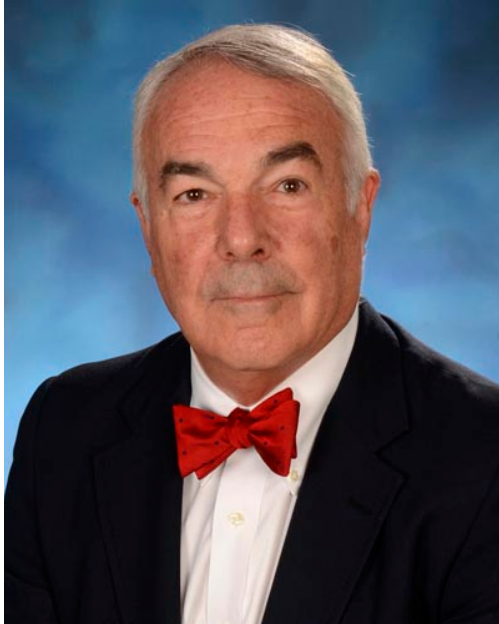


## ICU infections

**Alan Cross** ([across@som.umaryland.edu](mailto:across@som.umaryland.edu)):



Dr. Cross' research focuses on the study of sepsis, including: (1) development of vaccines to prevent sepsis including development of multivalent vaccines for *P. aeruginosa*, *Klebsiella* and *E. coli* that progressed to phase 1 testing in human subjects; (2) study of glycobiology and sialic acid turnover as a druggable mechanism in innate host response and sepsis; (3) mechanisms of anthrax infection; (4) targeting the CD28/B7 axis to treat sepsis; and (5) mechanisms of Gram-negative bacterial sepsis.

### Highlighted Publications:

1. Cross AS, Karreman HJ, Zhang L, Rosenberg Z, Opal SM, Lees A. Immunization of cows with novel core glycolipid vaccine induces anti-endotoxin antibodies in bovine colostrum. *Vaccine* 2014; 32(46):6107-14. PMID: 25242628.
2. Feng C, Stamatou NM, Dragan A, Medvedev A, Whitford M, Zhang L, Song C, Rallabhandi, P, Nhu Q, Vogel SN, Geddes C, Cross AS. Sialyl residues modulate LPS-mediated signaling through the Toll-like receptor 4 complex. *PLoS One* 2012;7:e32359
3. Feng C, Zhang L, Almulki L, Faez S, Whitford M, Hafezi-Moghadam A, Cross AS. Endogenous PMN sialidase activity exposes activation epitope on CD11b/CD18 which enhances its binding interaction with ICAM-1. *J. Leukoc. Biol.* 2011;90:313-321
4. Ramachandran G, Tulapurkar ME2, Harris KM, Arad G, Shirvan A, Shemesh R, DeTolla LJ, Benazzi C, Opal SM, Kaempfer R, Cross AS. A peptide antagonist of CD28 signaling attenuates toxic shock and necrotizing soft tissue infection induced by *Streptococcus pyogenes* *J. Infect Dis.* 2013;207:1869-77. Epub 2013Mar14. PMID23493729

Links: Faculty webpage: <http://www.medschool.umaryland.edu/profiles/Cross-Alan/>

PubMed

publications: <http://www.ncbi.nlm.nih.gov/sites/myncbi/alan.cross.1/bibliography/41139315/public/?sort=date&direction=ascending>

**Anthony Harris** ([aharris@som.umaryland.edu](mailto:aharris@som.umaryland.edu)):



Dr. Harris is an infectious disease physician, epidemiologist and clinical investigator whose research program is focused on emerging pathogens, antimicrobial-resistant bacteria, hospital epidemiology/infection control, epidemiologic methods in infectious diseases and medical informatics, including the spread of multi-drug resistant pathogens in the ICU.

Highlighted Publications:

1. Harris AD, Pineles L, Belton B, Johnson JK, Shardell M, Loeb M, Newhouse R, Dembry L, Braun B, Perencevich EN, Hall KK, Morgan DJ and the Benefits of Universal Glove and Gown (BUGG) Investigators. Universal glove and gown use and acquisition of antibiotic-resistant bacteria in the ICU: A randomized trial. *JAMA*. 2013 Oct 16;310(15):1571-80. PMID: PMC4026208
2. Snyder GM, Thom KA, Furuno JP, Perencevich EN, Roghmann MC, Strauss SM, Netzer G and Harris AD. Detection of methicillin-resistant *Staphylococcus aureus* and vancomycin-resistant *enterococci* on the gowns and gloves of healthcare workers. *Infect Control Hosp Epidemiol*. 2008 Jul;29:583. PMID: PMC2577846
3. Harris AD, Smith D, Johnson JA, Bradham DD, and Roghmann MC. Risk factors for imipenem-resistant *Pseudomonas aeruginosa* among hospitalized patients. *Clin Infect Dis*. 2002 Feb;34(3):340.
4. Harris AD, Furuno JP, Roghmann MC, Johnson JK, Conway LJ, Venezia RA, Standiford HC, Schweizer ML, Hebden JN, Moore AC, Perencevich EN. Targeted MRSA surveillance and its potential use to guide empiric antibiotic therapy. *Antimicrob Agents Chemother*. 2010 Aug;54:3143. PMID: PMC2916333

Links:

Med School faculty page: <http://www.medschool.umaryland.edu/profiles/Harris-Anthony/>  
PubMed

publications: <http://www.ncbi.nlm.nih.gov/sites/myncbi/1juj1mj9Y6dAb/bibliography/47934858/public/?sort=date&direction=ascending>.

