



TEXAS TECH UNIVERSITY  
HEALTH SCIENCES CENTER  
School of Pharmacy™  
at Dallas/Fort Worth



## ASHP-Accredited Specialty Residency in CRITICAL CARE

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### Philosophy:

The Critical Care Specialty Residency at Texas Tech University Health Sciences Center (TTUHSC) School of Pharmacy & the Veterans Affairs North Texas Health Care System (VANTHCS) is designed to embrace critical care pharmacy practice in a variety of settings and develop the resident's skills in critical care pharmacy practice, teaching pharmacy students, practitioners, nursing & medical staff, & conducting clinically-oriented research.



### General Description:

This 12-month residency is designed to give the resident a well-rounded experience in both medical and surgical critical care practice. The residency core rotations provide a strong base in critical care fundamentals and

elective rotations are tailored for the resident to meet individual career goals. The focus of the training is to master each of the disease states established within the ASHP Practice Standards for a Specialized Residency in Critical Care Practice. In addition, residents are appointed as Assistant Instructors for the TTUHSC School of Pharmacy.

## **Program Goals:**

- To develop well-rounded critical care practitioners who can provide high-level clinical care in a variety of clinical ICU settings
- To develop effective clinical instructors with a desire for sharing knowledge and promoting learning among students
- To promote the desire for pursuing clinically-oriented research to further the knowledge of drug therapy use in the critical care setting.



# Program Activities:

## Residency Rotations

Required	Elective
Medicine ICU (3 months)	Toxicology/Poison Control
Cardiology ICU (1 month)	Pediatric ICU
Surgical & Thoracic ICU (6 weeks)	Trauma ICU
Infectious Diseases (6 weeks)	Nutrition Support
*repeat required rotations available as electives	Antibiotic management
	Burn ICU
	+ other electives available upon request

## Teaching Activities

- **Didactic**
  - One formal “Resident Rounds” 45-minute disease-based presentation to the VANTHCS pharmacy staff and faculty is required
  - Didactic lectures within the TTUHSC School of Pharmacy are optional as availability permits
  - Four formal journal club presentations to the VANTHCS pharmacy staff, faculty, pharmacy students, and other residents are required
  - One formal presentation at Specialty Resident Journal Club is required
  - Formal lectures and informal inservices to nursing and medical staff are available, and encouraged several times per year
- **Problem-Based Learning (PBL)**
  - Participation in Case Studies II and III courses as a group facilitator within the school of pharmacy is required
- **Experiential**
  - Residents will serve as primary preceptors for TTUHSC school of pharmacy students on 2 rotations

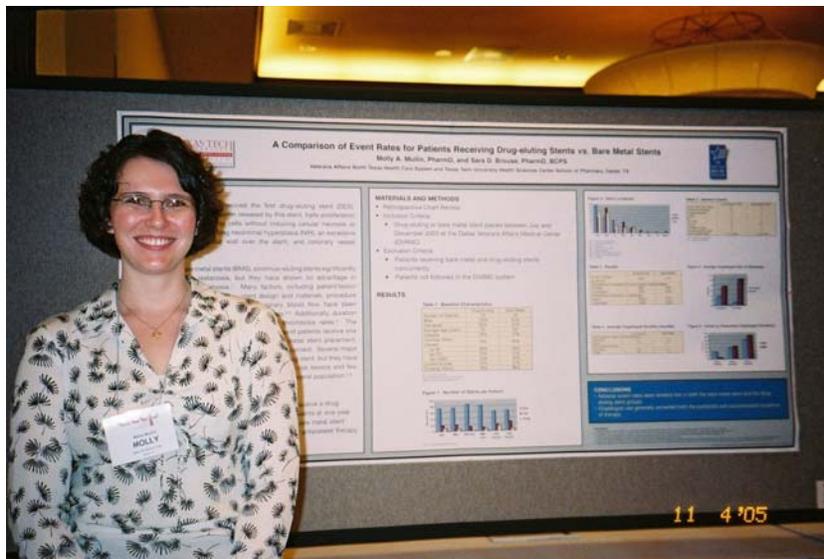
- Other informal teaching activities, such as leading topic discussions for students, are available throughout the year

*All residents have the option of completing the **Clinician-Educator Teaching Certificate Program** during their residency year with TTUHSC SOP.*

## **Residency Projects**

Completion of an IRB-approved research project, including preparation of a manuscript suitable for submission to a journal, is required for residency completion. Additionally, residents are required to conduct a quality improvement project in an area identified by the resident during the year. Upon completion, results will be presented to appropriate pharmacy, nursing, and/or medical staff. Chosen projects must:

- 1) include generation of original data
- 2) be suitable for publication or presentation at a national pharmacy meeting
- 3) reasonably be completed within the residency year



## **Additional Activities:**

### **Manuscript Preparation**

Residents are required to submit one manuscript per year for publication in a refereed journal.

