K. Ghishan, MD*

Professor of Clinical Pediatrics and Physiology, University of Arizona; Head, Department of Pediatrics, Director, Steele Memorial Children's Research Center, Tucson, Arizona

Chronic Diarrhea

*Gerald S. Gilchrist, MD*

Helen C. Levitt Professor Emeritus, Mayo Foundation, Mayo Medical School; Formerly Chair, Department of Pediatric and Adolescent Medicine and Consultant in Pediatric Hematology/Oncology, Mayo Clinic, Rochester, Minnesota

Lymphoma

*Charles M. Ginsburg, MD*

Marilyn R. Corrigan Distinguished Chair of Pediatric Research, Professor of Pediatrics, Associate Dean for Faculty Development, University of Texas Southwestern Medical Center, Dallas, Texas

Animal and Human Bites

*Bertil Glader, MD, PhD*

Professor of Pediatrics, Stanford University School of Medicine; Attending Hematologist, Lucile Salter Packard Children's Hospital, Palo Alto, California

The Anemias; Anemias of Inadequate Production

*Donald A. Goldmann, MD*

Professor of Pediatrics, Harvard Medical School; Epidemiologist, Children's Hospital Boston, Boston, Massachusetts

Diagnostic Microbiology

*Denise Goodman, MD*

Assistant Professor, Feinberg School of Medicine of Northwestern University; Attending Physician, Pediatric Intensive Care Unit, Children's Memorial Hospital, Chicago, Illinois

Inflammatory Disorders of the Small Airways

*Collin S. Goto, MD*

Assistant Clinical Professor of Pediatrics, University of California, San Diego; Attending Physician, Division of

Emergency Medicine and Toxicology, Children's Hospital and Health Center, The California Poison Control System, San Diego, California

Heavy Metal Intoxication

*David Gozal, MD*

Children's Foundation Chair for Pediatric Research, Professor of Pediatrics, Pharmacology, and Toxicology, University of Louisville; Director, Division of Sleep Medicine, Kosair Children's Hospital, Louisville, Kentucky

Neuromuscular Diseases with Pulmonary Consequences

*Michael Green, MD, MPH*

Professor of Pediatrics and Surgery, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania

Infections in Immunocompromised Persons

*Thomas P. Green, MD*

Chair, Department of Pediatrics, Women's Board Centennial Professor, Feinberg School of Medicine, Northwestern University; Physician-in-Chief, Children's Memorial Hospital, Chicago, Illinois

Disorders of the Lungs and Lower Airways; Congenital Disorders of the Lungs, Pulmonary Edema; Pulmonary Hemorrhage, Embolism, and Infection

*Larry A. Greenbaum, MD, PhD*

Associate Professor of Pediatrics, Medical College of Wisconsin; Attending Physician, Children's Hospital of Wisconsin, Milwaukee, Wisconsin

Pathophysiology of Body Fluids and Fluid Therapy

*David Grossman, MD, MPH*

Professor of Pediatrics, University of Washington; Director, Harborview Injury Prevention and Research Center, Seattle, Washington

Injury Control

*Linda Sayler Gudas, PhD*

Assistant Clinical Professor, Harvard Medical School; Assistant in Psychiatry, Department of Psychology, Children's Hospital, Boston, Massachusetts

Grief and Bereavement

*James G. Gurney, PhD*

Associate Professor of Pediatrics, Division of Epidemiology and Clinical Research, University of Minnesota, Minneapolis, Minnesota

Epidemiology of Childhood and Adolescent Cancer

*Gabriel G. Haddad, MD*

Professor of Pediatrics and Neuroscience, University Chair, Department of Pediatrics, Albert Einstein College of Medicine; Pediatrician-in-Chief, Children's Hospital at Montefiore, Bronx, New York

Development of the Respiratory System; Regulation of Respiration; Respiratory Pathophysiology; Defense Mechanisms and Metabolic Functions of the Lung; Diagnostic Approach to Respiratory Disease; Obstructive Sleep Apnea and Hypoventilation; Primary Ciliary Dyskinesia (Immotile Cilia Syndrome)

*Joseph Haddad Jr., MD*

Associate Professor and Vice Chair, Department of Otolaryngology/Head and Neck Surgery, Columbia University

College of Physicians and Surgeons; Lawrence Savetsky Chair and Director, Pediatric Otolaryngology, Children's Hospital of New York-Presbyterian, New York, New York  
Congenital Disorders of the Nose; Acquired Disorders of the Nose; Nasal Polyps; Clinical Manifestations; Hearing Loss; Congenital Malformations; Diseases of the External Ear; The Inner Ear and Diseases of the Bony Labyrinth; Traumatic Injuries of the Ear and Temporal Bone; Tumors of the Ear and Temporal Bone

*Judith G. Hall, MD*

Professor of Pediatrics and Medical Genetics, University of British Columbia; British Columbia's Children's Hospital, Vancouver, British Columbia, Canada  
Chromosomal Clinical Abnormalities; Genetic Counseling

*Scott B. Halstead, MD*

Adjunct Professor of Preventive Medicine and Biometrics, Uniformed Services University of the Health Sciences, Bethesda, Maryland  
Arboviral Encephalitis in North America; Arboviral Encephalitis Outside North America; Dengue Fever and Dengue Hemorrhagic Fever; Yellow Fever; Other Viral Hemorrhagic Fevers; Hantaviruses

