

million people<sup>2</sup> where there were about 20 deaths. Not to belittle this situation, but the *Toronto Star* reported 59 murders in Toronto in 2001, and the Toronto Police Service has reported 20 murders in 2003. We should be steadfast in our determination to minimize the harm from this disease, but we must also be careful not to let hype create panic, which would lead to more harm and fear in an already tenuous world psyche.

Christian Donohue, M.D.

Summit Medical Group  
Summit, NJ 07901

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**THE AUTHORS REPLY:** Lila and colleagues make the clinical point that not all cases of community-acquired pneumonia from a region affected by the SARS epidemic are caused by the SARS coronavirus. We agree that a detailed history, a physical examination, and a series of diagnostic tests are appropriate.

Donohue warns that the medical profession should be careful not to panic in the midst of an epidemic, especially if the number of cases pales in comparison with the number of patients with ap-

parently less threatening endemic infections. We agree that emerging infections should be managed in a data-driven way, and communications should be balanced and truthful. However, we would not necessarily find fault with the WHO, because it had to make decisions empirically in the face of limited data. Just as a physician may initially prescribe a broad spectrum of antibiotics for a patient with life-threatening sepsis of unknown cause and later narrow the antibiotic choices when the antibiogram comes back, we think that it is appropriate to take broad precautions initially when the public health is involved. Once the epidemiologic details become clear, more focused approaches may be applied. Initially, the WHO did not know where we stood on the epidemic curve, what various modes of transmission were possible, how many new cases resulted from each case (the case reproduction rate), whether the virus was carried for extended periods, or whether asymptomatic cases existed. In hindsight, some of the approaches that were taken may seem excessive, but in the context of uncertainty and risk to health, we think that they were reasonable.

Richard P. Wenzel, M.D.  
Michael B. Edmond, M.D., M.P.H.

Virginia Commonwealth University  
Richmond, VA 23219  
[rwenzel@mail2.vcu.edu](mailto:rwenzel@mail2.vcu.edu)

## SARS in Hong Kong

**TO THE EDITOR:** Lee et al. (May 15 issue)<sup>1</sup> describe the clinical and laboratory features of 138 cases of suspected severe acute respiratory syndrome (SARS) in Hong Kong. It is striking that 44.8 percent of the patients had thrombocytopenia, 45.0 percent had elevated levels of D-dimers, and 42.8 percent had a prolonged activated partial-thromboplastin time. This combination suggests the presence of a form of disseminated intravascular coagulation<sup>2</sup> or pulmonary-induced coagulation and fibrin polymerization with consumption of platelets and clotting factors. Elevated D-dimer levels have also been reported in patients with acute lung injury and in patients with the acute respiratory distress syndrome.<sup>3</sup> We suggest that patients with SARS who have elevated D-dimer levels might need anticoagulant therapy or fibrinolytic therapy such as plasminogen activators,<sup>4</sup> activated protein C, soluble thrombomodulin, antithrombin, tissue factor–pathway

inhibitor, activated factor VII–pathway inhibitor, heparin, or low-molecular-weight heparin<sup>5</sup> in order to reverse intraalveolar coagulation, microthrombi formation, and alveolar and interstitial fibrin deposition.<sup>6</sup> Such reversals might improve survival.<sup>5</sup>

Ya Ping Wu, Ph.D.

University Medical Center  
3584 CX Utrecht, the Netherlands  
[ywu@azu.nl](mailto:ywu@azu.nl)

Ran Wei, M.D.

Taishan Medical College  
Taian, Shandong 271000, China

Philip G. de Groot, Ph.D.

University Medical Center  
3584 CX Utrecht, the Netherlands

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## A Novel Coronavirus and SARS

**TO THE EDITOR:** Ksiazek et al. (May 15 issue)<sup>1</sup> report that there is antibody cross-reactivity between serum from a patient with severe acute respiratory distress syndrome (SARS) and antibodies that are reactive with group I coronaviruses. This finding raises the possibility of using existing vaccines against these heterologous coronaviruses for protection against SARS. Unfortunately, the study did not show any virus-neutralization activity. Nevertheless, the close similarity between the SARS open reading frame 1b and other human and animal coronaviruses lends support to the idea of using heterologous coronaviral strains, which are harmless to humans, as vaccines. There are several historical examples of successful heterologous vaccination, such as cowpox virus for smallpox in humans and bacille Calmette–Guérin derived from mycobacterium in cattle for tuberculosis in humans. Furthermore, it has been shown that pathogens cause diseases primarily through their ability to evade immune control and through mimicry of host

proteins.<sup>2</sup> “Fuzzy” antigenic recognition might enable T-cell clones to recognize a spectrum of antigens, even antigens that are not closely similar to one another. Thus, the use of altered heterologous antigens, which are structurally different from self-antigens, may improve immunity against the orthologous pathogens.<sup>3</sup>

Qibin Leng, Ph.D.

Weizmann Institute of Science  
Rehovot 76100, Israel  
qibin\_leng@yahoo.com

Zvi Bentwich, M.D.

Rosetta Genomics  
Rehovot 76701, Israel

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## Pseudo-SARS

**TO THE EDITOR:** We evaluated a possible case of severe acute respiratory syndrome (SARS) that involved issues of hospital admission, an inconsistent travel history, and possible enforced isolation. Some of the problems were similar to those described in a recent account in New York.<sup>1</sup>

On May 12, 2003, a 36-year-old white man (accompanied by his Asian wife) was evaluated in our emergency room for fever and cough. He stated that they had arrived in the United States five days earlier from Taiwan, where he worked as an English teacher for physicians. His symptoms began two days after their arrival in the United States. Emergency room personnel placed masks on the couple and isolated them from other patients. This event coincided with the start of the Top Officials

2 (TOPOFF 2) bioterrorism-response exercise at our hospital. When consulted at 1 a.m., we initially questioned whether this patient might be part of the drill. The drill scenario involved an outbreak of pneumonic plague but was also to include some surprises. The patient had no respiratory distress, and a chest radiograph and the oxygen saturation were normal, but the couple had no local residence. Therefore, the patient was admitted to a negative-pressure isolation room and placed under contact and respiratory-isolation precautions in accordance with the recommendations of the Centers for Disease Control and Prevention.<sup>2</sup>

The following day, the patient's diagnosis was reassessed, because he had no fever and he repeatedly requested narcotics for chest pain. That evening, he