

Section of Neonatology, Perinatal and Pulmonary Biology

DIVISION PROFILE	
Number of Faculty	37
Number of Joint Appointment Faculty	1
Number of Staff Physicians	15
Number of Fellows	
Clinical Fellows	11
Research Fellows	9
Number of Graduate Students	6
Number of Support Personnel	120
Annual Total Grant Support (direct)	\$8,630,179
Annual Total Industry Contracts (direct)	\$912,221
Number of Peer Reviewed Publications	66
Patient Encounters	
Outpatient	6,916
Inpatient	79,196

FACULTY LISTING

Jeffrey A. Whitsett, MD, Professor of Pediatrics, Chief, Section of Neonatology, Perinatal and Pulmonary Biology

James M. Greenberg, MD, Associate Professor of Pediatrics, Director, Division of Neonatology; Medical Director, Regional Newborn Services; Director, Mercy Hospital Fairfield Nursery

Alan H. Jobe, MD, PhD, Professor of Pediatrics, Director, Division of Perinatal Biology; Director, Neonatology Fellowship Advanced Research Training Program

Ann L. Akeson, PhD, Research Associate Professor of Pediatrics

Henry T. Akinbi, MD, Associate Professor of Clinical Pediatrics

Cindy J. Bachurski, PhD, Research Associate Professor of Pediatrics, Elective Director: Research in Pulmonary Biology and Neonatology Elective, University of Cincinnati College of Medicine; Director, Summer Internship Program for high school students, CCHMC

Thomas Bartman, MD, PhD, Assistant Professor of Pediatrics

Michael W. Crossman, MD, PhD, Assistant Professor of Clinical Pediatrics

Vrushank Davé, PhD, Research Instructor of Pediatrics

Edward F. Donovan, MD, Professor Emeritus of Clinical Pediatrics, Director, Neonatology Clinical Research Core; Director, Child Policy Research Center

Horacio S. Falciglia, MD, Professor of Clinical Pediatrics, Director, Good Samaritan Hospital Mother/Baby Unit

Jon H. Fridriksson, MD, Associate Professor of Pediatrics, Medical Director, Regional Center for Newborn Intensive Care; Medical Director, Neonatal Transport Team

Stephan W. Glasser, PhD, Associate Professor of Pediatrics, Member and Interim Acting Chairman, University of Cincinnati Radiation Safety Committee

Beth E. Haberman, MD, Assistant Professor of Pediatrics, Medical Director, Mercy Hospital Anderson Special Care Nursery; Leader, Fellowship Teaching Program; Associate Director, High Risk Infant Follow-up Clinic

Steven B. Hoath, MD, Professor of Pediatrics, Director, Skin Sciences Institute

Machiko Ikegami, MD, PhD, Professor of Pediatrics, Director, Surfactant and Metabolic Function Core

Suhas G. Kallapur, MD, Associate Professor of Clinical Pediatrics, Director of CME, Division of Neonatology

Paul Kingma, MD, PhD, Assistant Professor of Pediatrics

Thomas R. Korfhagen, MD, PhD, Professor of Pediatrics

Timothy D. Le Cras, PhD, Associate Professor of Pediatrics, Co-Director, Graduate Student Recruiting, Molecular and Development Biology Graduate Program

Ron S. Levin, MD, Associate Professor of Clinical Pediatrics, Director, Center for Infants and Children with Special Needs

Michael L. Mucenski, PhD, Research Assistant Professor of Pediatrics
Vivek Narendran, MD, Assistant Professor of Clinical Pediatrics, Medical Director, Cincinnati Perinatal Outreach Project; Medical Director, The Christ Hospital Nursery; and University Hospital NICU and Newborn Nurseries
Amy Nathan, MD, Research Instructor of Pediatrics
Anne-Karina Perl, PhD, Research Assistant Professor of Pediatrics
John H. Reuter, MD, PhD, Associate Professor of Pediatrics, Chair, Department of Pediatrics, Bethesda Hospital
Ward R. Rice, MD, PhD, Professor of Pediatrics, Director, Neonatal Fellowship Training Program
Kurt R. Schibler, MD, Associate Professor of Pediatrics, Director, Neonatology Clinical Research Steering Committee
John M. Shannon, PhD, Professor of Pediatrics
Jean J. Steichen, MD, Professor of Pediatrics; Associate Professor of OB/GYN, UCMC, Associate Director, Newborn Division; Director, Alliance Neonatal Services, Director, CCHMC High Risk Infant Follow-up Clinic
Bruce C. Trapnell, MD, Professor of Pediatrics, Director, Rare Lung Diseases Consortium; Co-Director, Cincinnati Cystic Fibrosis Therapeutics Development Network (TDN) Center; Scientific Director, Alpha-1 Foundation
Laura P. Ward, MD, Adjunct Assistant Professor of Clinical Pediatrics
Barbara B. Warner, MD, Associate Professor of Pediatrics, Director, Department of Neonatal Pediatrics, TriHealth Hospitals
Timothy E. Weaver, PhD, Professor of Pediatrics, Co-Director, Division of Pulmonary Biology
Kathy E. Wedig, MD, Associate Professor of Clinical Pediatrics, Director, High-Risk Follow-up Clinic, Good Samaritan Hospital; Director, Medical Student Exchange
Susan E. Wert, PhD, Associate Professor of Pediatrics, Director, Molecular Morphology Core, Division of Pulmonary Biology; Director, Clinical Core, NIH Specialized Center of Research (SCOR) in Pathobiology of Lung Development
Yan Xu, PhD, Research Assistant Professor of Pediatrics, Director, Microarray-Bioinformatics Core