*Margaret R. Hammerschlag, MD*

Professor of Pediatrics and Medicine, Director, Division of Pediatric Infectious Diseases, SUNY Downstate Medical Center, Brooklyn, New York  
Chlamydial Infections

*Aaron Hamvas, MD*

Professor of Pediatrics, Washington University School of Medicine; Medical Director, Neonatal Intensive Care Unit, St. Louis Children's Hospital, St. Louis, Missouri  
Pulmonary Alveolar Proteinosis; Inherited Disorders of Surfactant Protein Metabolism

*James C. Harris, MD*

Professor of Psychiatry and Behavioral Sciences, Professor of Pediatrics, The Johns Hopkins University School of Medicine; Director, Developmental Neuro-Psychiatry, Johns Hopkins University Hospital, Baltimore, Maryland  
Disorders of Purine and Pyrimidine Metabolism

*Gary E. Hartman, MD*

Professor of Surgery and Pediatrics, George Washington University School of Medicine; Chief, Pediatric Surgery, Children's National Medical Center, Washington, DC  
Acute Appendicitis; Diaphragmatic Hernia; Epigastric Hernia

*David B. Haslam, MD*

Assistant Professor of Pediatrics and Molecular Microbiology, Washington University School of Medicine; St. Louis Children's Hospital, St. Louis, Missouri  
Enterococcus

*Robert H. A. Haslam, MD*

Emeritus Professor and Chair, Department of Pediatrics, Professor of Medicine (Neurology), University of Toronto; Emeritus Pediatrician-in-Chief and Staff Neurologist, Hospital for Sick Children, Toronto, Ontario, Canada  
Neurologic Evaluation; Headaches; Neurocutaneous Syndromes; Brain Abscess; Pseudotumor Cerebri; Spinal Cord Disorders

*Fern R. Hauck, MD*

Associate Professor and Director of Research, Department of

Family Medicine, University of Virginia Health System, Charlottesville, Virginia  
Sudden Infant Death Syndrome

*Paul R. Haut, MD*

Associate Professor of Pediatrics, Indiana University School of Medicine; Director of Pediatric Stem Cell Transplantation, James Whitcomb Riley Hospital for Children, Indianapolis, Indiana  
Pulmonary Tumors

*Gregory F. Hayden, MD*

Professor of Pediatrics, Director, Center for the Advancement of Generalist Medicine, University of Virginia School of Medicine, Charlottesville, Virginia  
The Common Cold; Acute Pharyngitis

*Jacqueline T. Hecht, PhD*

Professor of Pediatrics, Director, Genetic Counseling Program, University of Texas-Houston, Houston, Texas  
General Considerations; Disorders Involving Cartilage Matrix Proteins; Disorders Involving Transmembrane Receptors; Disorders Involving Ion Transporter; Disorders Involving Transcription Factors; Disorders Involving Defective Bone Resorption; Disorders for Which Defects Are Poorly Understood or Unknown

*William C. Heird, MD*

Professor of Pediatrics, Baylor College of Medicine; Children's Nutrition Research Center, Houston, Texas  
Nutritional Requirements; The Feeding of Infants and Children; Food Insecurity, Hunger, and Undernutrition; Vitamin Deficiencies and Excesses

*J. Owen Hendley, MD*

Professor of Pediatrics, University of Virginia School of Medicine, Charlottesville, Virginia  
Sinusitis; Retropharyngeal Abscess, Lateral Pharyngeal (Parapharyngeal) Abscess, and Peritonsillar Cellulitis/Abscess

*Fred M. Henretig, MD*

Professor of Pediatrics and Emergency Medicine, University of Pennsylvania School of Medicine; Director, Section of Clinical Toxicology, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania  
Biologic and Chemical Terrorism

*Gloria P. Heresi, MD*

Associate Professor of Pediatric Infectious Diseases, University of Texas-Houston Health Science Center; Memorial Hermann Children's Hospital, Houston, Texas  
Cholera (*Vibrio cholerae*); *Campylobacter*; *Yersinia*; *Aeromonas* and *Plesiomonas*

*Albert C. Hergenroeder, MD*

Professor of Pediatrics, Baylor College of Medicine; Chief, Adolescent Medicine Service and Sports Medicine Clinic, Texas Children's Hospital, Houston, Texas  
Sports Medicine

*Cynthia E. Herzog, MD*

Associate Professor, University of Texas M. D. Anderson Cancer Center, Houston, Texas  
Retinoblastoma; Gonadal and Germ Cell Neoplasms; Neoplasms of the Liver; Benign Vascular Tumors; Rare Tumors

*Lauren D. Holinger, MD*

Professor of Otolaryngology/Head and Neck Surgery, Northwestern University; Paul H. Holinger, MD, Professor, Head, Division of Pediatric Otolaryngology and Department of Communicative Disorders, Children's Memorial Hospital, Chicago, Illinois

Congenital Anomalies of the Larynx; Foreign Bodies of the Airway; Laryngotracheal Stenosis, Subglottic Stenosis; Congenital Anomalies of the Trachea and Bronchi; Neoplasms of the Larynx, Trachea, and Bronchi

