

**Shaun D. Carstairs, MD, DFACMT, FACEP**

Captain (Retired), Medical Corps, United States Navy

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**Work Experience**

2020-present

**SCRIPPS HEALTH SAN DIEGO**

- Emergency physician and medical toxicologist
- Provides acute care, emergency medicine, addiction/substance use treatment, and medical toxicology consultation and treatment services to an underserved population in southern San Diego County
- Educates emergency medicine and family medicine residents rotating through the emergency department

2006-present

**RADY CHILDREN'S HOSPITAL SAN DIEGO**

- Emergency physician and medical toxicologist
- Provides emergency medical care to children in the largest children's hospital emergency department in California, which treats more than 97,000 patients/year

2025-present

**ACP HEALTH**

- Provides emergency medical care to patients in rural emergency departments in Texas and Louisiana

2020-2023

**98POINT6 INC./TRANSCARENT INC.**

- Associate Medical Director, 98point6 Medical Group; led the company's Family Medicine, Emergency Medicine, and Internal Medicine physicians in providing high-quality, safe patient care
- Experienced emergency physician and medical toxicologist that provided telehealth services nationally through an innovative online platform
- Physician leader for company-wide COVID-19 response; coordinated with copywriters, legal, product, and engineering to ensure that COVID-19 patient care, vaccination, and return-to-work advice was in accordance with the most up-to-date CDC/FDA guidance

Apr-Sep 2020

**K HEALTH**

- Emergency physician providing online, text-based, comprehensive clinical care that encompasses primary care, including behavioral and mental health

2008-2020

**UNIVERSITY OF CALIFORNIA SAN DIEGO MEDICAL CENTER**

*Attending Physician, Department of Emergency Medicine*

- Provided emergency medical care in the Emergency Departments of 2 academic teaching hospitals caring for a total of more than 90,000 patients/year
- Teaching faculty for a PGY1-4 Emergency Medicine residency program, providing medical education to 36 residents in emergency medicine

*Attending Physician, Division of Medical Toxicology*

- Provided specialty toxicology consulting services in the care of poisoned patients at 6 large hospitals in the greater San Diego area
- Teaching faculty for the medical toxicology fellowship program, providing medical education to 4 fellows in medical toxicology

2019-2020

**CLEVELAND CLINIC (INTERNATIONAL OPERATIONS)**

*Emergency Medicine Physician*

- Provided emergency medical care for clients of the Cleveland Clinic in various locations outside of the United States

2016-2019

**1st MARINE DIVISION, CAMP PENDLETON, CA**

*Chief Medical Officer (Division Surgeon)*

- Supervised 51 medical providers in the provision of quality medical care to more than 22,000 U.S. Marines and Sailors at the nation's largest Marine Corps base
- Oversaw the creation and execution of evidence-based clinical practice guidelines to optimize health outcomes and medical readiness
- Developed and led strategic medical plans in accordance with the guidance of the Commanding General of 1st Marine Division

2013-2019

**DEPARTMENT OF DEFENSE PHARMACY & THERAPEUTICS COMMITTEE**

*At-large member*

- One of 17 voting members managing TRICARE's uniform drug formulary with a \$7 billion budget for 9 million beneficiaries, saving the Department of Defense more than \$500 million annually in direct drug cost avoidance

2005-2016

**NAVAL MEDICAL CENTER SAN DIEGO**

*Attending Physician, Emergency Department*

- Provided emergency medical care in a 38-bed Emergency Department with a patient volume of 75,000 patients/year
- Teaching faculty for a PGY1-4 Emergency Medicine residency program, providing medical education to 40 residents in emergency medicine
- Deployed to Al Qa'im, Iraq from January-September 2007 as Emergency Physician in charge of a Shock Trauma Platoon that cared for severely injured Marines, soldiers, and sailors
- Served as Officer-In-Charge, Expeditionary Resuscitative Surgical System (Pacific), from 2014-2015, responsible for providing short-fused emergency medical & trauma care aboard U.S. Navy vessels in the Pacific Ocean in support of U.S. special operations forces
- Interim Residency Program Director, Emergency Medicine, 2013-2014; responsible for managing and mentoring the education of 37 emergency medicine residents
- Interim Chairman, Emergency Department, 2012-2013; led more than 180 health care personnel in the delivery of high-quality patient care at one of the military's busiest emergency departments
- Research Director, Emergency Department, 2010-2012; directly supervised the conduct of more than 20 active clinical and laboratory research studies in the fields of emergency medicine and medical toxicology