FACULTY JOINT APPOINTMENT LISTING

Jeanne L. Ballard, MD, Associate Professor of Clinical Pediatrics and OB/GYN, Division of Neonatology

STAFF PHYSICIAN LISTING

Stephen Bird, MD
Thomas Catalanotto, MD
Diane Donley, MD
Michelle French, MD
Venkatesan Gorantla, MD
Lisa Green, MD
Evelyn Jones, MD
Carrie Kluger, MD
Katie Loudermilk, MD
Kenton Pate, MD
John Robinson, MD
Deborah Rufner, MD
Warren Webb, MD
Scott Wexelblatt, MD
Neal Guttenberg, MD

OVERVIEW

Clinical

The Division of Neonatology operates one of the largest, most comprehensive and sophisticated programs of care in the United States. The division provides coverage and medical leadership for all three Level III-IV

Neonatal Intensive Care Units in Cincinnati, six Level II Special Care Nurseries, and also provides care for approximately 17,000 normal newborns annually in nine area hospitals. The division plays an integral role in the Fetal Care Center that provides prenatal testing, diagnosis and intervention for complex fetal conditions/diagnoses. The division is active in training fellows and clinical-scientists and is actively involved in clinical research to improve the outcome of newborn infants.

Research

The Division of Pulmonary Biology focuses research efforts to the elucidation of the molecular and cellular mechanisms controlling lung morphogenesis, function and repair. The investigators have interests in host defense, surfactant biology, perinatal respiratory adaptation and the molecular pathogenesis of inherited and acquired lung disease. The division is active in training graduate students, postdoctoral associates and clinical-scientists. The combined Pulmonary-Neonatal group engages in clinical and basic science research. Lung, skin, gastrointestinal and cardiac development and disease are major areas of interest.



Left to Right: (1st row) B. Trapnell, L. Ward, A. Nathan, K. Falciglia, B. Haberman, J. Whitsett, J. Greenberg, Y. Xu, T. LeCras (2nd row) T. Bartman, S. Glasser, T. Cahill, A. Akeson, K. Wedig, J. Shannon, S. Kallapur, W. Rice, A. Jobe (3rd row) M. Mucenski, J. Fridriksson, M. Ikegami, S. Hoath, T. Weaver, P. Kingma

HIGHLIGHTS

Clinical Highlights

The division, under the directorship of Dr. James Greenberg, provides care and leadership for the majority of area normal newborn nurseries, special care nurseries and all newborn intensive care services. We also are accepting an increasing number of patient referrals from outside the region for prenatal management of complex medical/surgical diagnoses. The division also continues to provide a continuum of care for newborns and young children spanning from fetal life through high-risk follow-up in one of its two hospital-based outpatient clinics.

The division has maintained an active research program ranging from basic developmental biology research through multi-center clinical studies. The division is one of 16 centers participating in the NICHD Neonatal Network. Our center contributes the largest number of patients of any in the Network. Drs. Edward Donovan and Kurt Schibler serve as Co-principal Investigators for the network grant.

The Division of Neonatology is an active participant in the Cincinnati Fetal Care Center. Division neonatologists provide ongoing prenatal clinical consultation for patients referred to the center in collaboration with colleagues in Maternal-Fetal Medicine and Pediatric Surgery. This program is in collaboration between Cincinnati Children's Hospital, University Hospital, and Good Samaritan Hospital and represents an important community-wide effort to identify high-risk infants requiring complex perinatal, neonatal, surgical, cardiology and genetics subspecialty management. The division continues to develop its Congenital Diaphragmatic

Hernia program. This program is a collaboration between the Division of Neonatology and the Division of Pediatric Surgery, and is designed to provide state-of-the-art care for infants with this complex congenital malformation. The Fetal Care Center and Congenital Diaphragmatic Hernia team represent efforts by the division to develop clinical programs for patients with complex medical/surgical problems.