#### *Steve Holve, MD*

Clinical Professor of Pediatrics, The Johns Hopkins University School of Medicine, Baltimore, Maryland; Chief, Department of Pediatrics, Tuba City Indian Medical Center, Tuba City, Arizona

Envenomations

#### *Jeffrey D. Hord, MD*

Associate Professor of Pediatrics, Northwestern Ohio Universities College of Medicine; Director, Pediatric Hematology/Oncology, Children's Hospital Medical Center, Akron, Ohio

The Acquired Pancytopenias

#### *William A. Horton, MD*

Professor of Molecular and Medical Genetics, Oregon Health Sciences University; Director of Research, Shriners Hospital for Children, Portland, Oregon

General Considerations; Disorders Involving Cartilage Matrix Proteins; Disorders Involving Transmembrane Receptors; Disorders Involving Ion Transporter; Disorders Involving Transcription Factors; Disorders Involving Defective Bone Resorption; Disorders for Which Defects Are Poorly Understood or Unknown

#### *Peter Hotez, MD, PhD*

Professor and Chair, Department of Microbiology and Tropical Medicine, The George Washington University Medical Center, Washington, DC

Hookworms (*Ancylostoma* and *Necator americanus*)

#### *Michelle S. Howenstine, MD*

Associate Professor of Clinical Pediatrics, Indiana University School of Medicine; James Whitcomb Riley Hospital for Children, Indianapolis, Indiana

Interstitial Lung Diseases

#### *E. Eugene Hoyme, MD*

Professor and Chief, Division of Medical Genetics, Department of Pediatrics, Stanford University School of Medicine; Chief, Genetics Service, Lucile Salter Packard Children's Hospital, Stanford, California

The Molecular Basis of Genetic Disorders; Molecular Diagnosis of Genetic Diseases; Patterns of Inheritance

#### *Vicki Huff, PhD*

Associate Professor of Molecular Genetics/Cancer Genetics, University of Texas M. D. Anderson Cancer Center, Houston, Texas

Neoplasms of the Kidney

#### *Walter T. Hughes, MD*

Professor of Pediatrics, University of Tennessee College of Medicine; Emeritus Member, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, Tennessee

*Pneumocystis carinii*

#### *Carl E. Hunt, MD*

Adjunct Professor of Pediatrics, Uniformed Services University of the Health Sciences; Director, National Center on Sleep Disorders Research, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland

Sudden Infant Death Syndrome

#### *Sunny Zaheed Hussain, MD*

Fellow in Pediatric Gastroenterology, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania

The Esophagus

#### *Jeffrey Hyams, MD*

Professor of Pediatrics, University of Connecticut School of Medicine; Head, Division of Digestive Diseases and Nutrition, Connecticut Children's Medical Center, Hartford, Connecticut

Inflammatory Bowel Disease; Food Allergy (Food Hypersensitivity); Eosinophilic Gastroenteritis; Malformations; Ascites; Peritonitis

#### *Richard F. Jacobs, MD*

Horace C. Cabe Professor of Pediatrics, University of Arkansas for Medical Sciences; Chief, Pediatric Infectious Diseases, Arkansas Children's Hospital, Little Rock, Arkansas

*Actinomyces*; *Nocardia*; Tularemia (*Francisella tularensis*); *Brucella*

#### *Norman Jaffe, MD*

Professor of Pediatrics, University of Texas M. D. Anderson Cancer Center, Houston, Texas

Neoplasms of the Kidney

#### *Renée R. Jenkins, MD*

Professor and Chair of Pediatrics, Howard University College of Medicine; Chair, Department of Pediatrics and Child Health, Howard University Hospital, Washington, DC

The Epidemiology of Adolescent Health Problems; Delivery of Health Care to Adolescents; Depression; Suicide; Violent Behavior; Substance Abuse; The Breast; Menstrual Problems; Contraception; Pregnancy; Sexually Transmitted Diseases

#### *Hal B. Jenson, MD*

Professor and Chair, Department of Pediatrics, Director, Center for Pediatric Research, Eastern Virginia Medical School and Children's Hospital of The King's Daughters; Senior Vice President for Academic Affairs, Children's Hospital of The King's Daughters, Norfolk, Virginia

Chronic Fatigue Syndrome; Epstein-Barr Virus; Lymphocytic Choriomeningitis Virus; Polyomaviruses; Human T-Cell Lymphotropic Viruses Types I and II

#### *Chandy C. John, MD*

Assistant Professor of Pediatrics, Case Western Reserve University School of Medicine; Division of Pediatric Infectious Diseases, Co-Director, Rainbow Center for International Child Health, Rainbow Babies and Children's Hospital, Cleveland, Ohio

Amebiasis; Trichomoniasis (*Trichomonas vaginalis*); Health Advice for Children Traveling Internationally

#### *Charles F. Johnson, MD*

Professor of Pediatrics, The Ohio State University; Children's

Hospital, Columbus, Ohio  
Abuse and Neglect of Children

*Michael V. Johnston, MD*

Professor of Neurology and Pediatrics, Kennedy Krieger Institute and The Johns Hopkins University School of Medicine, Baltimore, Maryland  
Congenital Anomalies of the Central Nervous System; Seizures in Childhood; Conditions that Mimic Seizures; Movement Disorders; Encephalopathies; Neurodegenerative Disorders of Childhood; Acute Stroke Syndromes

