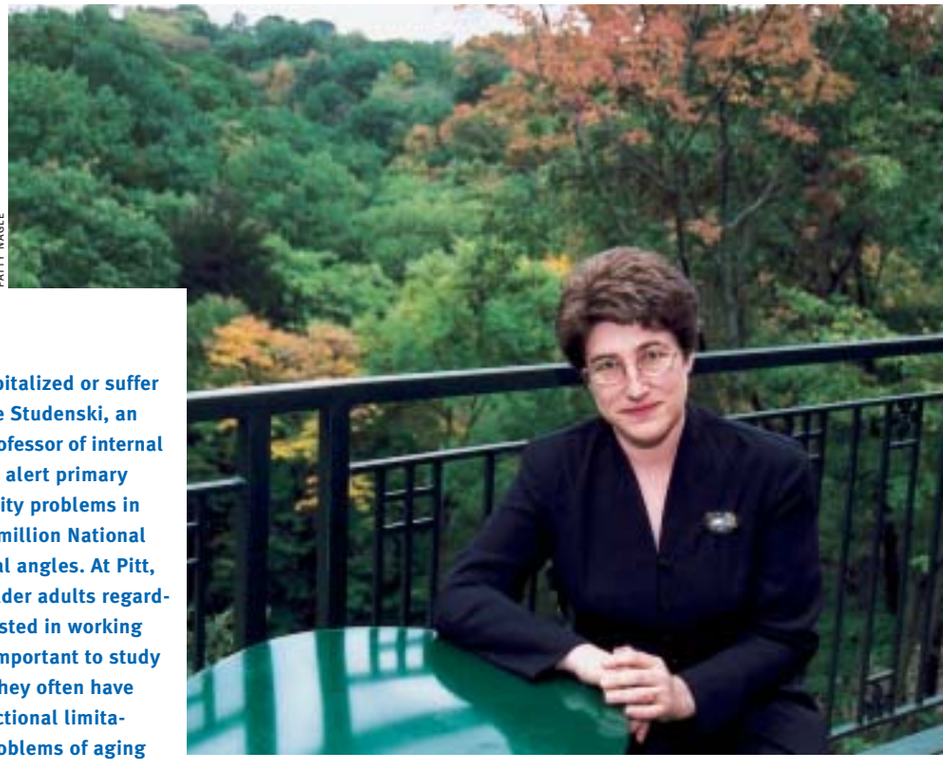


Devoted to noteworthy happenings at the medical school . . . To stay abreast of school news day by day, see www.health.pitt.edu

PATTY NAGLE



Studenski

Every Walk of Life

How fast elderly people walk can predict whether they will be hospitalized or suffer a decline in health or function, according to a new study. Stephanie Studenski, an MD who joined the University of Pittsburgh faculty in August as a professor of internal medicine, designed the speed-of-walking test as a low-tech way to alert primary care providers to patients at risk. A specialist in balance and mobility problems in older adults, Studenski also is the principal investigator on an $8 million National Institute on Aging grant—a study that examines stroke from several angles. At Pitt, she will investigate the perceptions of health care providers and older adults regarding problems with and changes to mobility. "I'm particularly interested in working with people in their late 70s, 80s, and 90s," says Studenski. It is important to study this older population, she believes, because they often have multiple health problems and functional limitations, and because most problems of aging are multifaceted. ***—Dottie Horn***

FOOTNOTE

They call themselves "Geeks with Palms," a group of med students known to peck away at their PDAs. Of course, they have a Web site, www.pittmed.pitt.edu/palm, offering advice for using PDAs in medicine. Don't miss the link to BS-o-Matic, which promises the user will "never again be at a loss for words." The jargon generator comes in three "aromas"—buzzwords for technology, sports, and the arts.

A FIRST FOR THE DOMINICAN REPUBLIC

During the first liver transplant in the Dominican Republic, a 9-month-old girl received part of her mother's liver. The transplant was performed in November by University of Pittsburgh surgeons who brought needed equipment, paid for their flights, and donated their time for the operation.

It was not the first Pitt transplant mission abroad. On one trip, to Sudan, a Pitt team transplanted five kidneys. In Peru, China, and El Salvador, the doctors performed living donor kidney and liver transplants. So far, in teams of two or three, Pitt's John Fung, Victor Garrido, Jorge Reyes, George Mazariegos, and former Pitt prof Velma Scantlebury have performed a total of 10 transplants abroad. Eight of those patients are alive today.