The division's neonatal-perinatal Fellowship Training Program remains robust, with 10 fellows currently in various stages of their training. Dr. Ward Rice serves as Program Director and is supported by Graduate Medical Education Committee members consisting of Drs. Kurt Schibler, Alan Jobe, Beth Haberman and Jon Fridriksson.

Research Highlights

A number of important programs have been developed by investigators in the Divisions of Pulmonary Biology and Neonatology: 1) a Program Project on Surfactant Homeostasis; 2) a Specialized Center of Research (SCOR) grant (NHLBI); and 3) the NIH-funded Center for Rare Diseases; 4) Research Development Programs of the Cystic Fibrosis Foundation; 5) Neonatal Network of the National Institutes of Health; 6) NHLBI and NICHD funded Fellowship Training Grant for graduate and postgraduate training.

The Program Project Grant, is led by Timothy E. Weaver, PhD, and was recently funded by the National Institutes of Health. The program includes projects led by Drs. Jeffrey Whitsett, Machiko Ikegami, and Timothy Weaver from the Division of Pulmonary Biology, and Dr. Daniel Prows from the Division of Human Genetics. These projects seek to determine the mechanisms contributing to acute and chronic lung diseases in children and adults. The role of protein misfolding, transcriptional control of cell survival and repair, and the factors regulating airway epithelial cell differentiation, are being actively studied to further understand the pathogenesis of asthma, emphysema, and pulmonary fibrosis that affect infants and adults.

The SCOR grant, Jeffrey A. Whitsett, MD, PI, has made considerable progress in elucidating genes and processes mediating lung morphogenesis or causing pulmonary fibrosis and acute respiratory failure in infants and adults. The group has identified the role of genes involved in surfactant homeostasis that have been implicated in the pathogenesis of severe lung disease. Growth factors, signaling molecules, and transcription factors regulating formation and repair of the lung are under investigation in work led by Dr. John M. Shannon.

Cystic Fibrosis RDP Center, Jeffrey Whitsett, MD., Co-PI. Dr. Christopher Karp will now direct the CFF RDP Center and Dr. Whitsett will serve as Co-PI. This Center has directed pretranslational and translational studies focused to the source of Cystic Fibrosis. Pilot projects, training and cores are supported.

The Center for Rare Lung Diseases, Bruce C. Trapnell, MD, works in close collaboration with Frank X. McCormack, MD at the University of Cincinnati. The center conducts interventional trials, manages databases, and creates a center for education, research, and for partnerships with patient advocate organizations in the fight against pulmonary diseases, including emphysema, pulmonary fibrosis, and bronchopulmonary dysplasia.

Neonatal Network (NICHD) for multicenter trials, Edward Donovan, MD, Kurt Schibler, MD. This grant has funded clinical trials and data management involved in multi-center interventional trials focused to lung injury outcomes in newborn infants. Dr. Alan Jobe has been the chair of the national planning committee for this program. The Neonatal Network recently completed important clinical trials to study temperature reduction in treatment of brain damage following neonatal hypoxic-ischemic injury at birth.

NIH (NHLBI and NICHD) funded training programs led by our divisions support research training for doctoral students and postdoctoral trainees.

TRAINING

Madhavi Koneru, MD
Adrian Lavery, MD

PL4 New York Medical College, Staten Island, NY
PL4 Medical University of South Carolina,
Charleston, SC
PL5 Miami Children's Hospital, Miami, FL

Ivan Abril, MD

Noah Hillman, MD	PL5	Children's Hospital Medical Center-UCMC, Cincinnati, OH
Melinda Markham, MD	PL5	UAMS/Arkansas Children's Hospital, Little Rock, AR
Tamina Singh, MD	PL5	University of Illinois at Chicago, Chicago, IL
Alan Kenny, MD, PhD	PL5	University of Rochester, Rochester, NY
Alison Protain, DO	PL5	Children's Hospital/Cleveland Clinic, Cleveland, OH
Tanya Cahill, MD	PL6	Children's Hospital Medical Center-UCMC, Cincinnati, OH
Venkatesh Sampath, MD	PL6	Cleveland Clinic Foundation, Cleveland, OH
Valencia Walker, MD	PL6	University of Tennessee, Memphis, TN
Brenna Carey, PhD		University of Cincinnati
Yutaka Maeda, PhD		University of California
Kanji Uchida, MD, PhD		Toyko University School of Medicine University Graduate School of Medicine
Huajing Wan, PhD		University of Cincinnati
Jim Bridges, PhD		University of Cincinnati
Brad Mallory, PhD		University of Cincinnati
Ross Ridsdale, PhD		University of Toronto
Valerie Besnard, PhD		Universite Rene Descartes - Paris
Alexander Lange, PhD		University of Cincinnati