## **Southwestern Leadership Conference (ALCALDE)**

Residents participate in this regional residents meeting, also known as ALCALDE, in the spring. Residents have the opportunity to present their project results for evaluation. It is also a great opportunity to interact with residents from other programs throughout the region.

## **Distributive Requirements**

- Residents will be required to receive staffing training in the ICU satellite pharmacies at the VANTHCS. Residents will receive compensation as a pharmacist at the current hospital rate for each shift worked (in addition to residency stipend).
- Residents round 6 days/week on the Medicine ICU and Cardiology ICU services to provide continuity of care.
- Residents will have periodic activities built into the program to strengthen and reinforce skills in several areas of critical care pharmacy practice. Activities will be based on needs identified in orientation and prior experiences of the resident, as outlined in the ASHP accreditation standards for critical care residency programs.
- Residents will become a member of the critical care workgroup and attend committee meetings.
- There is no formal on-call program associated with this residency, but opportunities exist, if desired. The pharmacy service provides an in-house pharmacy on-call room within the medical center.

*For additional information, please refer to the Accreditation Standards for Critical Care Residency programs: [www.ashp.org](http://www.ashp.org)*

## **Code Blue Response Team**

- Residents will become a member of the code blue response team and carry the code blue pager year-round. ACLS certification is required, and provided by the VANTHCS.

## Program Leadership:

### *Faculty*



**Sara Brouse, Pharm.D., BCPS, AQ Cardiology**

**Vice Chair for Residency Programs, Associate Professor of Pharmacy Practice, TTUHSC School of Pharmacy, Program Director for the PGY2 Critical Care Specialty Residency and Advanced Practice Pharmacist in Critical Care & Cardiology, VA North Texas Health Care System**

Dr. Brouse received her Doctor of Pharmacy degree from the University of Missouri—Kansas City in 1997. She completed a pharmacy practice residency & critical care specialty residency at the University of Kentucky Medical Center from 1997-99. She became a Board Certified Pharmacotherapy Specialist in 2000 and received Added Qualifications in Cardiology in 2005. Dr. Brouse actively participates in several professional organizations, including the American College of Clinical Pharmacy (ACCP) and the Society of Critical Care Medicine. She is past-president of the Dallas-Fort Worth Chapter of ACCP. She has been invited to speak locally, regionally, nationally, and internationally on topics related to acute coronary syndromes and sedation/analgesia in the critically ill. She provides the “Acute Care Cardiology” instruction BCPS preparatory review courses at the ACCP Spring Practice & Research Forum meetings each year. She authored a PSAP-V chapter on Agitation & Drug Withdrawal Syndromes in the Critical Care/Transplantation Module released in 2006. Dr. Brouse practices within the Medicine and Cardiology ICUs and the Cardiology Clinic at the VANTHCS. Her research interests include decompensated heart failure, drug-induced complications in acute coronary syndromes, & sedation/analgesia in critically ill patients.



**Jerica L. Goodwin, Pharm.D.**

**ICU Program Manager for Surgical & Thoracic ICUs & Anesthesiology Department, VA North Texas Healthcare System, and Clinical Assistant Professor, TTUHSC School of Pharmacy**

Jerica Goodwin, Pharm.D., received her Pharm.D. from Florida Agricultural & Mechanical (A&M) University College of Pharmacy in 2001. She completed her Pharmacy Practice Residency at the Denver VA Medical Center in Denver, CO in 2002 and the Critical Care Specialty Residency at the Dallas VA Medical Center & TTUHSC School of Pharmacy in Dallas, TX in 2003. Dr. Goodwin is currently the ICU Program Manager for the Surgical & Thoracic ICU, & Anesthesiology Department at the Dallas VA Medical Center. She is also a Clinical Assistant Professor at Texas Tech University School of Pharmacy. Dr. Goodwin's research interests include evaluating empiric antimicrobial prescribing for gram-negative pathogens in the ICU and drug dosing in bariatric surgery patients. She is an active member of the Dallas-Fort Worth Chapter & national American College of Clinical Pharmacy and the Society of Critical Care Medicine.