Unfortunately, shortly after her operation, the Dominican girl died from a lung infection. ***—Megan E. Sofilka***



CAMI MESA

A&Q
with Matt Vitale

When Matt Vitale was in junior high school in Anchorage, he encountered a moose on the road. He did what anyone would have done—he screamed and ran. The moose followed him for a "stressful" hundred yards. He managed to bypass other wildlife roadblocks and is now a first-year med student and one of 13 Dean's Merit Scholars for 2002. (Vitale also happened to score in the 98th percentile in three of the four MCAT sections, but shrugs off the accomplishment, pointing out, "We all took them, and we ended up here, and that's where we're at now.")

On Pittsburgh:
"I like it so much better than I thought I would. I'm in Squirrel Hill, and I can walk 15 minutes and be in Frick Park, and I love that. Pittsburgh has such a good sense of itself. Every neighborhood has some sort of identity or character."

On apprehension about medical school:
"The thing I was most afraid of, at first, was cutting up the cadaver. That was strange at first. Eventually, you're really just looking for that nerve or vessel or muscle or whatever. You don't stop to think, 'This was a guy.' You still have those days where you're like, 'This is a guy,' and it's kind of hard to process. I wonder what his last day was like."

On his research as an undergrad regarding issues of consent in vulnerable populations like Alzheimer's patients:
"I think these issues are hugely important. . . . [especially] in terms of whether or not people can really even give consent or not because [they're] scared and so concerned about [what's happening to them].

"Do people really understand what they're getting into? People get so scared about their health and how things are going. They really are so ready to take any piece of hope."

His question for the world:
"What is the best way to spend a Saturday afternoon in Pittsburgh? There has to be something slightly better than studying. I know that's a hard bar to set, but—"

—Interview by Meghan Holohan

Faculty Snapshots

Relaxin is a female hormone named for its function: Late in pregnancy, it loosens ligaments, helping to facilitate safe delivery of the fetus. As it turns out, it's also a vasodilator—able to reduce vasoconstrictor responses in arteries—according to a new study by **Jacqueline Novak**, assistant professor of obstetrics, gynecology, and reproductive sciences, and **Kirk Conrad**, a professor in the same department. The hormone's vasodilator properties might someday lead to clinical applications. "Relaxin could possibly help in hormone replacement therapy, if it doesn't have some of the negative side effects of estrogen," says Novak. "Relaxin doesn't have the feminizing qualities of estrogen, so perhaps it could be applicable in men." In the future, the scientists will look at whether the hormone can increase blood flow to the uterus. "This could have implications for diseases such as preeclampsia, where blood flow to the placenta is compromised," Novak says.

FOR MORE INFORMATION: ajpregu.physiology.org (Search August 2002.)



Novak and Conrad

Many stroke survivors suffer from a condition called spasticity, in which muscles in their upper extremities pull in one direction with a force that may be 10 or 20 times what one is able to generate to oppose it. As a result, too often "the wrist remains flexed, the fingers remain flexed, the elbow is bent, and the shoulder is close in to the side," says **Ross Zafonte**, professor and chair of the Department of Physical Medicine and Rehabilitation. In a study published August 8 in the *New England Journal of Medicine*, Zafonte and collaborators reported that intramuscular injections of botulinum toxin type A (Botox) reduced spasticity in the wrists and fingers of stroke survivors. Some participants reported less pain after the treatment, and some had fewer difficulties using their upper extremities to clean or dress themselves.

In inflammatory bowel disease (IBD) circles, **Miguel Regueiro** is often called the baby of the group. Although only 36, the assistant professor of medicine has a national reputation—he is invited to speak at about 75 continuing medical education programs and another 75 patient-oriented symposia each year. Despite frequent travel, he sees the bulk of the 1,500 to 2,000 patients who come to Pitt's IBD clinic each year. Regueiro is also a researcher, leading clinical trials and conducting epidemiological studies on IBD. He was invited to edit a special journal issue titled *Gastroenterology Clinics of North America: Inflammatory Bowel Disease*. Published in August 2002, the issue provides information for physicians caring for IBD patients. *—DH*



Regueiro

Tunnel Vision

BY CHUCK STARESINIC

Rick Kunkle (MD '71), associate medical director at Latrobe Area Hospital, was on his July vacation in Tennessee's Smoky Mountains when he got word about nine coal miners trapped underground in Somerset County. That was a late Wednesday night; he was on site the next morning.