GRANTS, CONTRACTS AND INDUSTRY AGREEMENTS

Grant and Contracts	Awards	Annual Direct/Project Period	Direct
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Akeson, A			
VEGF Regulation of Pulmonary Vascular Development			
National Institutes of Health			
R01 HL 067807		7/1/03 – 06/30/07	\$250,000/\$1,000,000
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Akinbi, H			
Role of Lysozyme in Airway Host Defense			
National Institutes of Health			
R01 AI 050797		02/15/02 – 01/31/07	\$219,713/\$1,125,000
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Bachurski, C			
Role of NFI and Alveolar Type II Cell Function			
National Institutes of Health			
R01 HL 060907		07/01/03 – 06/30/07	\$225,000/\$900,000
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Bartman, T			
Analysis of NFATc1 as the Mechanism by Which Early Heart Function Regulates			
Endocardial Cushion			
American Heart Association - Ohio			
		01/01/06 – 12/31/09	\$59,091/\$239,364
Role of Chondronitin and Dermatan Sulfatation in Endocardial Cushion			
Morphogenesis			
March of Dimes – National			
		06/01/06 – 05/31/09	\$70,909/\$218,181
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Boat, T – PI			
Jobe, A – Program Director			
Research Training for Pediatrics Subspecialists			
National Institutes of Health			
T32 HD 043005		07/01/02 – 04/30/07	\$208,151/\$892,080

Davé, V	Calcineurin/NFAT Pathway in Lung Formation and Function American Heart Association	07/01/05 – 06/30/07	\$55,000/\$110,000
Glasser, S	Regulation of the Lung Surfactant Protein C Gene National Institutes of Health R01 HL 050046	04/01/04 – 03/31/08	\$219,713/\$900,000
Hill, K	Division of Family Services Regional Outreach Education Project Ohio Department of Health 31-3-001-1-BM-04	10/01/05 – 09/30/06	\$90,000
Hoath, S	Mechanisms of Wound Healing with Cultured Human Skin National Institutes of Health (University of Cincinnati subcontract) R01 GM 050509	07/01/02 – 06/30/06	\$4,439/\$81,684
Ikegami, M	Role of Surfactant Protein D in Surfactant Homeostasis National Institutes of Health R01 HL 063329	08/01/03 – 07/31/07	\$264,327/\$1,050,643
Jobe, A	New Mediators of Lung Maturation National Institutes of Health R01 HL 065397	09/01/04 – 08/31/09	\$282,459/\$1,457,632
	Antecedents to Lung Injury in the Preterm National Institutes of Health R01 HD 012714	05/01/06 – 03/31/11	\$195,275/\$954,405
Kallapur, S	Mechanisms of Vascular Injury in the Preterm Lung National Institutes of Health K08 HL 070711	07/01/02 – 06/30/07	\$115,750/\$578,756
Korfhagen, T	Role of Surfactant Protein-A in Lung Defense National Institutes of Health R01 HL 058795	2/13/04 – 1/31/09	\$244,125/\$1,250,000
	Growth Factor Protection in Acute Lung Injury National Institutes of Health (University of Cincinnati subcontract) R01 HL 077763	12/15/05 – 11/30/09	\$46,829/\$195,985
Lecras, T	Role of Tef-Alpha in Pulmonary Vascular Disease National Institutes of Health R01 HL 072894	04/10/03 – 03/31/07	\$244,125/\$1,000,000
	Role of Vascular Endothelial Growth Factor in Hyperoxic Lung Disease in Newborns American Lung Association	07/01/03 – 06/30/06	\$50,000/\$150,000
Schibler, K	NICHD Cooperative Multi-Center Neonatal Research Network National Institutes of Health U10 HD 027853	04/01/06 – 03/31/11	\$141,021/\$619,326

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Senft, A			
RSV and Macrophage Oxidative Burst			
American Lung Association			
	07/01/04 – 06/30/06		\$32,500/\$65,000
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Shannon, J			
Chondroitin Sulfate Proteoglycans in Lung Development			
National Institutes of Health			
R01 HL 071898	01/03/03 – 11/30/06		\$195,300/\$800,000
Alveolar Type II Cells: Effects of KGF			
National Institutes of Health (National Jewish Medical & Research Center subcontract)			
R01 HL 029891	04/01/06 – 03/31/10		\$13,083/\$69,870
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Trapnell, B			
Regulation of Alveolar Macrophage Phagocytosis			
National Institutes of Health			
R01 HL 071823	12/05/02 – 11/30/07		\$244,125/\$1,250,000
Rare Disease Clinical Network			
National Institutes of Health			
U54 RR 019498	09/30/03 – 07/31/08		\$885,170/\$4,498,194
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Warner, B			
EGF for the Prevention of NEC in Preterm Infants			
The Gerber Foundation			
	01/01/05 – 06/01/06		\$3,657/\$224,846
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Weaver, T			
Structure/Function Analyses of SPB in Transgenic Mice			
National Institutes of Health			
R37 HL 056285	05/01/01 – 04/30/06		\$355,087/\$1,885,203
Regulation of Respiratory Epithelial Cell Homeostasis			
National Institutes of Health			
P01 HL 061646	08/10/04 – 06/30/09		\$1,396,533/\$6,892,425
Weaver, T	\$279,846	Project 1	
Prows, D	\$168,577	Project 2	
Ikegami, P	\$290,387	Project 3	
Whitsett, J	\$292,932	Project 4	
Weaver, T	\$9,785	Core A	
Xu, Y	\$143,898	Core B	
Wert, S	\$211,108	Core C	
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Whitsett, J			
Research Development Program Grant-Component II			
Cystic Fibrosis Foundation			
R457-CR02	08/01/05 – 7/31/06		\$89,930
HH and Alveolar Formation			
National Institutes of Health			
R01 HL 075770	09/30/03 – 08/31/07		\$275,000/\$1,100,000
Perinatal Expression of Surfactant Protein Gene SP-B			
National Institutes of Health			
R01 HL 038859	04/01/03 – 03/31/08		\$281,891/\$1,294,401
Pulmonary and Cardiovascular Development Training Grant			
National Institutes of Health			
T32 HL 007752	07/01/04 – 06/30/09		\$228,487/\$1,142,435

