



Infectious Disease

One of the earliest contributions of VA researchers to medical science was the establishment of effective treatments for tuberculosis, back in the 1930s and 1940s. Since then, VA scientists have helped advance the understanding, prevention, and treatment of numerous infectious diseases, ranging from the common cold to major public-health threats such as AIDS.

Examples of VA Research Advances

VA scientist leads effort toward preferred AIDS vaccine – Susan Zolla-Pazner, PhD, of VA and New York University, has been leading an international team of scientists in an \$8.4-million effort to develop vaccines against the AIDS virus. The group, funded by the Gates Foundation, has been working to isolate the most powerful antibodies found in patients infected with various HIV strains. The next step will be identifying structures on the virus surface that are targeted by these antibodies and incorporating them into genetically engineered vaccines.

Privacy curtains in hospitals could spread germs – The curtains between hospital beds can harbor drug-resistant bacteria and may be playing a role in the spread of the germs, according to a recent VA study. The researchers found that 42 percent of curtains were contaminated with vancomycin-resistant enterococci; 22 percent with methicillin-resistant *Staphylococcus aureus*; and 4 percent with *Clostridium difficile*. Moreover, it appeared the germs were easily transferred when study personnel wearing gloves touched the curtains and then pressed their hands into “hand imprint cultures.” Most hospitals wash privacy curtains every few months or whenever they are visibly soiled.

Predicting HIV disease progression – A team led by a VA researcher in San Antonio, Tex., found that specific combinations of two genes—CCL3L1 and CCR5—could be a more accurate predictor of the progression of HIV infection to AIDS than currently used laboratory markers, such as CD4 cell counts and viral loads.

Facts About Infectious Diseases

Infectious diseases are generally classified according to the source of the infection. The major types are viral, bacterial, parasitic, and fungal. In the VA health care system, two viral diseases of special concern are HIV-AIDS and hepatitis C. VA maintains special websites devoted to these conditions: www.hiv.va.gov and www.hepatitis.va.gov. VA investigators are studying these and a wide range of other infectious diseases and working toward developing effective new preventive strategies, vaccines, and drugs. In recent years, bioterror—the use of bacteria, viruses, or toxins to harm people—has become a concern for public health officials, and VA hospitals take part in a national program called BioSense to help track and investigate suspected bioterror events.