His was a mighty quick trip through the Appalachians overnight. But Kunkle performs well in the dark.

Twenty years ago, as chair of the emergency department at Latrobe, Kunkle was troubled by the number of coal miners dying of injuries that would not have been fatal above ground. So he and a paramedic created the Special Medical Response Team (SMRT) to offer emergency care where the miners were most vulnerable. The team developed expertise where none had existed before. Eventually they took on mine fires as far away as Utah. Their efforts with the Federal Emergency Management Agency led to the development of the first urban search and rescue teams, of which there are now 28 in the nation. When news of the "Quecreek Nine" hit, SMRT had 20 years of experience from which to draw.

Alum Jim Dickson (MD '85) is SMRT's chief medical officer. He meticulously laid out a procedure for getting the Somerset miners out of the rescue cage, onto stretchers, and into decontamination and decompression. In case the miners were unconscious, Dickson devised a means of suspending a person in the rescue cage using half a backboard and a come-along. (Pitt's assistant dean for medical education, John Mahoney, MD '90, was not at Quecreek, but also works with SMRT.)

Much of the three days SMRT was on site was spent thinking through possible responses once the rescuers reached the miners: How do you treat a severely hypothermic patient who has spent three days under pressure in an air bubble? And what if the rescuers broke through to the miners but received no response?

Kunkle describes the moment they learned all nine men were alive as "pure euphoria." He praises everyone involved in the rescue—from the governor to those who brought food for the team: "God gives you a certain amount of talent, and he expects you to use it, and he expects you to maximize it."



QUECREEK/SOMERSET POOL

Two Pitt med alumni were key members of the medical response team called in to aid the Quecreek Nine.

It's a Postdoc Life for Us

There are definite perks to his job, notes Steve Wendell, a postdoc in molecular genetics and biochemistry: "You have minimal obligations as far as committee meetings and other peripheral tasks that tend to take you away from bench work. So, scientifically, it's probably the best stage of your whole life and very rewarding." The postdoctoral life has drawbacks as well, he points out. Finances and the long hours needed to build a scientific reputation loom large as concerns. And the emotional strain of an uncertain future makes some wonder about alternatives to highly competitive academic careers.

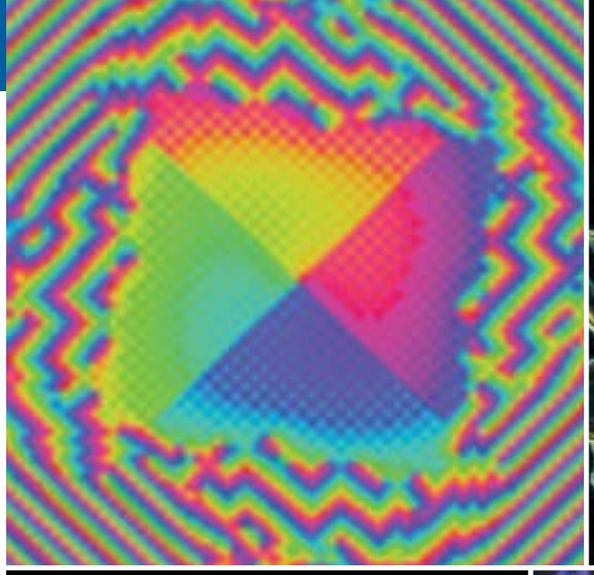
To build a support structure for themselves, Pitt postdocs have created the University of Pittsburgh Postdoctoral Association. (Pitt retains 1,100 postdocs in the health sciences schools alone, Wendell estimates.) Salary and benefits top their list of concerns. Organizers also want to ensure postdocs have access to career development programs, and they plan to create a handbook as well as a welcoming network for new postdocs, especially those coming from other countries. *—DH*

