Editor-in-Chief's Note

Alarmins and More


Richard I. Shader, MD

Some months ago, I was startled when the hard-wired smoke detector in our hallway let out a screeching, piercing sound. I immediately went for one of my wall-mounted fire extinguishers and began to search for the source the smoke. I smelled nothing; I found nothing. Annoyed by the sound and puzzled by the absence of a source, I reluctantly went to the control panel and turned off the alarm. Climbing a stepladder, I opened the ceiling alarm box—there was a dead spider spanning the sensor to sounder circuit. On other occasions, just the faintest smell from a toaster tripped an alarm from a detector located in a nearby room.

Our themed Update in this issue deals with *alarmins*. To me, alarmins are our body's smoke detectors. They too are sensitive and set off selectively. For example, nonprogrammed cell death or necrosis quickly initiates the release of alarmins, whereas cells that die during apoptosis do not.[1] To help readers better understand alarmins, Professor Theoharis Theoharides, our Topic Editor for Asthma, Allergy, and Immunology, has assembled a collection of papers that discuss alarmins from both basic and clinical perspectives. Although there are as yet only a few direct clinical applications linked to alarmins, this area of study sheds light on conditions and processes such as tissue repair, inflammation, tumor immunity, and sepsis. Sepsis, in particular, is associated with a "cytokine storm" involving massive release of alarmins. Biologics such as interleukin-1β–soluble receptor are used to treat familial Mediterranean fever,[2] and interleukin-6 and interleukin-6 soluble receptor may be early biomarkers for coronary artery disease.[3]

Reading these papers should help us better understand how the body's smoke detectors work. I look forward to a future issue containing an Update on how the study of alarmins has led to the discovery of therapies that will serve as effective fire extinguishers. It is also possible that monitoring levels of alarmins might serve as a measurable biomarker to assist in a differential diagnosis or to follow the course of an illness. Alarmins might also be alerting signals that, when detected early in the course of a disease process, prompt an intervention strategy that prevents greater morbidity. The adage "where there's smoke, there's fire" comes to mind; a medical version might be "where there's an alarmin, there's a harming."

One of my goals as Editor-in-Chief of *Clinical Therapeutics* (*CT*) is that *CT* be a journal bringing together the work and thinking of clinician scientists from around the world. This issue of *CT* contains submissions from corresponding authors who work in ten different countries: Brazil, Canada, China, Norway, Qatar, Russia, Switzerland, Taiwan, the United Kingdom (UK), and the United States. In addition, the paper by Khraishi et al.[4] involves coauthor colleagues from Canada, the UK, the Czech Republic, France, and Germany. We are succeeding in this goal, but we continue to strive to reach and represent an even broader international audience of clinicians and scientists. Therapeutic and scientific advances and the dissemination of this knowledge are universal concerns.

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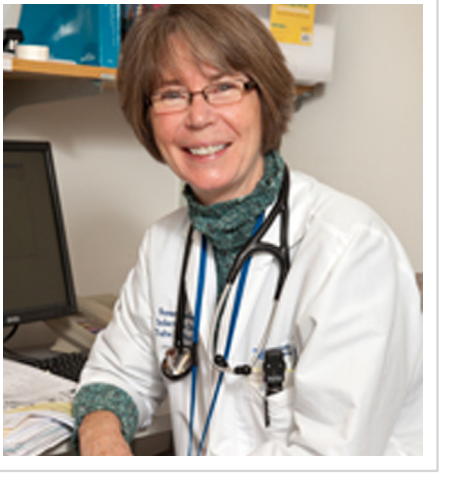
SUSAN HADLEY, M.D. A MEMORIAL NOTE

We at Clinical Therapeutics are sad to report that Susan Hadley, MD passed away on March 30, 2016. Susan was our first Topic Editor for Infectious Diseases. She distinguished herself as a clinician, educator, and scientist. She was also known as a champion for the proper and judicious use of antimicrobial agents. Her special themed section on Antibiotic Stewardship was widely read and appreciated.[5-10] She was also devoted to improving health care in Nicaragua and annually took Tufts students there to learn and work with her.

Susan and her family have requested that those who wish to honor her memory should target their gifts to the Nicaragua Global Health Program at Tufts University School of Medicine. Gifts should be sent to Medical Development, TUSM, 136 Harrison Ave., Boston, Massachusetts 02111. In addition gifts can be made online at http://giving.tufts.edu/med. Please include a notation of "Susan Hadley" in the "Dedicate Your Gift" field.



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Allergy, Asthma, and Immunology Update

This month's Allergy, Asthma, and Immunology Update is a special feature which is available as FREE ACCESS content on the journal's website. The previous Allergy, Asthma, and Immunology Update, entitled "Gut Microbiota and the Immune System," was published in Volume 37, Number 5 of Clinical Therapeutics. To view the previous Update, see the articles below:

1. Afrin LB, Khoruts A. Mast Cell Activation Disease and Microbiotic Interactions.
2. El-Aidy S, Dinan TG, Cryan JF. Gut Microbiota: The Conductor in the Orchestra of Immune–Neuroendocrine Communication.
3. Min YW, Rhee P-L. The Role of Microbiota on the Gut Immunology.
4. Buie T. Potential Etiologic Factors of Microbiome Disruption in Autism.
5. Petra AI, Panagiotidou S, Hatziagelaki E, Stewart JM, Conti P, Theoharides TC. Gut-Microbiota-Brain Axis and Its Effect on Neuropsychiatric Disorders With Suspected Immune Dysregulation.
6. Jin D, Wu S, Zhang Y, Lu R, Xia Y, Dong H, Sun J. Lack of Vitamin D Receptor Causes Dysbiosis and Changes the Functions of the Murine Intestinal Microbiome.