News
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****UT Southwestern researchers,
Arthritis Foundation present seminar

DALLAS--Researchers at The University of Texas Southwestern Medical Center at Dallas are searching for the causes of rheumatoid arthritis and the spondyloarthropathies (inflammation of the vertebrae). The Arthritis Foundation, North Texas Chapter and the Harold C. Simmons Arthritis Research Center will present a seminar outlining arthritis research progress from 7:30 to 10:00 p.m., Tuesday, April 5, in the A. W. Harris Faculty/Alumni Club in the Fred W. Florence Bioinformation Center at UT Southwestern.

Featured speakers are Dr. Fred McDuffie, Arthritis Foundation chairman; Dr. Peter Lipsky, Simmons Center director and chief of the Rheumatic Diseases Unit in the Department of Internal Medicine at UT Southwestern Medical School; and Devon Giacalone, president of Dallas Biomedical Corp.

UT Southwestern researchers will exhibit overviews of their research projects and discuss their findings from 7:30 to 8:00 p.m. in the faculty club.

These researchers are studying the causes of rheumatoid arthritis and the spondyloarthropathies, a Greek word meaning inflammation of the spinal joints. The school is the site of a federally funded Specialized Center of Research in rheumatoid arthritis and the Harold C. Simmons Arthritis Research Center, which is studying the spondyloarthropathies, specifically, ankylosing spondylitis.

The spondyloarthropathies affect more than two million Americans. They are a group of diseases that afflict the vertebrae as well as other joints. They also may affect other organs such as the skin and eyes. This group of diseases includes ankylosing spondylitis, Reiter's syndrome, psoriatic arthritis, enteropathic arthritis and post-dysenteric reactive arthritis.

Rheumatoid arthritis is a chronic inflammatory disease that usually affects the peripheral joints. Its primary target is the synovium or joint lining.

Although there are major differences between the two diseases, there are also similarities. "Both have a genetic component," Lipsky said. "And in both the immune system seems to be abnormal so that, rather than acting as the body's defense mechanism, it damages tissue. In ankylosing spondylitis there is an environmental trigger, likely a bacterium, that triggers the disease in genetically susceptible individuals. In rheumatoid arthritis, we really don't know what the environmental trigger is, but certain evidence suggests that it might be a virus."

Southwestern researchers studying rheumatoid arthritis include Dr. Peter Stastny, who is examining the nature of the genes that control rheumatoid factor, an auto-antibody which causes the immune system to attack the patient's own body.

Dr. Donald Capra is analyzing the genes that control rheumatoid factor production and production of other auto-antibodies in patients with rheumatoid arthritis.

Dr. Joel Taurog is involved in developing new animal models of the disease.

(More)

Dr. Allan Duby is studying whether the lymphocytes, or specialized white blood cells, that congregate in the synovial tissue are specific for a given antigen or foreign material.

Lipsky and other researchers are involved in a detailed analysis of the immunologic processes that drive rheumatoid arthritis.

Finally, a number of individuals in the rheumatology unit are analyzing the effects of drugs on immune functions of patients to see which treatments are best at various stages in the disease.

Research has already begun at the Simmons Center. Scientists are using a multifaceted research approach involving the latest techniques of immunology, genetics and cell and molecular biology to search for clues at each link in the spondyloarthropathies chain -- the genetic marker, the environmental trigger and the damaging immune response.

On the genetic level, Taurog has isolated, cloned and sequenced the HLA-B27 gene -- the genetic marker. He is now working to identify what pieces of the molecule predispose a person to reactive arthritis or ankylosing spondylitis by changing portions of the gene's sequence and seeing how the change alters its function.

Dr. Heather Stieglitz has approached the condition from a bacterial angle. She has been working to find the genetic sequences in bacterial DNA that act as environmental triggers. Lipsky said she has found some candidate genes that may encode the foreign materials that trigger the disease.

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NOTE TO EDITORS AND REPORTERS: You are invited to join Arthritis Foundation volunteers for cocktails and hors d'oeuvres from 6:00 to 7:30 p.m., Tuesday, April 5, on the fourth floor atrium of the Cecil H. and Ida Green Biomedical Research Building. Tours of the eighth floor, which will house the arthritis research labs, will also be conducted.

Distribution: AA, AB, AC, AC1, AF1, AG, AG1, AH, AI, AK, AK1, ADM, ADM1, SL