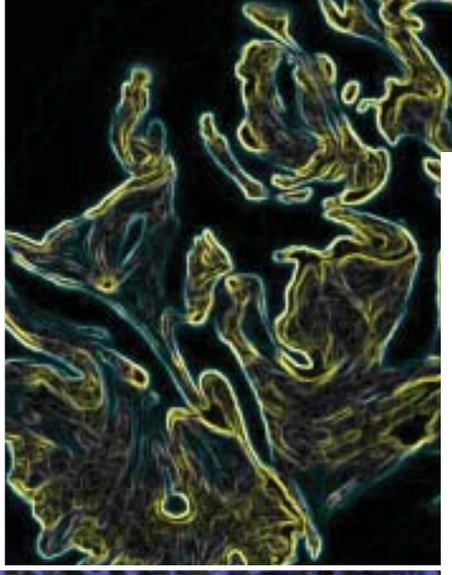
TWO PARTS DEWEY DECIMAL, ONE PART MOLECULAR BIO

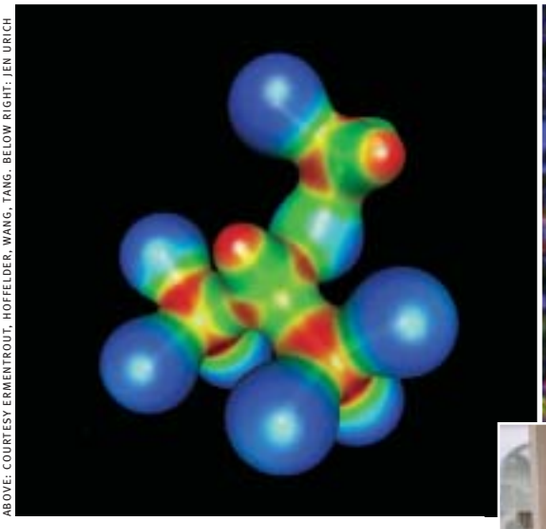
Let's say a researcher at Pitt comes across a protein she believes is involved in a disease. She can go to GeneLynx (www.genelynx.org), type in the name of the protein as the keyword, and instantly access a host of information—including the gene that codes for the protein and mutations identified in that gene.

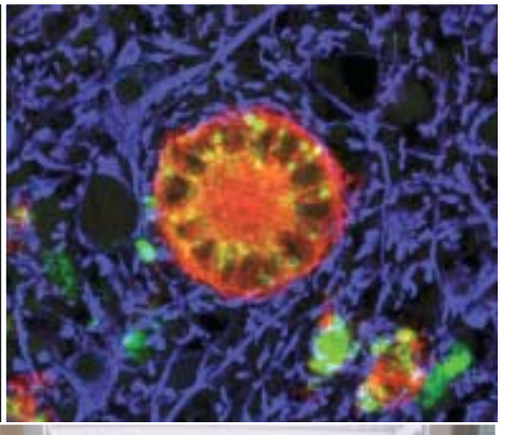
"GeneLynx is one-stop shopping for getting all the information for that particular protein," says Ansuman Chattopadhyay, a PhD in biochemistry who is the new information specialist in molecular biology and genetics at Falk Library.

The database is one of more than 100 related to biomedical research now on the Internet. It's Chattopadhyay's job to help Pitt scientists and students make sense of it all, to find and use the resources that best meet their needs. He teaches classes and offers individual consultations. Only three medical school libraries in the country retain a specialist like Chattopadhyay. *—MES*











ABOVE: COURTESY ERMENTROUT, HOFFELDER, WANG, TANG. BELOW RIGHT: JEN URICH

RIGHT: **The Science as Art exhibition at the Frick Fine Arts Building in September**
CLOCKWISE FROM TOP LEFT: **Work by Bard Ermentrout, Diane Hoffelder, Wanda Wang, and Pei Tang**

Cool Fusion

Standing by his poster—a sleek marketing display in a tasteful selection of blue and maroon hues—Timothy Mietzner looks slightly uncomfortable. The associate professor of molecular genetics and biochemistry's face brightens as he eases into a conversation about his "product" for managing bacterial and viral infections.

Mietzner was among those chosen by Pitt's Office of Technology Management to participate in Science 2002's Synergy in Science technology showcase held in September. He sheepishly admits he knew next to nothing about business until event organizers matched him with Philip Yeske of Fluorous Technologies, a chemical technology company. At the moment, Yeske, holding a drink (the festival's martini bar just opened) and handing out business cards, is engrossed in discourse with another man. Just a week ago, Yeske shook hands with Mietzner for the first time, and the two ended up spending hours brainstorming about how Mietzner could get his discovery on the market while still controlling its scientific applications. Their approach with the colorful poster seems to portend good things. As members of the local business and academic communities filter in, an interested crowd grows around Mietzner, who's now gesturing with ease.

