Journal of Immunology, Daniel F. Hanson, professor provides insights into fever that you get it.

Your mother starved you when you were ill, Peggy Lee crooned a famous song about it and the medical profession still doesn't know exactly why you get it.

Now, a Washington University immunologist provides insights into fever that you get it. Hanson, visiting professor of biology, shows that: (1) fever involves a wide temperature range, not just anything over 98.6 degrees Fahrenheit (F); (2) the initial rallying of our immune response to infection is temperature-dependent, not the actual work of the immune system; (3) the thermometer numbers aside, fever's useful purpose is to warm peripheral tissues and not core tissues.

Peripheral tissues, with their attendant lymph nodes and capillaries, comprise about half of the immune system and are housed in the outer two centimeters of the body just below the skin. Core tissues are deeper in the center of the body, and it is their temperature that is usually measured when we feel feverish.

“The true purpose of fever may be to warm the peripheral tissues, not the core,” Hanson says. “The traditional dividing line of 98.6 degrees F between normal and febrile temperatures isn't that simple. Body temperature is not just a single number on a thermometer, but an entire distribution of temperatures throughout the body. The distribution has one shape when you're healthy, and several other possible shapes when you're ill.”

In health, temperatures that permit the most efficient immune responses are restricted to certain portions of the immune system, whereas, during fever, those portions are expanded by enlarging the distribution of permissive temperatures. In effect, elevated temperatures temporarily increase the size and quickness of the immune system and the resultant immune response.

Once infection has a foothold in the body, hormones from defending cells called macrophages spill into the blood and travel all the way to the hypothalamus in the brain, signaling a rise in temperatures — fever — throughout the body. This warms the core of the body, as everyone knows, but it also warms the cooler peripheral tissues. According to Hanson, it is in the warming of these cooler portions that fever has its impact on the immune system.

Hanson made his in vitro observations by incubating mouse spleen cells with 10-degree variation while providing them with artificial stimuli similar to the bacteria or viruses that cause infection. The range of temperatures was 29 degrees Celsius (C) to 39 degrees C (from 84.2 degrees F to 102.2 degrees F), analyzed in two-degree C increments. The range was meant to simulate temperature range from normal skin on the low end up to a temperature clearly indicative of fever on the high end. He then observed differences in the resulting cell division and in the formation of new killer T-cells, the lymphocyte cells that defend us against many viruses, cancers and some bacteria. It is the first study to use mature cells to measure such a response as well as the first to test the immune system over such a wide range of temperatures. He also measured the effects of these same temperatures on the function of already formed T-cells, the lymphocyte cells that defend us.

Hot findings
Researchers say fever’s purpose is to warm peripheral, not core, tissues

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Assessing the risk

University opens nation's first center for psychiatric genetic counseling

Kahl named associate dean for student affairs

L eslie E. Kahl, M.D., has been named associate dean for student affairs at the School of Medicine. Kahl is replacing Patricia L. Cole, M.D., an assistant professor of psychiatry at the School of Medicine and director of the new center.

"Individuals and families affected by psychiatric illnesses often are unaware of the genetic connections to mental illness. Most are relieved by this kind of information since their risk is often lower than they think," Moldin says. "We can then offer people support to deal with the stress and challenge associated with having a family history of mental illness. Genetic counseling information is particularly useful to expectant parents who are concerned about risks to their unborn child.

"Any increasing amount of genetic research into mental illness has created a need for psychiatric genetic counseling," says Steven O. Moldin, Ph.D., assistant professor of psychiatry at the School of Medicine. "With the disease, the risk of passing it to a child is about 13 percent. When both parents have the disease, the risk rises to about 46 percent. Exact figures are computed following a detailed family medical history. The data gathered then is entered into a computer program that can assess risk of mental disorders. Moldin also will discuss the environmental and lifestyle factors that are known to play a role in the development of mental disorders.

"If you have a 10 percent risk of developing schizophrenia at some time in your life, those are pretty good odds. You only have one in 10 chance of developing the disorder," Moldin says. "But, we know that using drugs like PCP, amphetamines and cocaine can trigger a schizophrenia-like reaction in the brain, and that can be a factor in development of the disease. We would certainly warn genetically predisposed persons that their risk would rise dramatically if they used such substances."

— Steven O. Moldin

For more information about the Center for Psychiatric Genetic Counseling, call 454-3635.

