UAB part of dream team to find HIV vaccine

NIAID commits $300 million to research effort of virtual center

BY JOY CARTER
Media Relations

UAB is one of four institutions that will make up a new virtual Center for HIV/AIDS Vaccine Immunology (CHAVI). The National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, announced it will award the consortium, led by Barton Haynes of Duke University, more than $300 million during the next seven years. The aim is to address key roadblocks to HIV vaccine development and to design, develop and test new HIV vaccine candidates.

In addition to Haynes, scientific leaders for the center are Professor George Shaw (Medicine), Howard Hughes Medical Institute Investigator; Drs. Norman Letvin and Joseph Sodroski of Harvard University; and Dr. Andrew McMichael of Oxford University, England. Leaders will direct the overall work of the center, including research done in their own labs and collaborative partnerships between the center and other institutions around the world.

“Despite the best efforts of scientists worldwide, an effective HIV vaccine still eludes us.”
—Professor George Shaw (Medicine)

Medical Institute Investigator; Drs. Norman Letvin and Joseph Sodroski of Harvard University; and Dr. Andrew McMichael of Oxford University, England. Leaders will direct the overall work of the center, including research done in their own labs and collaborative partnerships between the center and other institutions around the world.

See GENETIC DIVERSITY on page 12

Professors George Shaw and Beatrice Hahn (Medicine) will lead a group of 20 here at UAB in an international HIV vaccine research collaboration that includes three other universities.

Hospital among 100 Most Wired

Results show link between IT use and high-quality care

BY TRACY BISCHOFF
Media Relations

The UAB Health System is again one of the 100 most wired hospitals in the nation, marking its sixth year on the prestigious list. For the first time the annual survey results also show a connection between those hospitals considered the most technologically advanced and quality of health care.

UABHS was named by Hospitals and Health Networks, the journal of the American Hospital Association, as one of the 100 Most Wired Hospitals and Health Networks in its July 2005 issue.

UABHS has been included on the list six of the seven years HHN has been conducting the annual survey, making it the only hospital in Alabama to merit such a distinction.

Hospitals are surveyed on their use of Internet technologies for safety and quality, customer service, disaster readiness, business processes and workforce issues. Most Wired hospitals use computers to allow physicians to check or order patient tests and enter medication orders electronically. They also allow patients to perform billing functions via computer.

In addition, an analysis of this year’s Most Wired survey results shows, for the first time, that hospitals leading the way in information technology also have better patient outcomes, according to HHS.

Survey results show these hospitals and health systems use a wider array of IT

See UAB on page 3

New PT lab improves mobility

BY LORI HERRING
Reporter Staff

Quality of life after stroke, a subjective quantity, does have some objective methods of measurement. Movement is one of these, and a digitized physical-therapy lab at UAB is researching, measuring and helping to improve mobility in stroke victims and others with human-movement dysfunction.

The lab, which opened in January 2003, uses infrared cameras, lights, computers and force sensors to build a three-dimensional model of a person moving.

“This equipment allows us literally and figuratively to take a picture of what movement is like under controlled conditions,” said Assistant Professor Matthew Ford (Physical Therapy). “This equipment gives us

the opportunity to truly measure motion.”

How it works

The person whose movement is being measured is outfitted in 31 reflective markers, strategically positioned on bony landmarks around that person’s body so as to create a three-dimensional portrait of movement on a computer with the aid of light and cameras.

While the person moves, six cameras positioned around the lab take pictures at 120 frames per second. Strobes built into those cameras periodically flash so that light bounces off the reflective markers; also, the person walks down a 30-foot runway, under which is planted two force plates, which allow researchers to determine how much

See DIGITIZED on page 5

at a glance

Trickling down

UAB’s economic impact on Birmingham and Alabama exceeds the dollar value of the money the university spends. Those expenditures support other businesses throughout the community, generating additional payroll and capital expansions. UAB’s economic impact in 2004 was

$2.90 billion

according to the most recent economic impact study. The goal for 2005 is $2.79 billion.

Source: UAB Economic Impact Study (Dr. S.D. Lee (Business))
force the person uses when moving. This, in turn, allows determination of how the person’s muscles work when they move. Ford then is able to play connect-the-dots on the computer with the data gathered by the equipment, making a three-dimensional model of the person moving, which he can analyze next to a regular recording of the person moving.