Crowds gather again later at the festival's exhibition at the Frick Fine Arts Building, where science fused with art rather than business, and bold researchers offered scientific images and other "pieces" for display. Most of the work was tagged with painstaking description—e.g., the nuclear material from dead cancer cells stained with DAPI explained away ghost-like green circles floating in a sea of black. But cell biologist and professor Simon Watkins chose to offer why he'd selected an image of a dendritic cell: I love the way it sort of looks like a budding flower. *—MH*

Appointments



Kaminski

A lung typically suffers small, repeated injuries every day—a level of damage that most lungs can easily repair. In those with idiopathic pulmonary fibrosis (IPF), however, the repair mechanism malfunctions—leading to changes that impair the lung's oxygen processing capacity. **Naftali Kaminski**, an MD who recently arrived from Chaim Sheba Medical Center in Tel Hashomer, Israel, is slated to become the Simmons Professor of Pulmonary Research at the University of Pittsburgh. He uses microarrays and advanced computational tools to help describe how the normal repair mechanism goes awry. In a paper published last spring in the *Proceedings of the National Academy of Sciences,* Kaminski reported on a key regulator of IPF in both humans and mice. At Pitt, he will lead the Dorothy P. and Richard P. Simmons Center for Research and Education in Interstitial Lung Disease, overseeing both research and clinical initiatives.

Luis Ortiz will take on joint appointments in the Graduate School of Public Health (as director of the Division of Occupational and Environmental Medicine) and the School of Medicine (in the Division of Pulmonary, Allergy, and Critical Care Medicine). Ortiz studies pulmonary fibrosis that results from occupational exposure to particles or chemicals. His work at Tulane University shed light on the role of a protein, tumor necrosis factor, in regulating inflammation of the lung. Ortiz hopes that his studies of the basic biology of lung disease will lead to clinical protocols where none currently exist.

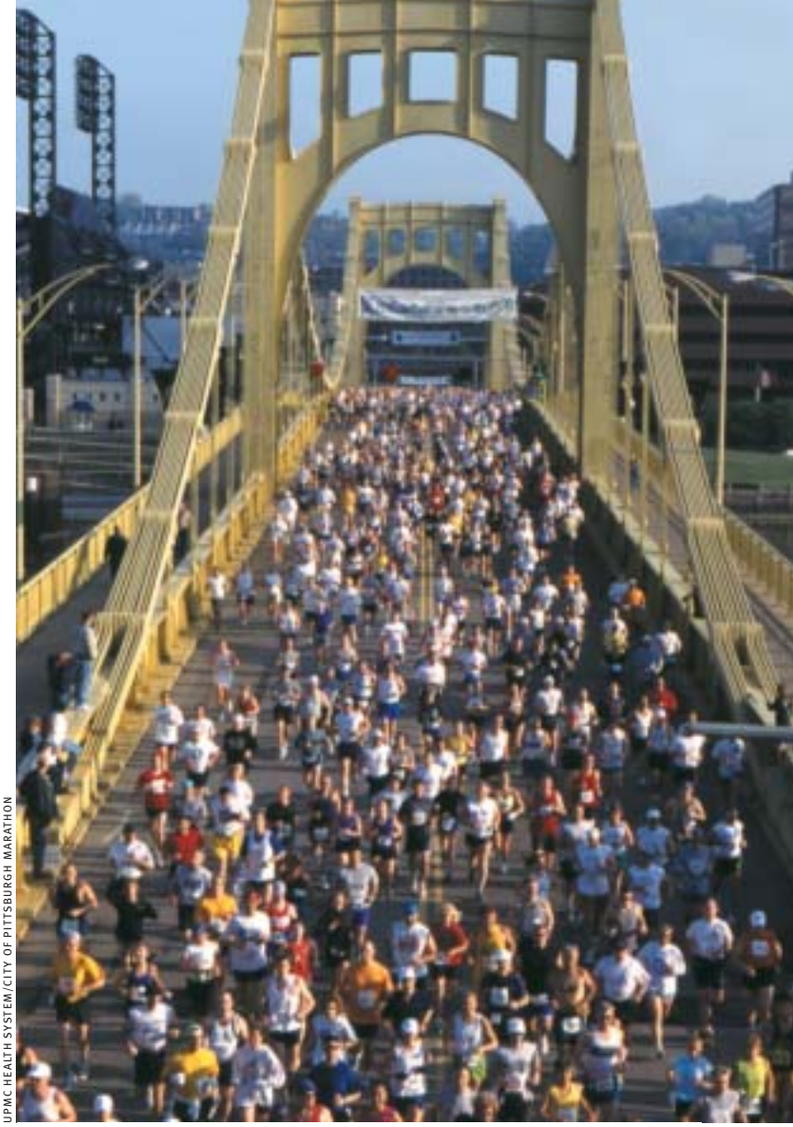
You'll find maybe only 200 board-certified pediatric rheumatologists in the United States. These are the doctors consulted on diseases such as juvenile rheumatoid arthritis and childhood lupus. Of those 200, only a handful conduct research, including standout **Raphael Hirsch**, who will head Pitt's new Division of Pediatric Rheumatology. In one recent and exciting study, Hirsch was able to both prevent and cure arthritis in mice by delivering therapeutic genes to joints. As division chief, Hirsch will recruit new faculty, develop a fellowship program, and expand the clinical program to better meet the needs of Pittsburgh's children. *—CS & DH*