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"In the past, families knew that their risk would rise dramtically if they used such substances."
**Atkinson mixes research, teaching, patient care**

John Atkinson, M.D., discusses the symptoms of lupus patient Claudia Castro with third-year medical students Alyson Buckner, left, and Dina Faulkner.

"It is gratifying to know that I have some kind of influence on people that know they are going to go out on their own and really make a difference."

"There aren't many individuals, even at this world-class medical center, who have attained his level of excellence and recognition in two of these major areas, let alone all three."

"Colleagues say it is a little more than that. I think it is his ability to get to the key issues by fine details. I think it is his ability to communicate it in a simple way that does not get obscured by fine details."
**Films**

**Thursday, Oct. 28**
6:30 and 9:30 p.m. Filmboard Foreign Series, "770 Years of Power," in Italian with English subtitles. Room 100 Brown Hall. Cost: $3. For 24-hour Filmboard hotline, call 935-5981.

**Friday, Oct. 29**
7 and 9:30 p.m. Filmboard Feature Series, "Three Days in the Country." Rental: $8, cost (outside of screening) $1.

**Midnight. Filmboard Midnight Series.** "Flash Gordon." (Also Oct. 30, same time, and Oct. 31 at 9:30 p.m.) Room 100 Brown Hall. Cost: $3.

**Monday, Nov. 1**
3 p.m. Russian Film, "Freeze — Die — Die Again." Free performance; all other performances $5 for general public, $3 for students. Room 149 Children's Place.

**Tuesday, Nov. 2**

**Wednesday, Nov. 3**
7 and 9:30 p.m. Filmboard Feature Series, "Bughead Cafe." (Also Oct. 30, same time, and Oct. 31 at 9:30 p.m.) Room 100 Brown Hall. Cost: $3.

**Friday, Nov. 5**
4 p.m. Science and medical seminars.
- "Primary Bilary Cirrhosis," Willis C Maddrey, executive officers in Medicine Lecture.
- "Primary Bilary Cirrhosis," Mark S. Sands, U of Pennsylvania School of Medicine, Section of Medical Genetics.
- "Primary Bilary Cirrhosis," Joel Price, prof., Dept. of Anatomy and Neurobiology. Room 423 McDonnell Medical Sciences Building.
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**Exhibitions**

"The Crossing of Borders and the Creation of Worlds: The Art of Howard Reisner," through Oct. 31. Gallery of Art, upper and lower galleries, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends.

"Recent Acquisitions: Rare Books and Manuscripts Added to Special Collections." Through December. Olin Library, Special Collections, Level Five. Hours: 8:30 a.m.-5 p.m. weekdays.


"African and American Artists in the Contemporary Era." Through Oct. 31. Rare Books and Manuscripts Reading Room, 413 Hurst Lounge. Hours: 9 a.m.-5 p.m. weekdays.

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Author, Gypsy activist to give Holocaust Memorial Lecture

Washington University Record / Oct. 28, 1993    5

Friday, Oct. 29

S. Macias, Ph.D., and Charles A. Hancock, professor in the Linguistics Department at the University of Texas at Austin, will participate in the Assembly Series, Jewish and Near Eastern Studies and Women’s Studies. Hancock will speak at 7:30 p.m. Wednesday, Nov. 3, in Graham Chapel. His lecture, “Gypsies, Germany and the Holocaust,” is sponsored by the Assembly Series and is free and open to the public.

Hancock, a Gypsy activist who is organizing the Memorial Holocaust system. He has been active on behalf of his ethnic community and in 1986 received the University of Texas Humanities Award in recognition of work on behalf of the American Jewish community. Hancock is a board member of the National Conference on Christians and Jews and a member of the American Jewish Committee. He is a member of the Advisory Council on Jewish Affairs in Haiti and the Institute on Race Relations in the Caribbean.

Hancock, who was born in Bratislava in 1950, received his doctorate from London University’s School of Oriental and African Studies. He has lived in the United States since 1972 when he began teaching at the University of Texas at Austin. In 1980 he was a visiting faculty member at the University of Michigan in Ann Arbor.

The lecture is sponsored by the Assembly Series, Jewish and Near Eastern Studies Program, Student Union and Fillet Foundation British Council. For more information, call 935-4620.

Women’s Soccer

Last Week: At A&M Classic: Washington 6, NYU 0

The women’s soccer team provided the first highlight of the year after a one-year absence, the Bears posted a 4-1 victory over Emory.