SCOR in Pathobiology of Lung Development

National Institutes of Health

P50 HL 056387	09/30/01 – 07/31/06	\$1,529,734/\$5,939,228
Whitsett, J	\$272,926	Project 1
Shannon, J	\$281,724	Project 2
Korfhagen, T	\$236,330	Project 3
Weaver, T	\$281,731	Project 4
Whitsett, J	\$172,928	Core A
Wert, S	\$172,503	Core B
Wert, S	\$111,592	Core C

Yan, C

Genetic Control of SP-B Gene Expression in the Lung

National Institutes of Health

R01 HL 061803	07/07/03 – 09/30/05	\$45,000/\$470,000
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Nuclear Receptor Co-Activators in the Lung

National Institutes of Health

R01 HL 067862	07/07/03 – 09/30/05	\$68,755/\$568,755
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Current Year Direct	\$8,630,179
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Industry Contracts

Hoath, S

KAO Corporation	\$287,563
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Steichen, J

Inhibitex	\$32,739
Medimmune, Inc	\$172,267

Trapnell, B

Wyeth Pharmaceutical	\$115,500
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Visscher, M

Procter & Gamble	\$132,875
Steris	\$152,027

Whitsett, J

Genzyme	\$19,250
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Current Year Direct Receipts	\$912,221
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TOTAL	\$9,542,400
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PUBLICATIONS

1. Geary C, Akinbi H, Korfhagen T, Fabre JE, Boucher R, Rice W. Increased susceptibility of purinergic receptor-deficient mice to lung infection with *Pseudomonas aeruginosa*. *Am J Physiol Lung Cell Mol Physiol* 2005;289(5):L890-5.
2. Ryan MA, Akinbi HT, Serrano AG, Perez-Gil J, Wu H, McCormack FX, Weaver TE. Antimicrobial activity of native and synthetic surfactant protein B peptides. *J Immunol* 2006;176(1):416-25.
3. Bachurski CJ, Trapnell B. Transcription factors: PU.1. In: Laurent GJ, Shapiro SD, editors. *Encyclopedia of respiratory medicine*; 1st ed. Amsterdam, Boston : Academic Press; 2006. p. 274-277.
4. Wilson TC, Bachurski CJ, Ikegami M, Jobe AH, Kallapur SG. Pulmonary and systemic induction of SAA3 after ventilation and endotoxin in preterm lambs. *Pediatr Res* 2005;58(6):1204-9.