**Ronald Hall, Pharm.D., BCPS with AQ in Infectious Diseases**

**Assistant Professor of Pharmacy Practice, TTUHSC School of Pharmacy and Clinical Pharmacy Specialist in Infectious Diseases, VA North Texas Health Care System, Clinical Scholar, UT Southwestern Medical School**

Dr. Hall earned his Doctor of Pharmacy degree from the St. Louis College of Pharmacy. His postdoctoral training includes completion of a Pharmacy Practice Residency at Baptist Memorial Healthcare in Memphis ('00-'01) and an Infectious Diseases Specialty Residency at the South Texas Veterans Healthcare System in San Antonio, TX ('01-'02). Dr. Hall became a Board-Certified Pharmacotherapy Specialist in 2003 and received Added Qualifications in Infectious Diseases in 2005. Dr. Hall's research interests focus on antimicrobial resistance, including extended-

	<p>spectrum beta-lactamase producing organisms &amp; multi-drug resistant <i>Pseudomonas aeruginosa</i>, the effects of antibiotic usage patterns on the development of resistance, and antifungal therapy. He has authored several publications relating to anti-infective therapy and has enjoyed the opportunity to speak on related infectious disease topics to physicians, pharmacists, &amp; nurses. Dr. Hall is active in national organizations including the Society of Infectious Disease Pharmacists, the American College of Clinical Pharmacy, &amp; the American Society of Microbiology.</p>
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## *Current Residents*

<p style="text-align: center;"><b>2007-08</b></p> 	<p><b>Dr. Michelle Horan</b></p> <p><a href="mailto:Michelle.horan@va.gov">Michelle.horan@va.gov</a></p> <p>Dr. Michelle Horan hails from Gunter, Texas and is currently a is a Critical Care Specialty Resident for the Veterans Affairs North Texas Health Care System - Dallas and an Assistant Instructor at Texas Tech University Health Sciences Center School of Pharmacy. She received her Doctorate of Pharmacy from Texas Tech University HSC School of Pharmacy in 2006. She completed her Pharmacy Practice Residency in San Antonio, Texas through the South Texas Veterans Health Care System and University of Texas in 2007. Her practice interests include critical care/internal medicine and hepatology. Dr Horan is currently a member of the American Society of Health System Pharmacists, the Society of Critical Care Medicine, and the American College of Clinical Pharmacy. She enjoys traveling, reading, hiking, and photography. Upon completion of her specialty residency, Dr Horan plans to pursue a position as a Critical Care Pharmacy Specialist with opportunities to precept/teach students and conduct research.</p>
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**2007-2008**



Dr. Dominique Wesby

[Dominiquea.wesby@va.gov](mailto:Dominiquea.wesby@va.gov)

Dominique A. Wesby, Pharm.D, is a Critical Care Specialty Resident and assistant instructor at the Veterans Affairs North Texas Health Care System and Texas Tech University Health Sciences Center School of Pharmacy. Dr. Wesby completed her Doctor of Pharmacy degree at Florida Agricultural and Mechanical University in April 2006. Last year she completed a pharmacy practice residency at the Veterans Affairs Medical Center in Memphis, Tennessee. Prior to pharmacy school she completed a Master of Science degree in Materials Science and Engineering at the University of Florida and a Bachelor of Science degree in Chemistry from Jackson State University. She is currently a member of the American Society of Health-Systems Pharmacists and the Dallas-Fort Worth American College of Clinical Pharmacy. Upon completion of her residency, she plans to pursue a clinical position in the area of critical care or internal medicine.

## *Program Alumni*



**2006-2007**

Dr. Brandi LaFrance

[Brandic.lafrance@gmail.com](mailto:Brandic.lafrance@gmail.com)

Brandi LaFrance, Pharm.D. is a Clinical Pharmacy Specialist in the Medical ICU at Tulane University Medical Center in New Orleans, LA. Dr. LaFrance received her Doctor of Pharmacy degree from Xavier University of Louisiana College of Pharmacy in May 2005 and completed her Pharmacy Practice Residency at the Veterans Affairs North Texas Healthcare System in Dallas in June 2006, followed by the Critical Care Specialty Residency, which she completed in 2007. She is an active member of the ASHP, ACCP, SCCM, and Kappa Epsilon Pharmaceutical Fraternity.

Dr. LaFrance evaluated the impact of pre-operative intensive insulin infusion on mortality, rates of

**2006-2007**



infection, and ICU length of stay in diabetic patients admitted for cardiothoracic surgery during her Critical Care Residency. Her current practice interests include cardiology and infectious diseases. She also enjoys precepting students. Dr. LaFrance completed the Clinician-Educator Teaching Certificate Program at TTUHSC SOP.