*Richard B. Johnston, Jr., MD*

Professor of Pediatrics, University of Colorado School of Medicine; National Jewish Medical and Research Center, Denver, Colorado  
Monocytes and Macrophages; The Complement System

*Kenneth Lyons Jones, MD*

Professor of Pediatrics, University of California, San Diego, School of Medicine; UCSD Medical Center, San Diego, California  
Dysmorphology

*Harry J. Kallas, MD*

Associate Professor of Pediatric Critical Care Medicine, Pediatric Medical Director, Life Flight, University of California, Davis, School of Medicine; UC Davis Children's Hospital, Sacramento, California  
Drowning and Near-Drowning

*Lewis J. Kass, MD*

Assistant Professor of Pediatrics, Albert Einstein College of Medicine; Children's Hospital at Montefiore, Bronx, New York  
Obstructive Sleep Apnea and Hypoventilation

*Mark A. Kay, MD, PhD*

Departments of Pediatrics and Genetics, Stanford University, Stanford, California  
Gene Therapy

*Allesandra N. Kazura, MD*

Assistant Professor of Psychiatry and Human Behavior, Brown University School of Medicine; Brown University Centers for Behavioral and Preventive Medicine, Providence, Rhode Island  
Psychosomatic Illness

*James W. Kazura, MD*

Professor of Medicine, International Health, and Pathology, Case Western Reserve University School of Medicine; Attending Physician, University Hospitals of Cleveland, Cleveland, Ohio  
Ascariasis (*Ascaris lumbricoides*); Trichuriasis (*Trichuris trichiura*); Enterobiasis (*Enterobius vermicularis*); Strongyloidiasis (*Strongyloides stercoralis*); Lymphatic Filariasis (*Brugia malayi*, *Brugia timori*, and *Wuchereria bancrofti*); Other Tissue Nematodes; Toxocariasis (Visceral and Ocular Larva Migrans); Trichinosis (*Trichinella spiralis*)

*Desmond P. Kelly, MD*

Clinical Associate Professor of Pediatrics, University of North Carolina School of Medicine; Director, Clinical Programs, All Kinds of Minds, Chapel Hill, North Carolina  
Patterns of Development and Function

*Kathi J. Kemper, MD, MPH*

Professor of Pediatrics, Wake Forest University School of Medicine; Brenner Children's Hospital  
Herbal Medicines

*John A. Kerner, MD*

Professor of Pediatrics, Director of Nutrition, Director of Pediatric Gastroenterology and Nutrition Fellowship, Stanford University School of Medicine; Director, Nutrition Support Team, Medical Director, Children's Home Pharmacy, Lucile Salter Packard Children's Hospital, Palo Alto, California  
Malabsorptive Disorders

*Seema Khan, MD*

Assistant Professor of Pediatric Gastroenterology, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
The Esophagus

*Charles H. King, MD*

Associate Professor of Medicine and International Health, Case Western Reserve School of Medicine; Attending Physician, University Hospitals of Cleveland, Cleveland, Ohio  
Schistosomiasis (*Schistosoma*); Flukes (Liver, Lung, and Intestinal)

*Stephen Kinsman, MD*

Assistant Professor of Pediatrics and Neurology, Director of Pediatric Neurology, University of Maryland School of Medicine, Baltimore, Maryland  
Congenital Anomalies of the Central Nervous System

*Bruce L. Klein, MD*

Associate Professor of Pediatrics and Emergency Medicine, The George Washington University School of Medicine and Health Sciences; Medical Director, Pediatric Transport Service, Children's National Medical Center, Washington, DC  
Acute Care of the Multiple Trauma Victim

*Marisa S. Klein-Gitelman, MD, MPH*

Assistant Professor of Pediatrics, Feinberg School of Medicine, Northwestern University; Interim Head, Division of Immunology/Rheumatology, Children's Memorial Hospital, Chicago, Illinois  
Systemic Lupus Erythematosus

*Robert M. Kliegman, MD*

Professor and Chair, Department of Pediatrics, Medical College of Wisconsin; Pediatrician in Chief, Pam and Les Muma Chair in Pediatrics, Children's Hospital of Wisconsin, Milwaukee, Wisconsin  
Mucopolysaccharidoses; Overview of Mortality and Morbidity; The Newborn Infant; High-Risk Pregnancies; The Fetus; The High-Risk Infant; Clinical Manifestations of Diseases in the Newborn Period; Nervous System Disorders; Delivery Room Emergencies; Respiratory Tract Disorders; Digestive System Disorders; Blood Disorders; Genitourinary System; The Umbilicus; Metabolic Disturbances; The Endocrine System

*William C. Koch, MD*

Associate Professor of Pediatrics, Virginia Commonwealth University; Division of Infectious Diseases, Medical College of Virginia, Richmond, Virginia  
Parvovirus B19

*Steve Kohl, MD*

Clinical Professor of Pediatrics, Oregon Health and Sciences University, Portland, Oregon  
Herpes Simplex Virus