2000-2002

**1<sup>st</sup> MARINE EXPEDITIONARY FORCE, CAMP PENDLETON, CA**

*Undersea & Diving Medical Officer, 1st Force Reconnaissance Company*

- Delivered acute and primary medical care for approximately 200 U.S. Navy and Marine Corps special operations forces
- Treated diving and hyperbaric injuries in Marine Corps special operations divers

7/1999-12/1999

**BRANCH MEDICAL CLINIC, NAVAL AIR STATION NORTH ISLAND, CA**

*General Medical Officer*

- Delivered acute and primary medical care to U.S. Navy sailors

## **Education**

- 2008-2010            **UNIVERSITY OF CALIFORNIA, SAN DIEGO, CA**  
Fellowship in Medical Toxicology
- 2002-2005            **NAVAL MEDICAL CENTER, SAN DIEGO, CA**  
Residency in Emergency Medicine  
Academic Chief Resident, July 2004 – July 2005
- Jan-Jun 2000        **NAVAL UNDERSEA MEDICAL INSTITUTE, GROTON, CT**  
Undersea Medical officer (UMO) Course
- 1998-1999            **NAVAL MEDICAL CENTER, SAN DIEGO, CA**  
Internship in General Surgery
- 1994-1998            **UNIFORMED SERVICES UNIVERSITY OF THE HEALTH  
SCIENCES (USUHS), BETHESDA, MD**  
Doctor of Medicine
- 1990-1994            **CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, CA**  
Bachelor of Science *cum laude*, Biology

## **Medical Licensure/Certifications**

- Board Certification in Emergency Medicine (ABEM), expiring 2026  
Board Certification in Medical Toxicology (ABEM), expiring 2030  
Board Certification in Addiction Medicine (ABPM), expiring 2034

Licensed in more than 40 states, including:

- Arizona Medical License #61851
- Arkansas Medical License #E-13787
- California Medical License #A71434
- Connecticut Medical License #68742
- District of Columbia Medical License #MD048909
- Georgia Medical License #90185
- Indiana Medical License #01086066A
- Louisiana Medical License #326862
- Massachusetts Medical License #286427
- Missouri Medical License #2021023190
- New Mexico Medical License #MD2021-0622
- New York Medical License #307898
- North Carolina Medical License #2021-01562
- Ohio Medical License # 35.135336
- Oregon Medical License #MD205547
- Pennsylvania Medical License #MD474774
- Texas Medical License #T1313

Virginia Medical License #0101272437  
Washington Medical License #MD61093782

Drug Enforcement Agency Certificate (CA, OR, TX)  
Advanced Cardiac Life Support (ACLS) Provider  
Pediatric Advanced Life Support (PALS) Provider

## **Academic Appointments**

### **Uniformed Services University of the Health Sciences (USUHS)**

- 2016-present Professor, Department of Military & Emergency Medicine
- 2011-2016 Associate Professor, Department of Military & Emergency Medicine
- 2006-2011 Assistant Professor, Department of Military & Emergency Medicine

## **Peer-Reviewed Publications**

Rudolf F, Hollenbach K, Carstairs KL, **Carstairs SD**. A retrospective review of antipsychotic medications administered to psychiatric patients in a tertiary care pediatric emergency department. *J Pediatr Pharmacol Ther* 2019; 24:234-237. (PMID: 31093023)

Stolbach A, Bebart V, Beuhler M, **Carstairs S**, Nelson L, Wahl M, Wax PM, McKay C. ACMT Position Statement: Alternative or contingency countermeasures for acetylcholinesterase inhibiting agents. *J Med Toxicol* 2018; 14:261-263. doi: 10.1007/s13181-018-0658-4. (PMID: 29667118)

**Carstairs SD**, Nordt SP, Ziegler J, Cantrell FL. A comparison of poisoned patients at military and Veterans Administration Hospitals. *J Mil Veterans Health* 2017; 25:19-22.

**Carstairs SD**, Koh C, Qian L, Qozi M, Seivard G, Cantrell FL. Sticky situations: cyanoacrylate exposures reported to a poison control system. *Clin Toxicol (Phila)* 2017; 55:1001-3. doi: 10.1080/15563650.2017.1327067. (PMID: 28535077)

Hilger KA, Hilger JR, Putnam SD, **Carstairs SD**, Maves RC. Feasibility and patient acceptance of emergency department-based influenza vaccination in a military medical center. *Mil Med* 2016; 181:883-6. doi: 10.7205/MILMED-D-15-00074. (PMID: 27483528)

**Carstairs SD**, Miller AD, Minns AB, Duchnick J, Riffenburgh RH, Clark RF, Tomaszewski CA. Single versus multiple hyperbaric sessions for carbon monoxide poisoning in a murine model. *J Med Toxicol* 2016; 12:386-90. (PMID: 27456263)