5. Beis D, Bartman T, Jin SW, Scott IC, D'Amico LA, Ober EA, Verkade H, Frantsve J, Field HA, Wehman A, Baier H, Tallafuss A, Bally-Cuif L, Chen JN, Stainier DY, Jungblut B. Genetic and cellular analyses of zebrafish atrioventricular cushion and valve development. *Development* 2005;132(18):4193-204.
6. Baird-Titus JM, Clark-Baldwin K, Dave V, Caperelli CA, Ma J, Rance M. The solution structure of the native K50 Bicoid homeodomain bound to the consensus TAATCC DNA-binding site. *J Mol Biol* 2006;356(5):1137-51.
7. Maeda Y, Hunter TC, Loudy DE, Dave V, Schreiber V, Whitsett JA. PARP-2 interacts with TTF-1 and regulates expression of surfactant protein-B. *J Biol Chem* 2006;281(14):9600-6.
8. Clark E, Donovan EF, Schoettker P. From outdated to updated, keeping clinical guidelines valid. *Int J Qual Health Care* 2006;18(3):165-6.
9. Donovan EF, Rose B. Use of evidence to reduce child health disparities in the U.S.: an introduction to this issue of public health reports. *Public Health Rep* 2005;120(4):366-9.
10. Shankaran S, Lupton AR, Ehrenkranz RA, Tyson JE, McDonald SA, Donovan EF, Fanaroff AA, Poole WK, Wright LL, Higgins RD, Finer NN, Carlo WA, Duara S, Oh W, Cotten CM, Stevenson DK, Stoll BJ, Lemons JA, Guillet R, Jobe AH. Whole-body hypothermia for neonates with hypoxic-ischemic encephalopathy. *N Engl J Med* 2005;353(15):1574-84.
11. Yang MB, Donovan EF, Wagge JR. Race, Gender, and Clinical Risk Index for Babies (CRIB) score as predictors of severe retinopathy of prematurity. *J AAPOS* 2006;10(3):253-61.
12. Van Meurs KP, Wright LL, Ehrenkranz RA, Lemons JA, Ball MB, Poole WK, Perritt R, Higgins RD, Oh W, Hudak ML, Lupton AR, Shankaran S, Finer NN, Carlo WA, Kennedy KA, Fridriksson JH, Steinhorn RH, Sokol GM, Konduri GG, Aschner JL, Stoll BJ, D'Angio CT, Stevenson DK. Inhaled nitric oxide for premature infants with severe respiratory failure. *N Engl J Med* 2005;353(1):13-22.
13. Lawson WE, Polosukhin VV, Stathopoulos GT, Zoia O, Han W, Lane KB, Li B, Donnelly EF, Holburn GE, Lewis KG, Collins RD, Hull WM, Glasser SW, Whitsett JA, Blackwell TS. Increased and prolonged pulmonary fibrosis in surfactant protein C-deficient mice following intratracheal bleomycin. *Am J Pathol* 2005;167(5):1267-77.
14. Benjamin H, Bhansali S, Hoath SB, Pickens WL, Smallwood R. A planar micro-sensor for bio-impedance measurements. *Sens Actuat B(Chem)* 2005;111-112(Suppl):430-435.
15. Hoath SB, Leahy DG. The human stratum corneum as extended, covalently cross-linked biopolymer: mathematics, molecules, and medicine. *Med Hypotheses* 2006;66(6):1191-8.
16. Ikegami M. Surfactant catabolism. *Respirology* 2006;11 Suppl:S24-7.
17. Ikegami M, Carter K, Bishop K, Yadav A, Masterjohn E, Brondyk W, Scheule RK, Whitsett JA. Intratracheal recombinant surfactant protein d prevents endotoxin shock in the newborn preterm lamb. *Am J Respir Crit Care Med* 2006;173(12):1342-7.
18. Ikegami M, Le Cras TD, Hardie WD, Stahlman MT, Whitsett JA, Korfhagen TR. TGF-alpha perturbs surfactant homeostasis in vivo. *Am J Physiol Lung Cell Mol Physiol* 2005;289(1):L34-43.
19. Ikegami M, Whitsett JA, Martis PC, Weaver TE. Reversibility of lung inflammation caused by SP-B deficiency. *Am J Physiol Lung Cell Mol Physiol* 2005;289(6):L962-70.
20. Balistreri WF, Jobe A, Boat TF. Pediatric Subspecialty Training Fellowships at Cincinnati Children's Hospital Medical Center (CCHMC). *J Pediatr* 2005;147(3):277-8.
21. Blakely ML, Tyson JE, Lally KP, McDonald S, Stoll BJ, Stevenson DK, Poole WK, Jobe AH, Wright LL, Higgins RD. Laparotomy versus peritoneal drainage for necrotizing enterocolitis or isolated intestinal perforation in extremely low birth weight infants: outcomes through 18 months adjusted age. *Pediatrics* 2006;117(4):e680-7.
22. Ehrenkranz RA, Walsh MC, Vohr BR, Jobe AH, Wright LL, Fanaroff AA, Wrage LA, Poole K. Validation of the National Institutes of Health consensus definition of bronchopulmonary dysplasia. *Pediatrics* 2005;116(6):1353-60.
23. Higgins RD, Raju TN, Perlman J, Azzopardi DV, Blackmon LR, Clark RH, Edwards AD, Ferriero DM, Gluckman PD, Gunn AJ, Jacobs SE, Eicher DJ, Jobe AH, Lupton AR, LeBlanc MH, Palmer C,