*Gerald P. Koocher, PhD*

Dean, Graduate School for Health Studies, Simmons College, Boston, Massachusetts  
Grief and Bereavement

*Jill E. Korbin, PhD (Anthropology)*

Professor of Anthropology, Associate Dean, College of Arts and Sciences, Case Western Reserve University; Co-Director, Schubert Center for Child Development, Cleveland, Ohio  
Cultural Issues in Pediatric Care

*Peter J. Krause, MD*

Professor of Pediatrics, University of Connecticut School of Medicine; Director, Infectious Diseases, Connecticut Children's Medical Center, Hartford, Connecticut  
Malaria (*Plasmodium*); Babesiosis (*Babesia*)

*Marzena Krawiec, MD*

Assistant Professor of Pediatrics, University of Wisconsin Medical School, Madison, Wisconsin  
Wheezing in Infants

*John F. Kuttesch, Jr., MD, PhD*

Associate Professor of Pediatric Hematology/Oncology, Vanderbilt University Medical Center, Nashville, Tennessee  
Brain Tumors in Childhood

*Catherine S. Lachenauer, MD*

Assistant Professor of Pediatrics, Harvard Medical School; Assistant in Medicine, Children's Hospital, Boston, Massachusetts  
Group B Streptococcus

*Stephan Ladisch, MD*

Professor of Pediatrics and Biochemistry/Molecular Biology, The George Washington University School of Medicine; Scientific Director, Children's Research Institute, Children's National Medical Center, Washington, DC  
Histiocytosis Syndromes of Childhood

*Stephen LaFranchi, MD*

Professor of Pediatrics, Oregon Health and Sciences University; Staff Physician, Doernbecher Children's Hospital, Portland, Oregon  
Disorders of the Thyroid Gland

*Oren Lakser, MD*

Assistant Professor of Pediatrics, Northwestern University; Attending Physician, Division of Pulmonary Medicine, Children's Memorial Hospital, Chicago, Illinois  
Parenchymal Disease with Prominent Hypersensitivity, Eosinophilic Infiltration, or Toxin-Mediated Injury; Slowly Resolving Pneumonia; Bronchiectasis; Pulmonary Abscess

*Richard M. Lampe, MD*

Professor and Chair, Department of Pediatrics, Texas Tech University School of Medicine, Lubbock, Texas  
Osteomyelitis and Suppurative Arthritis

*Philip J. Landrigan, MD*

Ethel H. Wise Professor and Chair, Department of

Community and Preventive Medicine, Mount Sinai School of Medicine, New York, New York  
Chemical Pollutants

*Charles T. Leach, MD*

Professor of Pediatrics, Chief, Division of Infectious Diseases, University of Texas Health Science Center at San Antonio; Attending Physician, Christus Santa Rosa Children's Hospital and University Hospital, San Antonio, Texas  
Roseola (Human Herpesviruses 6 and 7); Human Herpesvirus 8

*Margaret W. Leigh, MD*

Professor of Pediatrics, University of North Carolina; Attending Physician, University of North Carolina Hospitals, Chapel Hill, North Carolina  
Sarcoidosis

*Robert F. Lemanske, Jr., MD*

Professor of Pediatrics and Medicine, University of Wisconsin School of Medicine, Madison, Wisconsin  
Wheezing in Infants

*Steven Lestrud, MD*

Professor of Pediatrics, Feinberg School of Medicine, Northwestern University; Attending Physician, Pediatric Pulmonary and Critical Care, Chicago, Illinois  
Bronchopulmonary Dysplasia

*Donald Y. M. Leung, MD, PhD*

Professor of Pediatrics, University of Colorado Health Sciences Center; Head, Division of Pediatric Allergy-Immunology, National Jewish Medical and Research Center, Denver, Colorado  
Allergy and the Immunologic Basis of Atopic Disease; Diagnosis of Allergic Disease; Principles of Treatment of Allergic Disease; Allergic Rhinitis; Childhood Asthma; Atopic Dermatitis (Atopic Eczema); Urticaria and Angioedema (Hives); Anaphylaxis; Serum Sickness; Insect Allergy; Adverse Reactions to Foods

*Lenore S. Levine, MD*

Professor of Pediatrics, College of Physicians and Surgeons, Columbia University; Attending Pediatrician, New York Presbyterian Hospital, New York, New York  
Disorders of the Adrenal Glands

*Stephen Liben, MD*

Associate Professor of Pediatrics, McGill University; Director, Palliative Care Program, The Montreal Children's Hospital of the McGill University Health Center, Montreal, Quebec, Canada  
Pediatric Palliative Care: The Care of Children with Life-Limiting Illness

*Iris F. Litt, MD*

Marron and Mary Elisabeth Kendrick Professor of Pediatrics, Stanford University School of Medicine; Director, Division of Adolescent Medicine, Lucile Salter Packard Children's Hospital, Palo Alto, California  
Anorexia Nervosa and Bulimia

*Andrew H. Liu, MD*

Associate Professor of Pediatric Allergy and Immunology, Training Program Director, National Jewish Medical and Research Center, University of Colorado Health Sciences Center, Denver, Colorado  
Childhood Asthma