**Carstairs SD**. Ondansetron use in pregnancy and birth defects: a systematic review. *Obstet Gynecol* 2016; 127:878-83. doi: 10.1097/AOG.0000000000001388. (PMID: 27054939)

Oliveira LG, Capp SM, You WB, Riffenburgh RH, **Carstairs SD**. Ondansetron compared with doxylamine and pyridoxine for treatment of nausea in pregnancy: a randomized controlled trial. *Obstet Gynecol* 2014; 124:735-42. doi: 10.1097/AOG.0000000000000479. (PMID: 25198265)

Zanoni S, Darracq M, **Carstairs SD**. Altered mental status due to Pruno intoxication. *J Emerg Med* 2014; 46:767-8. doi: 10.1016/j.jememermed.2013.11.125. (PMID: 24680101)

Zanoni S, Platt G, Hernandez M, **Carstairs SD**. Complete ventricular asystole in a patient with altered mental status. *West J Emerg Med* 2014; 15:149-51. doi: 10.5811/westjem.2013.10.18884. (PMID: 24672602)

Thornton SL, Negus E, **Carstairs SD**. Pediatric zolpidem ingestion demonstrating zero order kinetics treated with flumazenil. *Pediatr Emerg Care* 2013; 29:1204-6. doi: 10.1097/PEC.0b013e3182aa139c. (PMID: 24196090)

**Carstairs SD**. Diagnosis of testicular cancer with a urine pregnancy test in an austere medical environment. *Am J Emerg Med* 2013; 31:1615. doi: 10.1016/j.ajem.2013.08.010. (PMID: 24051009)

Beer WM, **Carstairs SD**. Herlyn Werner Wunderlich syndrome: an unusual presentation of acute vaginal pain. *J Emerg Med* 2013; 45:541-3. (PMID: 23810118)

**Carstairs SD**, Suchard JR, Smith T, Simon LV, Kalynych CJ, Shimada M, Tanen DA. Contribution of serum ethanol concentration to the osmol gap: a prospective volunteer study. *Clin Toxicol (Phila)* 2013; 51:398-401. (PMID: 23641935)

**Carstairs SD**, Kreshak AA, Tanen DA. Crotaline Fab antivenom reverses platelet dysfunction induced by *C. scutulatus* venom: an *in vitro* study. *Acad Emerg Med* 2013; 20:522-5. (PMID: 23672368)

Carbone PN, Carbone DL, **Carstairs SD**, Luzi SA. Sudden cardiac death associated with methylene use. *Am J Forensic Med Pathol* 2013; 34:26-8. (PMID: 23403480)

Nordt SP, Minns A, **Carstairs S**, Kreshak A, Campbell C *et al*. Mass sociogenic illness initially reported as carbon monoxide poisoning. *J Emerg Med* 2012; 42:159-61. (PMID: 21658882)

**Carstairs SD**, Cantrell FL. The spice of life: an analysis of nutmeg exposures in California. *Clin Toxicol (Phila)* 2011; 49:177-80. (PMID: 21495887)

**Carstairs SD**, Schneir AB. Images in clinical medicine. Opsoclonus due to diphenhydramine poisoning. *N Engl J Med* 2010; 363:e40. (PMID: 21190451)

**Carstairs SD**, Luk JY, Tomaszewski CA, Cantrell FL. Ingestion of *Lantana camara* is not associated with significant effects in children. *Pediatrics* 2010; 126:e1585-8. (PMID: 21041281)

Minns AB, **Carstairs SD**, Clark RF. “Caustic cocktail”: closed-circuit diving apparatus contamination leading to corrosive injury. *Am J Emerg Med* 2010; 28(7):843.e3-5. (PMID: 20837270)

**Carstairs SD**, Fujinaka MJ, Keeney GE, Ly BT. Prolonged coma in a child due to hashish ingestion with quantitation of THC metabolites in urine. *J Emerg Med* 2011; 41:e69-71. (PMID: 20634020)

**Carstairs SD**, Cantrell FL. Peyote and mescaline exposures: a 12-year review of a statewide poison center database. *Clin Toxicol (Phila)* 2010; 48(4):350-3. (PMID: 20170392)

**Carstairs SD**, Urquhart A, Hoffman J, Clark RF, Cantrell FL. A retrospective review of suprathreshold modafinil exposures. *J Med Toxicol* 2010; 6(3):307-10. (PMID: 20358418)

**Carstairs SD**, Carstairs KL. Emergency department presentation of acute disseminated encephalomyelitis. *Pediatr Emerg Care* 2007; 23(2):109-11. (PMID: 17351411)