Dr. Kendrea Muldrew

[Kmmuldrew@sbcglobal.net](mailto:Kmmuldrew@sbcglobal.net)

Kendrea Muldrew, Pharm.D. is an Assistant Professor at University of Arkansas for Medical Sciences College of Pharmacy and Clinical Specialist in the Burn ICU at Arkansas Children's Hospital. Dr. Muldrew received her Doctor of Pharmacy degree from University of Arkansas for Medical Sciences in May 2005 and completed her Pharmacy Practice Residency at the Methodist University Hospital in Memphis, TN in June 2006. She completed the Critical Care Specialty Residency at TTUHSC School of Pharmacy & VA North Texas Healthcare System in June 2007. She is an active member of the ASHP, SCCM, and ACCP.

Dr. Muldrew evaluated the effect of pharmacist involvement on the cardiopulmonary resuscitation team on adherence to ACLS guidelines and outcomes. Her current practice interests include emergency medicine, burn ICU, and post-surgical intensive care. Dr. Muldrew completed the Clinician-Educator Teaching Certificate Program at TTUHSC SOP.

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**2005-2006**



**Dr. Susan Duquaine**

Susan Duquaine, Pharm.D., is a Clinical Coordinator at the Medical Center of Lewisville. She completed the Critical Care Specialty Residency in 2006. She received her Bachelors Degree in Pharmacy in 1987 and her Pharm.D. in 2005 from the University of Florida and was presented with the “Outstanding Academic Achievement Award”. Susan’s resident research project involved measuring outcomes after implementation of an intensive insulin protocol in the Surgical & Thoracic ICUs. Her professional interests include critical care, infectious diseases, and cardiology. She is developing many new pharmacy-driven protocols and involved in precepting students in her new position.

**2005-2006**



**Dr. Stacey Hong**

Stacey Hong, Pharm.D. is a Critical Care Specialist at the Baylor Irving Hospital in Dallas, TX. She completed the critical care residency with emphasis in infectious diseases under the direction of Dr. Brouse & Dr. Hall in 2006. Dr. Hong graduated from the University of Texas at Austin with a bachelor’s degree in microbiology, then earned her Pharm.D. from Texas Tech University Health Sciences Center. Stacey holds a strong interest in antibiotic management in the critically ill population, as well as utilization of pharmacokinetic/ pharmacodynamic principles to maximize drug benefit in patients. Her research project focused on the utilization of antibiotics in Ventilator-Associated Pneumonia.

**2004-2005**

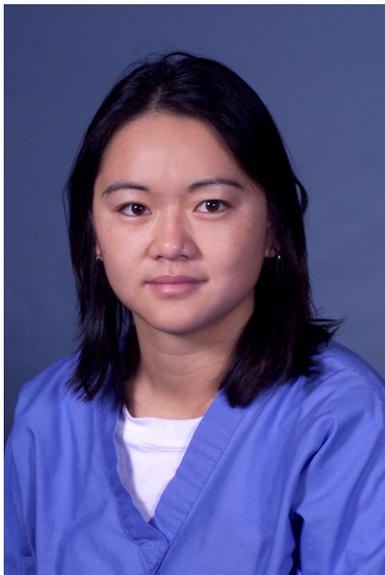


**Dr. Molly Mullin**

Molly Mullin, Pharm.D., BCPS is originally from Minnesota and received her Pharm.D. from the University of Minnesota in 2003. She completed her Pharmacy Practice Residency at the Minneapolis VA Medical Center in 2004. She was the program’s

3<sup>rd</sup> critical care resident. In addition to conducting clinical activities within the ICU, she was involved in precepting pharmacy students on the Medical ICU rotation and participated as a case facilitator for the case studies course. She conducted a research project entitled, "A Comparison of Event Rates for Patients Receiving Drug-Eluting Stents versus Bare Metal Stents," and presented it at the 2005 ACCP Spring Practice & Research Forum in Myrtle Beach, SC. It was accepted for publication in the Journal of Pharmacy Technology & published in 2007. She also implemented an intensive insulin protocol within the MICU during her residency year. She is also a member of ASHP, ACCP, SCCM, and APhA. Currently, Dr. Mullin is an SICU Clinical Pharmacy Specialist at Beaumont Hospital in Troy, Michigan.