Hirsch

ALUMNI CHECKUP: ELLEN ROH

BY MIKE RANSDELL



UPMC HEALTH SYSTEM/CITY OF PITTSBURGH MARATHON

Runners begin the 2001 marathon at the Roberto Clemente Bridge in downtown Pittsburgh.

Race day. The ritual begins. The number two is significant. Exactly two hours before the start, Ellen Roh, MD '02, grabs two bagels from the kitchen and retires to the bedroom in her Shadyside apartment for her morning meal. She plays a Madonna CD and prepares her mind and body for the challenge of running. She reads an inspirational letter that her college track coach wrote to her when she was an undergrad at Williams College in Williamstown, Massachusetts. It gives her confidence, strength. She then dresses, always sure to wear her lucky socks, and knot the laces of her Asics—twice.

When she arrives at the course she wanders off for some alone time. Must focus. Roh runs to warm her muscles and joints and free some nervous energy: two miles. As the start nears, she clears her mind and readies her body.

One such morning in May 1999, the Pittsburgh Marathon starter's gun cracked, and Roh was off—her 5 foot, 90-pound frame lurching forward among the swarm of pumping arms and legs. Three hours later—2:59:27 to be exact—she was the sixth woman to cross the finish line and 83rd runner overall. Not bad for her first marathon.

Now Roh, 26, has her sights set on bigger races—most notably the US Olympic Trials set for April 4, 2004, in St. Louis, a dream she harbors with guarded ambition.

"I'm trying to see my true potential [as a runner]," she says. "I don't want to be disappointed if I don't make it. I want to just see how far I can go."

In order to get invited to the trials, Roh needs to shave her time to 2:48:00 in a qualifying race. She's capable of that, says her coach, Joe Sarver: "I think she has a pretty good shot if she can stay healthy."

Only the fastest two marathoners at the trials will make the Olympic team.

It's now or never, according to Roh. She is postponing a residency in dermatology for two years to "pursue things that I might never get a chance to again. And running is one of them." While she trains, she is also studying medical informatics, thanks to a fellowship, under the guidance of Drazen Jukic, assistant professor of dermatology and pathology. Along with Jukic, she credits her major sponsor, Freddie Fu, chair of the Department of Orthopaedic Surgery, for making it all possible.

In the running world, Roh is either a late bloomer or a natural. She didn't start racing until her first year in college, and that was by accident. The cross-country coach saw her running during preseason conditioning for soccer and convinced her to switch sports. Roh narrowly missed qualifying for nationals in the 5K run as a freshman, then decided to rededicate herself to the sport by training harder.

"I remember thinking I didn't want that to happen again," she says.

It didn't. Her conditioning paid off as she qualified in the 5K the next three years and in the 10K her junior and senior years.

Maybe the time is right for her bid for the US Trials and the US Olympic Team. She does have two years to prepare.

FLASHBACK

Hippocrates (400 B.C.E.) on "The Sacred Disease," believed today to be epilepsy:

"And the disease called the Sacred arises from causes as the others, namely, those things which enter and quit the body, such as cold, the sun, and the winds, which are ever changing and are never at rest. And these things are divine, so that there is no necessity for making a distinction, and holding this disease to be more divine than the others, but all are divine, and all human."