Women’s Volleyball

Last Week: At WU Classic: Washington 3, Brown 0

Washington women’s volleyball began the fall with 27 seconds remaining, the University of Chicago scored on a one-yard touch- down pass in the fourth quarter as the Bears beat Maryville with their first national Gypsy leaders. He has been active on behalf of his ethnic community and in 1986 received the University of Texas Humanities Award in recognition of work on behalf of the American Jewish community. Hancock is a board member of the National Conference on Christians and Jews and a member of the American Jewish Committee. He is a member of the Advisory Council on Jewish Affairs in Haiti and the Institute on Race Relations in the Caribbean.

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Women’s Soccer

Last Week: At VU Classic: Washington 3, Brown 0

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killer T-cells. These cells "nuzzle up to..." the existence of pathogens..." and are "essential facilitators, decision-makers and..." in "cross-pollination between the two institutions..."

Immunologist studies fever, hypothesizes purpose behind feeling lousy — from page 1

What, he poses, is the biological function of fever? "Some people claim they never get much of a fever, but I don't know anybody who hasn't..." Hanson says. He hypothesizes that malaria is one way of getting an animal to stay in one place, sheltered, where it can keep all of its..." and..." Those early, subclinical stages..." are not in itself a physiological exorcism, as..."

Tony Fitzpatrick

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Bob Jobbins, left, director of World Service News, Radio and Television at the British Broadcasting Corp. (BBC), and Gwyn Jones, senior editor of World Service News, answer the question "What's News?" in Simon's Auditorium. The veteran reporters explained how the BBC determines what news its 130 million listeners hear every day.
By receiving his bachelor's degree from Washington, Moore followed in the footsteps of his father, who had received a law degree from Washington, and his sister, Ruth Moxce Garbe, who received both her bachelor's and master's degrees from the University. Through the generosity of Moore and Garbe, a former member of the Board of Trustees, the first endowed chair in the School of Architecture was established at Washington. Moore also sponsored a second chair for a visiting professorship in architecture.

Thomas graduated from Washington with a degree in chemical engineering in 1978. He was named an associate professor at Brown University and served as a visiting professor at MIT. He has served as a consultant to several companies and has received several prestigious awards, including the American Chemical Society Award for Excellence in Teaching.

Yanow received his medical degree in 1941 from the University of Chicago. He has had a distinguished career in medicine and business. Medicine Shoppe International Inc. is a national franchiser of pharmacies with over 900 locations in the United States. Yanow and his wife, Elaine, life members of the Eliot Society, named the Medical Shoppe International Inc. in their honor.

Zorensky and his wife, Jeane, sponsors of several scholarships for the Students in the Olin School. Zorensky has served on the Board of Trustees and is a member of the Eliot Society.

V. Zorensky, a professor of neurology, gave an invited presentation on "Recycling Myths and Realities: In Life and in Death." His research focuses on recycling and waste management.

L. C. Quiroga, a professor of history, presented a paper titled "Problems of Threshold and Dynamic Range vs. Cochlear Location: Intra- and Intercelluar Particle Movement." His research involves the study of cochlear implant technology.

J. C. W. K. Skinner, a professor of psychology, presented a paper on "Profiles of The Old and Dynamic Audiences." His research focuses on the psychology of aging.

Nancy M. Parker, a 1990 graduate of Washington, has been named assistant in governmental relations for medical affairs, according to William A. Pick, M.D., executive vice chancellor for medical affairs. In addition, Parker participates in a public policy agenda, which involves research and monitoring federal, state and local regulatory and legislative initiatives concerning healthcare reform and biomedical research.

Litzelher to give inaugural lecture...
Administrative Coordinator

940102. Graduate School of Arts and Sciences. Requirements: High school graduate, B.A., one year college prep.

11 p.m. Fridays; 8:15 a.m.-6 p.m. Saturdays.

35 wpm. Will be required to lift 20-pound boxes.

Secretary III

940079. Central Stores. Requirements: High school graduate, B.A., one year college prep.

35 wpm. Will be required to lift 20-pound boxes.

Interviewers were asked to interview students.

CLS.

Medical Research Technician

SAC.

Washington, DC.

Secretary

940035-R. Medical Librarian. Schedule: Part-time, 20 hours per week, 8 a.m.-noon. Mondays-Fridays.


940032-R. Pediatrics. Schedule: Part-time, 5 hours per week. 8 a.m.-noon. Tuesdays.


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