- Shankaran S, Soll RF, Stark AR, Thoresen M, Wyatt J. Hypothermia and perinatal asphyxia: executive summary of the National Institute of Child Health and Human Development workshop. *J Pediatr* 2006;148(2):170-175.
24. Jobe AH. Transition/Adaptation in the Delivery Room and Less RDS: "Don't Just Do Something, Stand There!" *J Pediatr* 2005;147(3):284-6.
 25. Jobe AH. Mechanisms to explain surfactant responses. *Biol Neonate* 2006;89(4):298-302.
 26. Jobe AH. Let's feed the preterm lung. *J Pediatr (Rio J)* 2006;82(3):165-6.
 27. Kramer BW, Jobe AH. The clever fetus: responding to inflammation to minimize lung injury. *Biol Neonate* 2005;88(3):202-7.
 28. Newnham JP, Shub A, Jobe AH, Bird PS, Ikegami M, Nitsos I, Moss TJ. The effects of intra-amniotic injection of periodontopathic lipopolysaccharides in sheep. *Am J Obstet Gynecol* 2005;193(2):313-21.
 29. Kallapur SG, Ikegami M. Physiological consequences of intrauterine insults. *Paediatr Respir Rev* 2006;7(2):110-6.
 30. Kallapur SG, Jobe AH. Contribution of inflammation to lung injury and development. *Arch Dis Child Fetal Neonatal Ed* 2006;91(2):F132-5.
 31. Kallapur SG, Moss TJ, Ikegami M, Jasman RL, Newnham JP, Jobe AH. Recruited Inflammatory Cells Mediate Endotoxin Induced Lung Maturation in Preterm Fetal Lambs. *Am J Respir Crit Care Med* 2005;172:1315-1321.
 32. Kingma PS, Whitsett JA. In defense of the lung: surfactant protein A and surfactant protein D. *Curr Opin Pharmacol* 2006;6(3):277-83.
 33. Mucenski ML, Nation JM, Thitoff AR, Besnard V, Xu Y, Wert SE, Harada N, Taketo MM, Stahlman MT, Whitsett JA. Beta-catenin regulates differentiation of respiratory epithelial cells in vivo. *Am J Physiol Lung Cell Mol Physiol* 2005;289(6):L971-9.
 34. Sampath V, Narendran V, Donovan EF, Stanek J, Schleiss MR. Nonimmune hydrops fetalis and fulminant fatal disease due to congenital cytomegalovirus infection in a premature infant. *J Perinatol* 2005;25(9):608-11.
 35. Visscher MO, Narendran V, Pickens WL, LaRuffa AA, Meinen-Derr J, Allen K, Hoath SB. Vernix caseosa in neonatal adaptation. *J Perinatol* 2005;25(7):440-6.
 36. Wendel KR, Nathan AT. Inhaled nitric oxide. *Newborn Infant Nurs Rev* 2005;6(2):100-105.
 37. Lin S, Perl AK, Shannon JM. Erm/thyroid transcription factor 1 interactions modulate surfactant protein C transcription. *J Biol Chem* 2006;281(24):16716-26.
 38. Perl AK, Wert SE, Loudy DE, Shan Z, Blair PA, Whitsett JA. Conditional recombination reveals distinct subsets of epithelial cells in trachea, bronchi, and alveoli. *Am J Respir Cell Mol Biol* 2005;33(5):455-62.
 39. Arkovitz MS, Hyatt BA, Shannon JM. Lung development is not necessary for diaphragm development in mice. *J Pediatr Surg* 2005;40(9):1390-4.
 40. Fujita M, Shannon JM, Ouchi H, Voelker DR, Nakanishi Y, Mason RJ. Serum surfactant protein D is increased in acute and chronic inflammation in mice. *Cytokine* 2005;31(1):25-33.
 41. Portnoy J, Pan T, Dinarello CA, Shannon JM, Westcott JY, Zhang L, Mason RJ. Alveolar type II cells inhibit fibroblast proliferation: role of IL-1alpha. *Am J Physiol Lung Cell Mol Physiol* 2006;290(2):L307-16.
 42. Van Vranken BE, Romanska HM, Polak JM, Rippon HJ, Shannon JM, Bishop AE. Coculture of embryonic stem cells with pulmonary mesenchyme: a microenvironment that promotes differentiation of pulmonary epithelium. *Tissue Eng* 2005;11(7-8):1177-87.
 43. Davis DW, Burns BM, Wilkerson SA, Steichen JJ. Visual perceptual skills in children born with very low birth weights. *J Pediatr Health Care* 2005;19(6):363-8.
 44. Abe S, Trapnell B. Colony stimulating factors. In: Laurent GJ, Shapiro SD, editors. *Encyclopedia of respiratory medicine*; 1st ed. Amsterdam, Boston: Academic Press; 2006. p. 540-545.