**Carstairs SD**, Tanen DA, Duncan TD, Nordling OB, Wanebo JE, Paluska TR, Theodore N, Riffenburgh RH. Computed tomography angiography for the evaluation of aneurysmal subarachnoid hemorrhage (SAH). *Acad Emerg Med* 2006; 13(5):486-92. (PMID: 16551778)

Richardson WR, Tanen DA, Tong TC, Betten DP, **Carstairs SD**, Williams SR, Cantrell FL, Clark RF. North American coral snake antivenin for the neutralization of non-native elapid venoms in a murine model. *Acad Emerg Med* 2006; 13(2):121-6. (PMID: 16436788)

**Carstairs SD**, Tanen DA. Case studies in toxicology. *Pediatr Ann* 2005; 34(12):973-8, 981. (PMID: 16419735)

Richardson WR, Tanen DA, Tong TC, Betten DP, **Carstairs SD**, Williams SR, Cantrell FL, Clark RF. Crotalidae polyvalent immune Fab (ovine) antivenom is effective in the neutralization of South American Viperidae venoms in a murine model. *Ann Emerg Med* 2005; 45(6):595-602. (PMID: 15940091)

**Carstairs SD**, Williams SR. Overdose of aripiprazole, a new type of antipsychotic. *J Emerg Med* 2005; 28(3):311-3. (PMID: 15769575)

**Carstairs S**, Roos J. An approach to the special operations trainee with altered mental status. *J Special Ops Med* 2002; 2(4):40-2.

**Carstairs S**. Arterial gas embolism in a diver using a closed-circuit oxygen rebreathing diving apparatus. *Undersea Hyperb Med* 2001; 28(4):229-31. (PMID: 12153151)

## **Letters to the Editor**

Riddle M, **Carstairs SD**. Successful treatment of brown widow spider envenomation with *Latrodectus mactans* antivenom. *Clin Toxicol (Phila)* 2020; 58(4):301-302. (PMID: 31526135)

**Carstairs SD**, Minns AB, Clark RF, Tomaszewski CA. In reply: "Single versus multiple hyperbaric sessions for carbon monoxide poisoning in a murine model". *J Med Toxicol* 2016 Oct 3. (PMID: 27699639)

**Carstairs SD**. In reply. *Obstet Gynecol* 2016; 128:409. (PMID: 27454721)

**Carstairs SD**, Suchard JR, Smith T, Simon LV, Kalynych CJ, Shimada M, Tanen DA. Response to letter (LCLT-2013-0022.R2). *Clin Toxicol (Phila)* 2013; 51:811. (PMID: 23902332)

**Carstairs SD**, Griffith EA, Alayin T, Ejike JC, Cantrell FL. Recurrent seizure activity in a child following acute vilazodone ingestion. *Ann Emerg Med* 2012; 60:819-20. (PMID: 23178026)

**Carstairs SD**, Clark RF. Atrioventricular block due to acute ethanol intoxication. *J Emerg Med* 2011; 41:298-300. (PMID: 19879087)

Scott CI, Koenig M, **Carstairs SD**, Clark RF. Caustic injury due to unintentional ingestion of a cooking adjunct. *J Emerg Med* 2011; 40:e119-20. (PMID: 19596178)

Richardson WH, **Carstairs SD**, Williams SR. A picturesque reversal of antimuscarinic delirium. *J Emerg Med* 2004; 26(4):463. (PMID: 15093860)

Woolf A, **Carstairs SD**, Tanen DA. Riluzole-induced methemoglobinemia. *Ann Emerg Med* 2004; 43(2):294-5. (PMID: 15083846)

## **Book Chapters**

**Carstairs SD**. High altitude disorders. In: Cydulka *et al.* (eds.): *Tintinalli's Manual of Emergency Medicine* (8<sup>th</sup> edition). McGraw-Hill Professional; 2016.

**Carstairs SD**, Tanen DA. Barbiturates. In: Schaidler *et al.* (eds.): *Rosen & Barkin's 5-Minute Emergency Medicine Consult* (5<sup>th</sup> edition). Lippincott Williams & Wilkins; 2015.

**Carstairs SD**. High-altitude medical problems. In: Cline, Ma, *et al.* (eds.): *Tintinalli's Emergency Medicine Just the Facts* (3<sup>rd</sup> edition). McGraw-Hill Professional; 2012.

**Carstairs SD.** High-altitude medical problems. In: Cline, Ma, *et al.* (eds.): *Tintinalli's Manual of Emergency Medicine* (7<sup>th</sup> edition). McGraw-Hill Professional; 2012.

**Carstairs SD,** Tanen DA. Snakebites. In: Kazzi, Shih *et al.* (eds.): *AAEM Toxicology Handbook* (2<sup>nd</sup> edition). United Press; 2011.