**Kerri Thom** ([kthom@som.umaryland.edu](mailto:kthom@som.umaryland.edu)):



Dr. Thom's research interests include the epidemiology and transmission of multidrug-resistant gram negative pathogens, antimicrobial resistance and infection prevention. She has a particular interest in the study of *Acinetobacter baumannii*, and other multidrug-resistant pathogens, in the healthcare settings. In addition, she studies strategies of infection prevention and antimicrobial stewardship aimed at reducing the spread of infection in healthcare settings and the development of resistance.

Highlighted Publications:

**Thom K**, Rock C, Jackson S, Johnson JK, Srinivasan A, Magder L, Roghmann MC, Bonomo R, and Harris A. Factors Leading to Transmission Risk of *Acinetobacter baumannii*. *In Press at Crit Care Med* 45:e633-39.

Haac B, Rock C, Harris A, Pineles L, Stein D, Scalea T, Hu P, Hagegeorge G, Liang S and **Thom K**. Hand Hygiene Compliance in the Setting of Trauma Resuscitation. *Injury* 2017;48:165-70, PMID: [PMC5711429](https://pubmed.ncbi.nlm.nih.gov/27811429/).

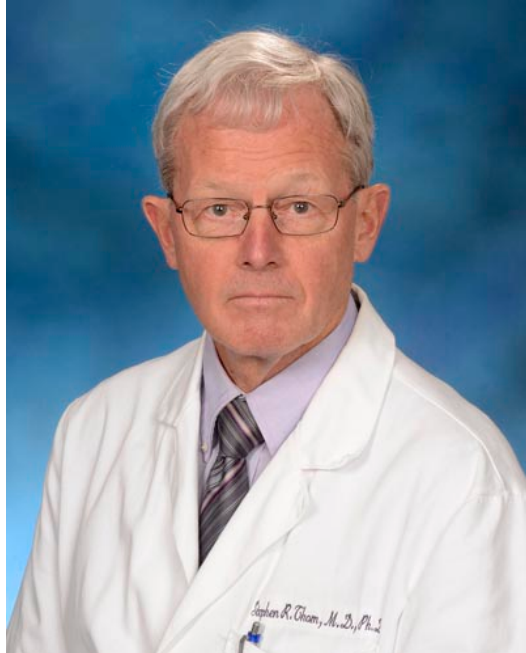
Harris A, Fleming B, Bromberg J, Rock P, Nkonge G, Emerick M, Harris-Williams M and **Thom K**. Surgical Site Infection after Renal Transplantation. *Infect Control Hosp Epidemiol*, April, 2015; 36:417. PMID: PMC4367121

Barnes S, Morgan D, Harris A, Carling P, and **Thom K**. Preventing the Transmission of Multidrug-resistant Organisms (MDROs): Modeling the Relative Importance of Hand Hygiene and Environmental Cleaning Interventions. *Infect Control Hosp Epidemiol*, September 2014; 35:1156. PMID: PMC4204209

Links:

Med School faculty page: <http://www.medschool.umaryland.edu/profiles/Thom-Kerri/>

**Steve Thom** ([SThom@som.umaryland.edu](mailto:SThom@som.umaryland.edu)):



The Thom lab is funded by the National Institutes of Health, Office of Naval Research and US Air Force to study the role of vasculogenic stem cells in neovascularization especially focused on diabetic wound healing; mechanisms of production and pathophysiology of circulating microparticles and exosomes in traumatic brain injury and decompression sickness; and cytoskeletal regulation of neutrophil  $\beta_2$  adhesion molecules in innate immune responses.

Highlighted Publications:

1. Thom SR, Bennett M, Banham ND, Chin WW, Blake DF, Rosen A, Pollock NW, Madden D, Barak O, Marroni A, Balestra C, Germonpre P, Pieri M, Cialoni D, Le P-NJ, Logue C, Lambert DS, Hardy KR, Sward D, Yang M, Bhopale VM, and Dujic Z. Association of microparticles and neutrophil activation with decompression sickness. *J Appl Physiol* 119: 427-434, 2015.
2. Thom SR, Bhopale VM, Hu J, and Yang M. Inflammatory responses to acute elevations of carbon dioxide in mice. *J Appl Physiol* 123: 297-302, 2017.
3. Thom SR, Bhopale VM, Yu K, Huang W, Kane MA, and Margolis DJ. Neutrophil microparticle production and inflammasome activation under hyperglycemia due to cytoskeletal instability. *J Biol Chem* 292: 18312-18324, 2017.
4. Thom SR, Hampton M, Troiano M, Mirza Z, Malay DS, Shannon S, Jennato N, Donohue C, Hoffstad O, Woltereck D, Yang M, Yu K, Bhopale V, and Margolis DJ. Measurements of CD34+/CD45-dim stem cells predict healing of diabetic neuropathic wounds. *Diabetes* 65: 486-497, 2016.

Links:

Med School faculty page: <https://umem.org/profiles/faculty/1257/>

PubMed

publications: <https://www.ncbi.nlm.nih.gov/sites/myncbi/1vwiUGxelx1Qm/bibliography/46346494/public/?sort=date&direction=descending>