45. Berclaz PY, Trapnell B. Rare childhood lung disorders: alpha-1 antitrypsin deficiency, pulmonary alveolar proteinosis and pulmonary alveolar microlithiasis. In: Chernick V, Kendig EL, editors. *Kendig's disorders of the respiratory tract in children*; 7th ed. Philadelphia: Saunders/Elsevier; 2006. p. 747-761.
46. Panos R, Young L, McCormack FX, Trapnell B. Rare lung diseases. In: Silverman EK, editor. *Respiratory genetics*. London New York: Hodder Arnold ; distributed in the U.S. by Oxford University Press; 2005. p. 461-478.
47. Warner BW, Warner BB. Role of epidermal growth factor in the pathogenesis of neonatal necrotizing enterocolitis. *Semin Pediatr Surg* 2005;14(3):175-80.
48. Bridges JP, Weaver TE. Use of transgenic mice to study lung morphogenesis and function. *Ilar J* 2006;47(1):22-31.
49. Serrano AG, Ryan M, Weaver TE, Perez-Gil J. Critical structure-function determinants within the N-terminal region of pulmonary surfactant protein SP-B. *Biophys J* 2006;90(1):238-49.
50. Wedig KE, Kogan J, Schorry EK, Whitsett JA. Skeletal demineralization and fractures caused by fetal magnesium toxicity. *J Perinatol* 2006;26(6):371-4.
51. Besnard V, Wert SE, Kaestner KH, Whitsett JA. Stage-specific regulation of respiratory epithelial cell differentiation by Foxa1. *Am J Physiol Lung Cell Mol Physiol* 2005;289(5):L750-9.
52. Park KS, Wells JM, Zorn AM, Wert SE, Laubach VE, Fernandez LG, Whitsett JA. Transdifferentiation of ciliated cells during repair of the respiratory epithelium. *Am J Respir Cell Mol Biol* 2006;34(2):151-7.
53. Park KS, Wells JM, Zorn AM, Wert SE, Whitsett JA. Sox17 influences the differentiation of respiratory epithelial cells. *Dev Biol* 2006;294(1):192-202.
54. Whitsett JA, Wert S, Trapnell B. Disorders of pulmonary surfactant homeostasis. In: Runge MS, Patterson C, editors. *Principles of molecular medicine*; 2nd ed. Totowa, N.J.: Humana Press; 2006. p. 277-285.
55. Floyd HS, Farnsworth CL, Kock ND, Mizesko MC, Little JL, Dance ST, Everitt J, Tichelaar J, Whitsett JA, Miller MS. Conditional expression of the mutant Ki-rasG12C allele results in formation of benign lung adenomas: development of a novel mouse lung tumor model. *Carcinogenesis* 2005;26(12):2196-206.
56. Garmany TH, Moxley MA, White FV, Dean M, Hull WM, Whitsett JA, Noguee LM, Hamvas A. Surfactant composition and function in patients with ABCA3 mutations. *Pediatr Res* 2006;59(6):801-5.
57. Kohl J, Baelder R, Lewkowich IP, Pandey MK, Hawlisch H, Wang L, Best J, Herman NS, Sproles AA, Zwirner J, Whitsett JA, Gerard C, Sfyroera G, Lambris JD, Wills-Karp M. A regulatory role for the C5a anaphylatoxin in type 2 immunity in asthma. *J Clin Invest* 2006;116(3):783-96.
58. Martis PC, Whitsett JA, Xu Y, Perl AK, Wan H, Ikegami M. C/EBPalpha is required for lung maturation at birth. *Development* 2006;133(6):1155-64.
59. Shu W, Guttentag S, Wang Z, Andl T, Ballard P, Lu MM, Piccolo S, Birchmeier W, Whitsett JA, Millar SE, Morrissey EE. Wnt/beta-catenin signaling acts upstream of N-myc, BMP4, and FGF signaling to regulate proximal-distal patterning in the lung. *Dev Biol* 2005;283(1):226-39.
60. Whitsett JA. Surfactant proteins in innate host defense of the lung. *Biol Neonate* 2005;88(3):175-80.
61. Whitsett JA, Perl AK. Conditional control of gene expression in the respiratory epithelium: A cautionary note. *Am J Respir Cell Mol Biol* 2006;34(5):519-20.
62. Yang CH, Szeliga J, Jordan J, Faske S, Sever-Chroneos Z, Dorsett B, Christian RE, Settlage RE, Shabanowitz J, Hunt DF, Whitsett JA, Chroneos ZC. Identification of the surfactant protein A receptor 210 as the unconventional myosin 18A. *J Biol Chem* 2005;280(41):34447-57.
63. Yoshida M, Whitsett JA. Alveolar macrophages and emphysema in surfactant protein-D-deficient mice. *Respirology* 2006;11 Suppl:S37-40.
64. Bridges JP, Xu Y, Na CL, Wong HR, Weaver TE. Adaptation and increased susceptibility to infection associated with constitutive expression of misfolded SP-C. *J Cell Biol* 2006;172(3):395-407.
65. Xu Y, Liu C, Clark JC, Whitsett JA. Functional genomic responses to cystic fibrosis transmembrane conductance regulator (CFTR) and CFTR(delta508) in the lung. *J Biol Chem* 2006;281(16):11279-91.