**Carstairs SD.** Polychlorinated biphenyls (PCBs). In: Olson (ed.): *Poisoning and Drug Overdose* (6<sup>th</sup> edition). McGraw-Hill Professional; 2011.

**Carstairs SD.** Trichloroethane, trichloroethylene, and tetrachloroethylene. In: Olson (ed.): *Poisoning and Drug Overdose* (6<sup>th</sup> edition). McGraw-Hill Professional; 2011.

**Carstairs SD,** Tanen DA. Barbiturates. In: Schaidler *et al.* (eds.): *Rosen & Barkin's 5-Minute Emergency Medicine Consult* (4<sup>th</sup> edition). Lippincott Williams & Wilkins; 2010.

**Carstairs SD,** Tanen DA. Barbiturates. In: Schaidler *et al.* (eds.): *Rosen & Barkin's 5-Minute Emergency Medicine Consult* (3<sup>rd</sup> edition). Lippincott Williams & Wilkins; 2006.

**Carstairs SD,** Tanen DA. Snakebites. In: Kazzi ZN, Roberge RJ (eds.): *AAEM Toxicology Handbook*, 169-71. United Press; 2005.

## **Other Publications**

**Carstairs S.** Why two emergency physicians' kids took part in the Pfizer vaccine trials. *STAT News*, November 15, 2021. URL: <https://www.statnews.com/2021/11/15/two-emergency-physicians-kids-took-part-in-pfizer-covid-vaccine-trials/>

**Carstairs SD.** Salicylates. *Call Us... (The Official Newsletter of the California Poison Control System)*. 7(4):1-6, 2009.

**Carstairs SD.** Colchicine. ToxED [database online]. Tampa, FL: Elsevier/Gold Standard Inc.; 2009. URL: <http://www.toxed.com>.

**Carstairs SD.** Essential oils. ToxED [database online]. Tampa, FL: Elsevier/Gold Standard Inc.; 2009. URL: <http://www.toxed.com>.

**Carstairs SD,** Clark RF. Chemical weapons: Nerve agents. ToxED [database online]. Tampa, FL: Elsevier/Gold Standard Inc.; 2008. URL: <http://www.toxed.com>.

**Carstairs SD.** Toxicology in the great Northwest. *Newsletter of the Society for Academic Emergency Medicine*. 17(1):7, 2005.

Schofer JM, Gray EG, **Carstairs SD,** Welling L. Accelerate your life: Naval emergency medicine. *The EPIC* (Government Services ACEP Chapter Newsletter). Summer 2004: 5-6.

## **National & International Presentations**

Cunningham J, Thomas C, **Carstairs SD**. Cardiogenic shock and elevated digoxin level associated with ingestion of tejocote (*Crataegus mexicana*) root. (Poster presentation, American College of Medical Toxicology Scientific Meeting, San Diego, CA, March 2023)

**Carstairs SD**. Danger south of the border: severe cardiotoxicity and death after ibogaine administration. (Poster presentation, American College of Medical Toxicology Scientific Meeting, virtual, March 2022)

Srihari P, Ontiveros ST, Minns A, **Carstairs SD**. Severe rattlesnake envenomation complicated by severe systemic reaction, diffuse myokymia, rhabdomyolysis, and supraventricular tachycardia. (Poster presentation, North American Congress of Clinical Toxicology, virtual, September 2020)

Gao H, **Carstairs SD**. Intractable vomiting and sedation requiring intubation in a child exposed to varenicline. (Poster presentation, North American Congress of Clinical Toxicology, virtual, September 2020)

Ontiveros ST, **Carstairs SD**. Thujone oil-induced convulsions: a homeopathic misadventure. (Poster presentation, American College of Medical Toxicology Scientific Meeting, New York City, NY, March 2020)

Srihari P, Ontiveros ST, Corbett B, **Carstairs SD**. Neuroleptic malignant syndrome after depot injection of zuclopenthixol. (Poster presentation, American College of Medical Toxicology Scientific Meeting, New York City, NY, March 2020)

Koch RA, Hollenbach K, **Carstairs SD**. What is the optimal technique for removal of cyanoacrylate glue? (Poster presentation, American College of Medical Toxicology Scientific Meeting, Washington, DC, April 2018)

Riddle MK, **Carstairs SD**. Successful treatment of brown widow spider envenomation with *Latrodectus mactans* antivenom. (Poster presentation, American College of Medical Toxicology Scientific Meeting, Washington, DC, April 2018)

**Carstairs SD**, Kwek W. Shipboard trauma care in the Republic of Singapore Navy: Lessons learned from Exercise CARAT 2015. (Oral presentation, Asia Pacific Military Health Exchange, Singapore, May 2017)

