

**BIOMEDICINE****Microbes implicated in heart disease**

Last year, a research team offered some of the first molecular evidence to support the provocative idea that heart disease could stem from infections with bacteria that cause chlamydia. Now, the group suggests that other microbes might cause heart problems in the same way.

In the earlier work, Josef M. Penninger of the University of Toronto and his colleagues discovered that part of a protein made by chlamydia bacteria resembles a piece of a protein in human heart tissue. Injecting mice with the bacterial protein produces an immune reaction against their own hearts and blood vessels. While the illness seen in the animals isn't the same as atherosclerosis, Penninger suggested that an immune response against the microbes' heartlike protein might still explain the evidence linking chlamydia infections to human heart disease.

Yet many people with heart disease don't possess the antibodies that would indicate a past chlamydia infection. Penninger and colleagues now report in the August *NATURE MEDICINE* that bacteria, viruses, and other microbes make the protein bit shared by the human heart and chlamydia bacteria. The researchers isolated the protein bit from nine different microbes, and in five cases used it to stimulate a heart-directed immune attack in mice. "Chlamydia [bacteria] may just be the beginning of the story," suggests Penninger.

—J.T.