*Sarah S. Long, MD*

Professor of Pediatrics, Drexel University College of Medicine; Chief, Section of Infectious Diseases, St. Christopher's Hospital for Children, Philadelphia, Pennsylvania  
*Diphtheria (Corynebacterium diphtheriae)*; Pertussis (*Bordetella pertussis* and *B. parapertussis*)

*Daniel J. Lovell, MD, MPH*

Professor of Pediatrics, University of Cincinnati Medical Center; Associate Director, Division of Pediatric Rheumatology, Cincinnati Children's Hospital, Cincinnati, Ohio  
 Treatment of Rheumatic Diseases

*G. Reid Lyon, PhD*

Branch Chief, Child Development and Behavior, National Institute of Child Health and Human Development, National Institutes of Health, Rockville, Maryland  
 Specific Reading Disability (Dyslexia)

*Joseph A. Majzoub, MD*

Professor of Pediatrics, Harvard Medical School; Chief, Division of Endocrinology, Children's Hospital Boston, Boston, Massachusetts  
 Diabetes Insipidus; Other Abnormalities of Arginine Vasopressin Metabolism and Action

*Yvonne Maldonado, MD*

Associate Professor of Pediatrics, Stanford University School of Medicine; Attending Physician, Lucile Salter Packard Children's Hospital, Stanford, California  
 Measles; Rubella; Mumps

*John C. Marini, MD, PhD*

Chief, Heritable Disorders Branch, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Maryland  
 Osteogenesis Imperfecta

*Morri Markowitz, MD*

Professor of Pediatrics, Albert Einstein College of Medicine; Attending Physician, Pediatrics, Division of Environmental Sciences, Children's Hospital at Montefiore, Montefiore Medical Center, Bronx, New York  
 Lead Poisoning

*Reuben K. Matalon, MD*

Professor of Pediatrics and Genetics, University of Texas Medical Branch, Galveston, Texas  
 Aspartic Acid (Canavan Disease)

*Lawrence H. Mathers, MD, PhD*

Assistant Professor of Pediatrics and Anatomy, Stanford University School of Medicine; Attending Physician, Lucile Salter Packard Children's Hospital, Stanford, California  
 Effective Communication with Families in the PICU; Pediatric Emergencies and Resuscitation; Shock; Transplantation Issues in the PICU; Withdrawal or Withholding of Life Support, Brain Death, and Organ Procurement

*Nancy J. Matyunas, PharmD*

Assistant Clinical Professor of Pediatrics, Adjunct Instructor in Pharmacology and Toxicology, University of Louisville,

Louisville, Kentucky

Poisonings: Drugs, Chemicals, and Plants

*Robert Mazor, MD*

Fellow, Department of Pediatrics, Division of Cardiology, Feinberg School of Medicine, Northwestern University; Children's Memorial Hospital, Chicago, Illinois  
 Pulmonary Edema

*Paul L. McCarthy, MD*

Professor of Pediatrics, Yale University School of Medicine; Director, Division of General Pediatrics, Children's Hospital at Yale-New Haven, New Haven, Connecticut  
 The Well Child; Evaluation of the Sick Child in the Office and Clinic

*Susanna A. McColley, MD*

Associate Professor of Pediatrics, Feinberg School of Medicine, Northwestern University; Director, Cystic Fibrosis Center, Children's Memorial Hospital, Chicago, Illinois  
 Disorders of the Lungs and Lower Airways; Pulmonary Tumors; Extrapulmonary Diseases with Pulmonary Manifestations

*Margaret M. McGovern, MD, PhD*

Associate Professor of Human Genetics and Pediatrics, Mount Sinai School of Medicine; Attending Physician, Pediatrics, Mount Sinai Hospital, New York, New York  
 Lipidoses; Mucopolidoses; Disorders of Glycoprotein Degradation and Structure

*Kenneth McIntosh, MD*

Professor of Pediatrics, Harvard Medical School; Senior Associate in Medicine, Children's Hospital Boston, Boston, Massachusetts  
 Respiratory Syncytial Virus; Adenoviruses; Rhinoviruses

*Rima McLeod, MD*

Jules and Doris Stein Research to Prevent Blindness Professor, University of Chicago, Visual Sciences and Ophthalmology Department, Chicago, Illinois  
 Toxoplasmosis (*Toxoplasma gondii*)

*Peter C. Melby, MD*

Associate Professor of Medicine, Division of Infectious Diseases, The University of Texas Health Science Center; Staff Physician, Department of Veterans Affairs Medical Center, South Texas Veterans Health Care System, San Antonio, Texas  
 Leishmaniasis (*Leishmania*)

*Fred A. Mettler, Jr., MD, MPH*

Professor and Chair, Department of Radiology, University of New Mexico, Albuquerque, New Mexico  
 Pediatric Radiation Injuries

*Marian G. Michaels, MD, MPH*

Associate Professor of Pediatrics and Surgery, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
 Infections in Immunocompromised Persons

*Henry Milgrom, MD*

Professor of Pediatrics, University of Colorado Health Sciences Center; Senior Faculty Member, National Jewish Medical and Research Center, Denver, Colorado  
 Allergic Rhinitis