Henderson GS, **Carstairs SD**. Initial experience with a transgender service member in the U.S. Marine Corps. (Oral presentation, Asia Pacific Military Health Exchange, Singapore, May 2017)

**Carstairs SD**, Lappan C. Medical teleconsultation for deployed U.S. Navy ships afloat. (Poster presentation, Asia Pacific Military Health Exchange, Singapore, May 2017)

**Carstairs SD**, Lappan C. Toxicology teleconsultation for deployed U.S. military personnel: a 12-year experience. (Poster presentation, Asia Pacific Military Health Exchange, Singapore, May 2017)

**Carstairs SD**, Arnold D, Morales W. Initial experience with an Expeditionary Resuscitative Surgical System (ERSS) in the U.S. Pacific Fleet. (Poster presentation, Asia Pacific Military Health Exchange, Singapore, May 2017)

Rudolf F, Hollenbach K, Carstairs KL, **Carstairs SD**. A retrospective review of antipsychotic medications administered to agitated psychiatric patients in a tertiary care pediatric emergency department. (Poster presentation, North American Congress of Clinical Toxicology, Boston, MA, September 2016)

**Carstairs SD**, Koh C, Qian L, Qozi M, Seivard G, Cantrell FL. Sticky situations: cyanoacrylate exposures reported to a poison control system. (Poster presentation, North American Congress of Clinical Toxicology, Boston, MA, September 2016)

**Carstairs SD**, Nordt SP, Ziegler J, Cantrell FL. A comparison of poisoned patients at military and Veterans' Administration hospitals. (Poster presentation, North American Congress of Clinical Toxicology, San Francisco, CA, October 2015)

**Carstairs SD**, Lappan CM, Barry JD. Toxicology teleconsultation for deployed U.S. military personnel: a 10-year experience. (Poster presentation, North American Congress of Clinical Toxicology, New Orleans, LA, October 2014)

Savaser D, Thornton SL, **Carstairs SD**, Gerona R. Hypotension and acute kidney injury from overdose of losartan and telmisartan. (Poster presentation, American College of Medical Toxicology Annual Scientific Meeting, San Juan, Puerto Rico, March 2013)

Oliveira LG, Capp S, You W, **Carstairs SD**. Ondansetron versus doxylamine/pyridoxine for treatment of nausea and vomiting in pregnancy: a randomized controlled trial. (Platform presentation -- first place, Resident Research Competition, American Academy of Emergency Medicine Annual Meeting, Las Vegas, NV, February 2013)

Carbone PN, Carbone DL, **Carstairs SD**, Luzi SA. Sudden cardiac death associated with methylene use. (Poster presentation, North American Congress of Clinical Toxicology, Las Vegas, NV, October 2012)

Zanoni S, Matthews C, Darracq M, **Carstairs SD**. Plastered on Pruno: severe intoxication from prison hooch. (Poster presentation, North American Congress of Clinical Toxicology, Las Vegas, NV, October 2012)

**Carstairs SD**, Suchard JR, Smith T, Simon LV, Kalynych C, Shimada M, Tanen DA. Contribution of serum ethanol concentration to the osmol gap: a prospective volunteer study. (Poster presentation, North American Congress of Clinical Toxicology, Las Vegas, NV, October 2012)

2012; oral presentation, Society of Academic Emergency Medicine Annual Meeting, Atlanta, GA, May 2013)

Austin A, Park PJ, **Carstairs SD**. Synthetic cannabinoid use in a military emergency department. (Poster presentation, Government Services – American College of Emergency Physicians Joint Services Symposium, Squaw Valley, CA, April 2012)

**Carstairs SD**, Kreshak AA, Tanen DA. Crotaline Fab antivenom reverses platelet dysfunction induced by *C. scutulatus* venom: an *in vitro* study. (Platform presentation, North American Congress of Clinical Toxicology, Washington, DC, September 2011; oral presentation, Society for Academic Emergency Medicine Annual Meeting, Chicago, IL, May 2012)

**Carstairs SD**, Luk JY, Cantrell FL. Pediatric *Lantana camara* ingestions: No need to worry. (Poster presentation, North American Congress of Clinical Toxicology, Denver, CO, October 2010)

**Carstairs SD**, Luk JY, Cantrell FL. A comprehensive review of anticholinergic plant exposures in California, 1997-2008. (Poster presentation, North American Congress of Clinical Toxicology, Denver, CO, October 2010)

Nordt SP, Minns A, **Carstairs S**, Kreshak A, Tomaszewski C, Campbell C, Joshua A, Hayden S, Clark R, Ly B. Suspected mass sociogenic illness reported as carbon monoxide poisoning. (Poster presentation, North American Congress of Clinical Toxicology, Denver, CO, October 2010)

