

# Immunology Panel

---

## Series Editors:

### **Marcia L. Buck, Pharm.D., FCCP, FPPAG**

*Clinical Coordinator*  
University of Virginia Children's Hospital  
*Associate Professor*  
Department of Pediatrics  
University of Virginia School of Medicine  
*Clinical Professor*  
Virginia Commonwealth University School of Pharmacy  
Department of Pharmacy Services  
University of Virginia Health System  
Charlottesville, Virginia

### **Kalen B. Manasco, Pharm.D., BCPS**

*Clinical Associate Professor*  
Department of Clinical and Administrative Pharmacy  
University of Georgia College of Pharmacy  
Augusta, Georgia

## Faculty Panel Chair:

### **Jennifer Le, Pharm.D., MAS, BCPS, AQ-ID, FCCP, FCSHP**

*Professor of Clinical Pharmacy*  
University of California, San Diego  
Skaggs School of Pharmacy and Pharmaceutical Sciences  
La Jolla, California  
*Faculty-in-Residence*  
Long Beach Memorial and Miller Children's Hospital  
Long Beach, California

## ROUTINE CHILDHOOD IMMUNIZATIONS

### Authors

#### **Stacie J. Lampkin, Pharm.D., BCACP, BCPPS, AE-C**

*Clinical Assistant Professor*  
Pharmacy Practice  
D'Youville College School of Pharmacy  
Buffalo, New York

#### **Amy Lynn Wojciechowski, Pharm.D., BCPS, AQ-ID**

*Clinical Assistant Professor*  
Department of Pharmacy Practice  
D'Youville College School of Pharmacy  
Buffalo, New York  
*Infectious Diseases Clinical Pharmacist*  
Department of Pharmacy  
Niagara Falls Memorial Medical Center  
Niagara Falls, New York

## Reviewers

### **Lindsay C. Trout, Pharm.D., BCPPS**

*Clinical Pharmacy Specialist*  
Pediatric Critical Care and General Pediatrics  
Penn State Milton S. Hershey Medical Center (PSHMC)  
Hershey, Pennsylvania

### **Clarissa F. Havel, Pharm.D., BCPS**

*Clinical Pharmacist*  
RPh-On-the-Go  
Skokie, Illinois

### **Bernard R. Lee, Pharm.D., BCPS, BCPPS**

*Clinical Pharmacist-General Pediatrics*  
Department of Pharmacy  
Johns Hopkins Medicine-All Children's Hospital  
St. Petersburg, Florida

### **Hazar Alnifaidy, Pharm.D., BCPS**

*Clinical Pharmacist*  
Department of Pharmacy  
Sidra Medical and Research Center  
Doha, Qatar, Middle East

## VACCINE DEVELOPMENT AND FUTURE TARGETS

### Authors

#### **April H. Yarbrough, Pharm.D., BCPS**

*Pediatric Infectious Disease Pharmacist*  
*Pharmacokinetic Specialist*  
Department of Pharmacy  
Children's of Alabama  
Birmingham, Alabama

#### **Scott James, M.D.**

*Assistant Professor*  
Department of Pediatrics, Division of Infectious Diseases  
University of Alabama at Birmingham  
Birmingham, Alabama

## Reviewers

### **Jessica Cottreau, Pharm.D., BCPS**

*Associate Professor*  
Rosalind Franklin University of Medicine and Science  
Chicago, Illinois

**Ashli Rasmussen, Pharm.D., BCPS**

*Clinical Research Pharmacist*  
Celerion, Inc.  
Phoenix, Arizona

## **PASSIVE IMMUNIZATION**

### **Author**

**Ann M. Philbrick, Pharm.D., BCPS, BCACP**

*Associate Professor*  
Pharmaceutical Care & Health Systems  
University of Minnesota College of Pharmacy  
Family Medicine & Community Health  
University of Minnesota Medical School  
Minneapolis, Minnesota

### **Reviewers**

**Jenna Halilovic Maker, Pharm.D., BCPS**

*Associate Professor*  
Department of Pharmacy Practice  
University of the Pacific Thomas J Long  
School of Pharmacy & Health Sciences  
Stockton, California  
*Clinical Pharmacist*  
Pediatric and Young Adult Infectious Diseases  
University of California Davis Medical Center  
Sacramento, California

**Ewha Bridget Kim, Pharm.D., BCPS, BCOP**

*Clinical Pharmacist, Ambulatory Oncology*  
Department of Pharmacy  
Massachusetts General Hospital  
Boston, Massachusetts

**Elias B. Chahine, Pharm.D., BCPS-AQ ID**

*Associate Professor of Pharmacy Practice*  
Pharmacy Practice  
Palm Beach Atlantic University, Lloyd  
L. Gregory School of Pharmacy  
West Palm Beach, Florida  
*Clinical Pharmacy Specialist*  
Pharmacy Services  
Wellington Regional Medical Center  
Wellington, Florida

The American College of Clinical Pharmacy and the authors thank the following individuals for their careful review of the Immunology I chapters:

**Marisel Segarra-Newnham, Pharm.D., MPH, FCCP, BCPS**

*Clinical Pharmacy Specialist, Infectious Diseases/HIV*  
*Antimicrobial Stewardship Program Pharmacy Director*  
Veterans Affairs Medical Center  
West Palm Beach, Florida  
*Clinical Assistant Professor of Pharmacy Practice*  
University of Florida College of Pharmacy  
Gainesville, Florida

**Ralph H. Raasch, Pharm.D., BCPS**

*Associate Professor of Pharmacy (retired)*  
Division of Practice Advancement and Clinical Education  
Eshelman School of Pharmacy  
The University of North Carolina at Chapel Hill  
Chapel Hill, North Carolina

## DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

**Consultancies:** Stacie J. Lampkin (American Lung Association, Inside Patient Care); Jenana Maker (Actavis Pharma, Inc.)

**Stock Ownership:**

**Royalties:**

**Grants:** Elias B. Chahine (Cubist); Scott James (NIH/NIAID)

**Honoraria:** Elias B. Chahine (Merck and Co, The Medicines Company, Cubist); Stacie J. Lampkin (Western New York Society of Health-System Pharmacists)

**Other:**

**Nothing to disclose:** Hazar Alnifaigy; Jessica Cottreau; Clarissa F. Havel; Bridget Kim; Bernard R. Lee; Ann M. Philbrick; Ashli Rasmussen; Lindsay C. Trout; Amy Lynn Wojciechowski; April H. Yarbrough

**ROLE OF BPS:** The Board of Pharmacy Specialties (BPS) is an autonomous division of the American Pharmacists Association (APhA). BPS is totally separate and distinct from ACCP. The Board, through its specialty councils, is responsible for specialty examination content, administration, scoring, and all other aspects of its certification programs. PedSAP has been approved by BPS for use in BCPPS recertification. Information about the BPS recertification process is available [online](#).

Other questions regarding recertification should be directed to:

[Board of Pharmacy Specialties](#)

2215 Constitution Avenue NW

Washington, DC 20037

(202) 429-7591