*Michael L. Miller, MD*

Associate Professor of Pediatrics, Northwestern University Medical School; Children's Memorial Medical Center, Chicago, Illinois  
Evaluation of Suspected Rheumatic Disease; Treatment of Rheumatic Diseases; Juvenile Rheumatoid Arthritis; Ankylosing Spondylitis and Other Spondyloarthropathies; Postinfectious Arthritis and Related Conditions; Systemic Lupus Erythematosus; Scleroderma; Vasculitis Syndromes; Musculoskeletal Pain Syndromes; Miscellaneous Conditions Associated with Arthritis

*Robert R. Montgomery, MD*

Professor of Pediatrics and Vice Chair of Research, Medical College of Wisconsin; Senior Investigator, Blood Center of Southeastern Wisconsin, Milwaukee, Wisconsin  
Hemorrhagic and Thrombotic Diseases

*Anna-Barbara Moscicki, MD*

Professor of Pediatrics, University of California, San Francisco, School of Medicine, San Francisco, California  
Human Papillomaviruses

*Hugo W. Moser, MD*

Professor of Neurology and Pediatrics, Kennedy Krieger Institute, The Johns Hopkins University School of Medicine, Baltimore, Maryland  
Disorders of Very Long Chain Fatty Acids

*Joseph L. Muenzer, MD*

Associate Professor of Pediatrics, University of North Carolina School of Medicine, Chapel Hill, North Carolina  
Mucopolysaccharidoses

*Flor M. Munoz, MD*

Assistant Professor of Pediatrics, Baylor College of Medicine; Texas Children's Hospital, Houston, Texas  
Tuberculosis (*Mycobacterium tuberculosis*)

*James R. Murphy, PhD*

Pediatric Infectious Diseases, University of Texas Health Science Center, Houston, Texas  
Cholera (*Vibrio cholerae*); *Campylobacter*; *Yersinia*; *Aeromonas* and *Plesiomonas*

*Martin G. Myers, MD*

Professor of Pediatrics, University of Texas Medical Branch; Children's Hospital, Galveston, Texas  
Varicella-Zoster Virus

*Robert D. Needleman, MD*

Adjunct Associate Professor of Pediatrics, Case Western Reserve University School of Medicine; Attending Physician, MetroHealth Medical Center, Cleveland, Ohio  
Growth and Development

*Leonard B. Nelson, MD*

Associate Professor of Ophthalmology and Pediatrics, Jefferson Medical College; Co-Director, Department of Pediatric Ophthalmology, Wills Eye Hospital, Philadelphia, Pennsylvania  
Disorders of the Eye

*Robert M. Nelson, MD, PhD*

Associate Professor of Anesthesia and Pediatrics, University

of Pennsylvania School of Medicine; Chair, Committees for the Protection of Human Subjects, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania  
Ethics in Pediatric Care

*Vicky Lee Ng, MD*

Assistant Professor of Pediatrics, University of Toronto; Staff Physician, Division of Gastroenterology and Nutrition, Pediatric Academic Multi-Organ Transplant (PAMOT) Program, Hospital for Sick Children, Toronto, Ontario, Canada  
Manifestations of Liver Disease

*John F. Nicholson, MD*

Associate Professor of Pediatrics and Pathology, Columbia University; Associate Attending Pediatrician, Children's Hospital of New York-Presbyterian Hospital, New York, New York  
Laboratory Testing in Infants and Children; Reference Ranges for Laboratory Tests and Procedures

*Zehava Noah, MD*

Associate Professor in Pediatrics, Feinberg School of Medicine, Northwestern University; Attending Physician, Children's Memorial Hospital, Chicago, Illinois  
Chronic Severe Respiratory Insufficiency

*Lawrence M. Nogee, MD*

Associate Professor of Pediatrics, The Johns Hopkins University School of Medicine; Attending Neonatologist, Johns Hopkins Children's Center, Baltimore, Maryland  
Pulmonary Alveolar Proteinosis; Inherited Disorders of Surfactant Protein Metabolism

*Theresa J. Ochoa, MD*

University of Texas-Houston Health Science Center; Pediatric Disease Fellow, Memorial Hermann Children's Hospital, Houston, Texas  
*Escherichia coli*

*Robin K. Ohls, MD*

Associate Professor of Pediatrics, Division of Neonatology, University of New Mexico School of Medicine; Department of Pediatrics/Neonatology, Children's Hospital of New Mexico, Albuquerque, New Mexico  
Development of the Hematopoietic System

*Scott E. Olitsky, MD*

Associate Professor of Ophthalmology, University of Missouri at Kansas City; Chief of Ophthalmology, The Children's Mercy Hospital, Kansas City, Missouri  
Disorders of the Eye

*Karen Olness, MD*

Professor of Pediatrics, Family Medicine, and International Health, Case Western Reserve University School of Medicine; Director, Rainbow Center for International Child Health, Rainbow Babies and Children's Hospital, Cleveland, Ohio  
Child Health in the Developing World

*Susan Orenstein, MD*

Professor and Chief, Pediatric Gastroenterology, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
The Esophagus



**Gary D. Overturf, MD**

Department of Pediatrics, University of New Mexico Medical Center, Albuquerque, New Mexico  
*Streptococcus pneumoniae* (Pneumococcus)

**Judith A. Owens, MD, MPH**

Associate Professor of Pediatrics, Brown Medical School; Director, Pediatrics Sleep Disorders Clinic, Hasbro Children's Hospital, Providence, Rhode Island  
 Sleep Disorders