The work he does in the lab now is mostly research-related; that is, the lab is not clinical; if a physician wants him to do an assessment he can but it’s not commonly requested.

Ford, whose clinical background is in stroke rehabilitation, said the lab can help determine how a stroke victim with a weak left side is compensating with various other parts of his body, for example.

“This equipment allows us to measure changes from moment to moment,” he said.

Currently, Ford is collaborating on a project with researchers at Children’s Hospital that looks at different interventions of strength training on spasticity in children; also, he’s working with the neurology department and the School of Medicine here to research Parkinson’s Disease.

Aside from the research, there also is a class, Analysis of Human Movement, that utilizes the lab—students learn about normal movement in the classroom, then make use of the lab’s high-tech equipment to get a more quantitative measure of what normal movement is.

The digitized physical-therapy lab is the only one of its kind on campus.

Assistant Professor Matthew Ford (Physical Therapy) views the data captured by the sensors on the body to measure motion in persons whose movement is impaired. Most of his work has been with stroke patients, but he is working with researchers at UAB and Children’s Hospital to investigate the effects of other conditions.

**Digitized motion analysis reveals how muscles work**

force the person uses when moving. This, in turn, allows determination of how the person’s muscles work when they move. Ford then is able to play connect-the-dots on the computer with the data gathered by the equipment, making a three-dimensional model of the person moving, which he can analyze next to a regular recording of the person moving.

The work he does in the lab now is mostly research-related; that is, the lab is not clinical; if a physician wants him to do an assessment he can but it’s not commonly requested.

Ford, whose clinical background is in stroke rehabilitation, said the lab can help determine how a stroke victim with a weak left side is compensating with various other parts of his body, for example.

“This equipment allows us to measure changes from moment to moment,” he said. Ford then is able to play connect-the-dots on the computer with the data gathered by the equipment, making a three-dimensional model of the person moving, which he can analyze next to a regular recording of the person moving.

The work he does in the lab now is mostly research-related; that is, the lab is not clinical; if a physician wants him to do an assessment he can but it’s not commonly requested.

Ford, whose clinical background is in stroke rehabilitation, said the lab can help determine how a stroke victim with a weak left side is compensating with various other parts of his body, for example.

“This equipment allows us to measure changes from moment to moment,” he said.

Currently, Ford is collaborating on a

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laura Hughes</td>
<td>(Medicine/Immunology-Rheumatology) Pharmacogenetics of Methotrexate in Rheumatoid Arthritis NIAID $107,043, 7/1/2005-6/30/2006</td>
</tr>
<tr>
<td>Francisco Robert</td>
<td>(Medicine/Hematology-Oncology) Randomized Phase III Study of Doca or Pemtrexed or without Cetuximab in Patients with Recurrent or Progressive Non-Small Cell Lung Cancer after Platinum-Based Therapy NCI $79,717, 6/28/2005-6/27/2011</td>
</tr>
<tr>
<td>Andries Steyn</td>
<td>(Microbiology) Role of M. Tuberculosis WhI3 Cystine Residues in Redox Regulation New York Community Trust $178,000, 7/1/2005-6/30/2007</td>
</tr>
</tbody>
</table>

**CONTINUATION**


David Allison UAB Obesity Training Program NIDDK $243,481, 7/1/2005-6/30/2006

Xinbin Chen The Transcriptional Activity of p53, a p53 Family Member National Cancer Institute $290,363, 7/1/2005-6/30/2006

Myra Crawford/ Toyia Russell The Alabama Tobacco-Free Families Program National Cancer Institute $78,376, 2/1/2005-10/31/2005


Myra Crawford/ Toyia Russell The Alabama Tobacco-Free Families Program National Cancer Institute $78,376, 2/1/2005-10/31/2005


Myra Crawford/ Toyia Russell The Alabama Tobacco-Free Families Program National Cancer Institute $78,376, 2/1/2005-10/31/2005


**COMPELRING CONTINUATION**


Herbert Cheung/ Wenji Dong (Biochemistry & Molecular Genetics) Regulatory Mechanisms in Cardiac

| Herbert Cheung/ Wenji Dong (Biochemistry & Molecular Genetics) Regulatory Mechanisms in Cardiac |