Miller AD, **Carstairs SD**, Minns AB, Duchnick J, Castillo EM, Clark RF, Tomaszewski CA. Single versus multiple hyperbaric sessions for carbon monoxide poisoning: Is more better? (Oral presentation, North American Congress of Clinical Toxicology, Denver, CO, October 2010)

**Carstairs SD**. Does crotaline Fab administration reverse venom-induced platelet dysfunction? An *in vitro* study. (Oral presentation, American College of Medical Toxicology Spring Symposium, Scottsdale, AZ, March 2010)

**Carstairs SD**, Cantrell FL: The spice of life: A 12-year review of nutmeg exposures. (Poster presentation, North American Congress of Clinical Toxicology, San Antonio, TX, September 2009)

**Carstairs SD**, Cantrell FL: Crazy for cacti: A retrospective review of peyote exposures. (Poster presentation, North American Congress of Clinical Toxicology, San Antonio, TX, September 2009)

Nordt SP, Minns A, Cantrell FL, Tomaszewski C, Miller A, Kreshak A, **Carstairs S**, Clark RF: Did massive recall of Digitek® tablets increase number of digoxin exposures to a poison control system? (Poster presentation, North American Congress of Clinical Toxicology, San Antonio, TX, September 2009)

Richardson WH, Tanen DA, Tong TC, Betten DP, Williams SR, **Carstairs SD**, Cantrell FL, Clark RF: North American coral snake antivenin for treatment of exotic elapid envenomations in a murine model. (Platform presentation, North American College of Clinical Toxicology, Seattle, WA, September 2004)

**Carstairs SD**, Tanen DA, Paluska TR, Duncan TD, Theodore N: CT Angiography for the Detection of Subarachnoid Hemorrhage: A Pilot Study. (Oral presentation, Society for Academic Emergency Medicine Annual Meeting, Orlando, FL, May 2004; oral presentation, Navy Academic Research Competition, San Diego, CA, April 2004)

Richardson WH, Tanen DA, Tong TC, Betten DP, Williams SR, **Carstairs SD**, Cantrell FL, Clark RF: Crotalidae Polyvalent Immune Fab Antivenom is effective for the treatment of South American Viperidae envenomations in a murine model. (Oral presentation, Society for Academic Emergency Medicine Annual Meeting, Orlando, FL, May 2004)

## **Grants**

\$525,000 from Joint Program Committee 5/Military Operational Medicine Research Program (JPC-5/MOMRP) Substance Abuse Task Area, FY2015-FY2017

"Does administration of either ketamine or droperidol decrease opioid use in patients with chronic pain presenting to the emergency department with an acute exacerbation of their pain?"

## **Invited Lectures**

“Hospital Hazards: Anesthetic Toxicity & Malignant Hyperthermia”

American College of Medical Toxicology Total Tox Course (Virtual),  
November 2024

American College of Medical Toxicology Total Tox Course (Virtual),  
October 2022

“Local Anesthetic Toxicity: When to be Concerned”

American College of Medical Toxicology Total Tox Course (Virtual),  
August 2021

American College of Medical Toxicology Total Tox Course (Virtual),  
February 2021

“Chemotherapeutic Agents”

American College of Medical Toxicology Board Review Course (Virtual),  
June 2024

American College of Medical Toxicology Board Review Course (Virtual),  
August 2022

American College of Medical Toxicology Board Review Course (Virtual),  
August 2020

American College of Medical Toxicology Board Review Course, Chicago, IL,  
September 2018

"Pesticides"

American College of Medical Toxicology Board Review Course (Virtual),  
June 2024

American College of Medical Toxicology Board Review Course (Virtual),  
August 2022

American College of Medical Toxicology Board Review Course (Virtual),  
August 2020

American College of Medical Toxicology Board Review Course, Chicago, IL,  
September 2018

Georgia Poison Center, Atlanta, GA, January 2018

American College of Medical Toxicology Board Review Course, Salt Lake City, UT,  
September 2016

American College of Medical Toxicology Board Review Course, Salt Lake City, UT,  
September 2014

"Warfare, Terrorism, and Hazardous Materials"

American College of Medical Toxicology Board Review Course (Virtual),  
June 2024

American College of Medical Toxicology Board Review Course (Virtual),  
August 2022

Western Fellows Toxicology Conference, San Diego, CA, May 2022

American College of Medical Toxicology Board Review Course (Virtual),  
August 2020

American College of Medical Toxicology Board Review Course, Chicago, IL,  
September 2018

American College of Medical Toxicology Board Review Course, Salt Lake City, UT,  
September 2016