**Lauren M. Pachman, MD**

Professor of Pediatrics, Division of Immunology/Rheumatology, Feinberg School of Medicine, Northwestern University; Interim Division Head, Disease Pathogenesis Program, Children's Memorial Institute of Education and Research (CMIER), Children's Memorial Hospital, Chicago, Illinois  
 Juvenile Dermatomyositis; Vasculitis Syndromes

**Regina M. Palazzo, MD**

Assistant Professor of Pediatrics, Yale University School of Medicine; Director, Cystic Fibrosis Center, Attending Physician, Yale-New Haven Children's Hospital, New Haven, Connecticut  
 Diagnostic Approach to Respiratory Disease

**Demosthenes Pappagianis, MD, PhD**

Professor, Department of Medical Microbiology and Immunology, University of California, Davis, School of Medicine, Davis, California  
*Coccidioidomycosis* (*Coccidioides immitis*)

**Diane E. Pappas, MD**

Associate Professor of Pediatrics, University of Virginia School of Medicine, Charlottesville, Virginia  
 Sinusitis; Retropharyngeal Abscess, Lateral Pharyngeal (Parapharyngeal) Abscess, and Peritonsillar Cellulitis/Abscess

**Jack L. Paradise, MD**

Professor of Pediatrics, Family Medicine, and Clinical Epidemiology, Professor of Otolaryngology, University of Pittsburgh School of Medicine; Attending Staff, Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
 Otitis Media

**John S. Parks, MD, PhD**

Professor of Pediatrics, Emory University School of Medicine; Director, Pediatric Endocrinology, Egleston Children's Hospital, Atlanta, Georgia  
 Hormones of the Hypothalamus and Pituitary; Hypopituitarism

**Sheral S. Patel, MD**

Assistant Professor of Pediatric Infectious Diseases, Case Western Reserve University School of Medicine; Attending Physician, Rainbow Babies and Children's Hospital, University Hospitals of Cleveland, Cleveland, Ohio  
*Ascariasis* (*Ascaris lumbricoides*); *Trichuriasis* (*Trichuris trichiura*); Enterobiasis (*Enterobius vermicularis*); Strongyloidiasis (*Strongyloides stercoralis*); Lymphatic Filariasis (*Brugia malayi*, *Brugia timori*, and *Wuchereria bancrofti*); Other Tissue Nematodes; Toxocariasis (Visceral and Ocular Larva Migrans); Trichinosis (*Trichinella spiralis*)

**Alberto Peña, MD**

Professor of Surgery, Albert Einstein College of Medicine, Bronx, New York; Chief, Pediatric Surgery, Schneider Children's Hospital, North Shore Long Island Jewish Health System, New Hyde Park, New York  
 Surgical Conditions of the Anus, Rectum, and Colon

**James M. Perrin, MD**

Professor of Pediatrics, Harvard Medical School; Director, Division of General Pediatrics, Director, Center for Child and Adolescent Health Policy, Massachusetts General Hospital for Children, Boston, Massachusetts  
 Developmental Disabilities and Chronic Illness; Chronic Illness in Childhood

**Michael A. Pesce, PhD**

Columbia University College of Physicians and Surgeons; Director, Specialty Laboratory, New York-Presbyterian Hospital at Columbia Medical Center, New York, New York  
 Laboratory Testing in Infants and Children; Reference Ranges for Laboratory Tests and Procedures

**Georges Peter, MD**

Professor of Pediatrics, Vice Chair for Faculty Affairs, Brown Medical School; Director, Division of Pediatric Infectious Diseases, Rhode Island Hospital, Providence, Rhode Island  
 Immunization Practices

**John Peters, DO**

Assistant Professor of Pediatric Gastroenterology, University of Pittsburgh School of Medicine; Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania  
 The Esophagus

**Ross E. Petty, MD, PhD**

Professor and Head of Pediatrics, University of British Columbia; British Columbia Children's Hospital, Vancouver, Canada  
 Ankylosing Spondylitis and Other Spondyloarthropathies

**Larry K. Pickering, MD**

Professor of Pediatrics, Emory University School of Medicine; Senior Advisor to the Director, National Immunization Program, Centers for Disease Control and Prevention, Atlanta, Georgia  
 Giardiasis and Balantidiasis; Child Care and Communicable Diseases; Gastroenteritis; Viral Hepatitis

**Dwight A. Powell, MD**

Professor of Pediatrics, The Ohio State University College of Medicine and Public Health; Chief, Section of Pediatric Infectious Diseases, Children's Hospital, Columbus, Ohio  
 Hansen Disease (*Mycobacterium leprae*); Nontuberculous Mycobacteria; Mycoplasmal Infections

**Keith R. Powell, MD**

Professor and Chair, Department of Pediatrics, Northeastern Ohio Universities College of Medicine; Vice President and Dr. Noah Miller Chair of Medicine, Children's Hospital Medical Center, Akron, Ohio  
 Fever; Fever Without a Focus; Sepsis and Shock

**Charles G. Prober, MD**

Professor of Pediatrics, Medicine, Microbiology, and Immunology, Associate Chair of Pediatrics; Stanford University School of Medicine, Stanford, California