**2003-2004**



**Dr. Kathy Vu**

Kathy Vu, Pharm.D., BCPS graduated from the University of Houston (UH) with her Doctor of Pharmacy degree in 2001. She practiced as a hospital pharmacist with an emphasis on clinical drug monitoring and patient teaching for 2 years. Dr. Vu is a member of ASHP, TSHP, ACCP, and SCCM. While pursuing her Pharm.D. degree, she had maintained a membership in APhA-ASP from 1997-2000 and held a regional Member-at-Large position (1998-1999) in the Association of Student Pharmacists. During her term as Member-at-Large, Dr. Vu increased awareness of the International Pharmaceutical Student Forum as well as expanded student exchange site availability. Dr. Vu broadened her international perspective during her residency year by presenting her residency research project poster at the joint ACCP-European Society of Clinical Pharmacy meeting in Paris, France in 2003. Dr. Vu is currently a clinical coordinator at Methodist Medical Center in Houston, TX and is an active member of a Federal Disaster Medical Relief Team (DMAT) for the state of Texas. She utilized her skills by being one of the first volunteers to respond in New Orleans after Hurricane Katrina.

**2002-2003**



**Dr. Jerica Goodwin**

Jerica Greene Goodwin, Pharm.D., received her Pharm.D. from Florida Agricultural & Mechanical (A&M) University College of Pharmacy in 2001. She completed her Pharmacy Practice Residency at the Denver VA Medical Center in Denver, CO in 2002 and the Critical Care Specialty Residency at the Dallas VA Medical Center & TTUHSC School of Pharmacy in Dallas, TX in 2003. She was the program's first resident and also Chief Pharmacy Resident in Dallas-Fort Worth. Dr. Goodwin is currently the ICU Program Manager for the Surgical & Thoracic ICU, & Anesthesiology Department at the Dallas VA Medical Center. She is also a Clinical Assistant Professor at Texas Tech University School of Pharmacy. Her professional interests include nutrition support, sedation & analgesia in critically ill patients, and glucose management in ICU patients.

## **Information for Applicants:**

Qualifications: Residency applicants must have a Pharm.D. degree, be eligible for licensure in Texas, and have completed a PGY1 Pharmacy Practice Residency.

Information regarding application materials, processes, and deadlines can be found under *Applicant Information*.

### **Contact Information:**

**Sara D. Brouse, Pharm.D., BCPS, AQ Cardiology  
Critical Care Residency Program Director**

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Fax: (214) 372-5020

[sara.brouse@ttuhsc.edu](mailto:sara.brouse@ttuhsc.edu)

## Site Information:



### **Dallas VA Medical Center**

The practice site for this residency is the Dallas VA Medical Center. The Dallas VAMC is a 300+ bed acute care medical center located in south Dallas. It is a central referral center for the VA North Texas Health Care

System (VANTHCS) and is a major teaching and medical research center for both the University of Texas Southwestern Medical School and the Texas Tech University School of Pharmacy. The Dallas VAMC has a 48-bed Intensive Care area in the Clinical Addition, a state-of-the-art building that was completed in 1998. Intensive Care Units are divided into the Surgical ICU, Thoracic ICU, Medicine ICU, and Cardiology ICU. Each of the four Intensive Care Units have computerized medical charts, medical administration records (MAR), bedside computer monitors for each patient, and physician order entry capabilities. A 50-bed telemetry step-down unit is also housed within the Clinical Addition.

Elective rotations are conducted with Pharm.D., residency and/or fellowship-trained preceptors at affiliated institutions within the Dallas-Fort Worth Area. Trauma ICU is conducted at either Baylor University Medical Center in Dallas, TX or Harris Methodist Medical Center in Fort Worth, TX. Poison Control & Toxicology is conducted at Parkland Memorial Medical Center in Dallas, TX. Pediatric ICU rotation is conducted at Children's Medical Center in Dallas, TX.



The **Texas Tech University Health Sciences Center School of Pharmacy** graduated its first class in May 2000. The TTUHSC SOP is the first publicly funded pharmacy school to be built in the US in 40 years. The main campus for the school of pharmacy is located in

Amarillo. Regional campuses are located in Dallas/Ft Worth, Lubbock, & Abilene.

The Dallas/Fort Worth Regional campus was established in 1999, & currently resides on the Dallas VAMC campus. Approximately 14 full-time and 25 adjunct clinical faculty as well as 2 distance learning classrooms in DFW support the education and training of 60 students in their last 2 years of pharmacy school and 15 residents. Residents are actively involved in didactic and clinical teaching and helping facilitate Pharm.D. students in acquiring problem-based learning skills.