American College of Medical Toxicology Board Review Course, Salt Lake City, UT,  
September 2014

"Poisonous Plants"

Department of Pediatrics, Rady Children's Hospital, March 2020

Department of Medicine, Scripps Mercy Hospital San Diego, March 2020

"The Expeditionary Trauma Resuscitative Surgical System: Initial Experience in the Pacific"  
Operation CARAT Medical Symposium, Singapore, July 2015

"Safety and Efficacy of Ondansetron Use in Pregnancy"

Healthy Connections Home Care Services, Dallas, TX, March 2015

Healthy Connections Home Care Services, Houston, TX, March 2015

"Mechanisms of Venom-Induced Coagulopathy"

North American Congress of Clinical Toxicology, New Orleans, LA, October 2014

American College of Emergency Physicians Scientific Assembly, Chicago, IL, October 2014

"Coagulopathies in Rattlesnake Envenomation: What Do We Know and Where Do We Go from Here?"

American College of Medical Toxicology National Meeting, Phoenix, AZ, March 2014

"Management of the Poisoned Patient"

Grand Rounds Presentation, Department of Military & Emergency Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD, January 2011

"Acute Chlorine Gas Toxicity"

Force Health Protection Conference, Albuquerque, NM, August 2009

"Toxic Alcohols"

Department of Pediatrics, Rady Children's Hospital, June 2019

Department of Pediatrics, Rady Children's Hospital, May 2017

Department of Emergency Medicine, University of California, Irvine, April 2012

Department of Pediatric Emergency Medicine, Rady Children's Hospital San Diego, November 2012

Department of Pediatrics, Rady Children's Hospital, April 2010

Department of Internal Medicine, Scripps Mercy Hospital, April 2010

Department of Internal Medicine, University of California, San Diego, April 2010

UC San Diego Skaggs School of Pharmaceutical Sciences, January 2010

Department of Pediatric Emergency Medicine, Rady Children's Hospital San Diego, August 2009

UC San Diego Skaggs School of Pharmaceutical Sciences, January 2009

"Toxic Mushrooms"

Department of Emergency Medicine, University of California, Irvine, April 2012

Department of Internal Medicine, University of California, San Diego, May 2010

UC San Diego Skaggs School of Pharmaceutical Sciences, January 2010

## **Academic Awards**

Australasian Military Medical Association/*Journal of Military & Veterans' Health* Best Veterans' Health Paper Award, 2017

Naval Medical Center Master Clinician Award, 2015

Naval Medical Center Associate Master Clinician Award, 2014

Fred Trayers Memorial Award (given to outstanding emergency medicine faculty mentor by the graduating residency class), 2013

Naval Medical Center San Diego EM Residency Academic Excellence Award, 2005

Naval Medical Center San Diego EM Residency Excellence in Research Award, 2005

SAEM/ACMT Michael Spadafora Medical Toxicology Scholarship, 2004

First Place, Navy Academic Research Competition, San Diego, CA, April 2004

USUHS Outstanding Academic Achievement Award, Surgery, 1997  
USUHS Outstanding Academic Achievement Award, Pharmacology, 1996  
USUHS Outstanding Academic Achievement Award, Medical Microbiology, Infectious  
Diseases and Immunology, 1996  
California Institute of Technology Summer Undergraduate Research Fellowship, 1993

## **Current Editorial Experience**

Editorial Reviewer for *Journal of Medical Toxicology* (2008-present)  
Editorial Reviewer for *Clinical Toxicology* (2010-present)  
Editorial Reviewer for *Journal of Pediatrics* (2015-present)  
Editorial Reviewer for *Pediatrics* (2016-present)  
Editorial Reviewer for *Journal of Military & Veterans' Health* (2017-present)

## **Professional Associations**

Distinguished Fellow (DFACMT), American College of Medical Toxicology (2026-present)  
Fellow (FACMT), American College of Medical Toxicology (2015-2026)  
Fellow (FACEP), American College of Emergency Physicians (2008-present)  
American Academy of Clinical Toxicology (AACT)  
Alpha Omega Alpha Honor Society (ΑΩΑ)  
Sigma Xi Scientific Research Honor Society (ΣΞ)

## **Military Awards/Certifications**

Fleet Marine Force Qualified Officer Warfare Designation  
Undersea Medical Officer Designation  
Certified U.S. Navy Diver  
Legion of Merit  
Navy & Marine Corps Commendation Medal (2 awards)  
National Defense Medal with bronze star  
Iraq Campaign Medal  
Global War on Terrorism Service Medal with Eagle, Globe, and Anchor  
Meritorious Unit Citation Ribbon  
Sea Service Deployment Ribbon  
Navy Expert Rifleman Medal  
Navy Pistol Ribbon