

CFAR CONNECTIONS

A Newsletter of the UAB CFAR

UAB AIDS RESEARCH CENTER EARNS \$7.5 MILLION GRANT RENEWAL

The University of Alabama at Birmingham (UAB) Center for AIDS Research (CFAR) has won a \$7.5 million grant to continue its work in the research, prevention and treatment of human virus (HIV) and acquired immunodeficiency syndrome (AIDS).

The renewal grant from the National Institutes of Health confirms UAB's place among an elite group of 20 CFARs nationwide in which doctors and scientists are engaged in basic, clinical, epidemiologic, behavioral and translational research to boost detection and treatment of HIV. HIV infects more than 30 million globally; during the past year more than 2 million worldwide died from AIDS, which is caused by the virus.

"This award enables us to keep moving forward into those areas, projects and techniques used to fight HIV and adapt to and explore projects that I consider leading-edge or uncharted," said Michael Saag, M.D., director of the UAB CFAR. "Our center has excelled in the basic science of HIV, and now we're doing the same in terms of patient care — advancing the message of HIV testing and prevention and taking our successes and care model into the developing world."

The \$7.5 million grant enables investigators to focus, expand and pursue their research goals and explore new ideas through multi-disciplinary collaboration and shared resources available to center researchers and HIV teams. It will support CFAR's 9 cores, or shared projects: administrative, biostatistics, virology, clinical, developmental, DNA sequencing, flow cytometry, international, , and behavioral science and prevention.

The center supports research on disease prevention and treatment in AIDS patients and also strengthens the capacity for HIV research in developing countries, said Saag, who is chair-elect of the Infectious Diseases Society of America's HIV Medicine Association.

Continued on Page 3

Contents



A Message from the CFAR
Director
Page 2



CFAR AIDS Malignancy
Pilot Awards
Page 3



Spotlight on the CFAR
Clinical Core
Page 4



CFAR 2009-2010
Seminar Series begins
September 15th 2009
Page 6

*Insights, updates and news for
HIV/AIDS research and clinical
investigators*

We are extremely pleased to announce the formal awarding of the successful competitive renewal of our CFAR! With the economic recession and tight budgets in Washington, it is becoming even more difficult to secure funding for projects.



This is especially true for Center grants, which create high hurdles for established Centers to justify continued support; such funding might be used instead to support new sites, thus letting the established sites use existing momentum going forward.

In the case of the UAB CFAR, we were in the first group of funded CFAR sites in 1987 and have received continuous funding since that time. With this competitive renewal, the reviewers were focused much more on what we planned to do over the next 5 years rather than what we had done over the previous 22 years. Through strategic planning, the input from a stellar external advisory committee, and lots of hard work by the CFAR leadership, we were able to pull together an outstanding application that merges the remarkable talents and focus of the 100+ CFAR members with the emerging questions in HIV research.

What is clear is that, despite the tremendous strides in HIV treatment, we still have a lot to do. Our prevention efforts are suboptimal, with roughly as many new cases of HIV occurring in 2008 as in 1990.

Prevention messages are heard but not heeded. Stigma still prevents many who are infected from letting others know of their status, leading many to believe that the epidemic doesn't touch anyone they know...and worse, that it can't affect them. Vaccine research has experienced some set-backs, but knowledge about the host-immune system interaction is creating some hope for a vaccine in the future.

And although HIV therapies are as good as they have ever been, we remain vigilant for unanticipated long-term side effects of medications.

In this issue of **Connections** we highlight two major activities of the CFAR: the Developmental Award Program and the Clinical Core. Providing Pilot Grants to investigators of promising projects allows the establishment of critical preliminary data that is used to support future grant applications. Without such data, these grants have little chance of success, in the current funding environment.

A Message from the Director Dr. Michael Saag

This particular Pilot Award program was performed in full partnership with the UAB Comprehensive Cancer Center. With the remarkable success of antiretroviral therapy, patients are not dying so much from AIDS-related complications, but rather are dying of other causes such as malignancies. Unlike the typical AIDS-defining cancers (such as Kaposi's Sarcoma and Non-Hodgkins Lymphoma), the cancer deaths in more recent times are due to more 'ordinary' cancers, such as lung, colon, kidney, and rectal carcinomas. As such, the National Cancer Institute has created a new Division to focus on the disproportionate number of malignancies occurring in the era of successful antiretroviral therapy. We are very grateful to Drs. Partridge and Bertram, and the members of the UAB Cancer Center for their tremendous collaborations in our effort to fight these emerging diseases.

One way that we know so much about the emerging trends in malignant disease is through the database created as part of the CFAR Clinical Core. As described in this issue, the Clinical Core consists of a Clinical Database, with data collected by a state-of-the-art Electronic Medical Record at point of care, linked to a Specimen Repository, wherein thousands of specimens are stored for easy retrieval by translational investigators. Through the Clinical Core, most of UAB's seminal discoveries in HIV Research were based, including the first description of the HIV quasispecies, the first use of viral load (HIV RNA), and the first description of the rapid replication of HIV in patients. A robust Clinical Trials Unit for HIV therapeutics, vaccine efficacy, and microbicide effectiveness is also a major part of the Clinical Core services. We are grateful for the outstanding leadership provided by Dr. Paul Goepfert in helping assure the success of the Clinical Core.

Finally, we are pleased to announce the addition of Mary Dougherty as our new Financial Administrator to the CFAR Administrative Core. Mary has years of service at UAB and we are very fortunate to have recruited someone of Mary's caliber to lead this effort.

Thanks to all of you the UAB Community who pull together everyday to make the UAB CFAR one of the best in the United States! I look forward to working with all of you in the years to come.

Center Renewal Award: Continued from Page 1

The UAB CFAR also is the lead institute on a nine-member CNICS consortium network of CFARs that combine secured data to track diagnosis and treatment outcomes, monitor quality-of-life measurements and link these data to a repository of clinical specimens.

“One of the areas we plan to study is how HIV-infected patients are living longer — almost a normal life span when they are on effective therapy — but their aging seems accelerated,” Saag said. “Infected patients are getting dementia or heart disease or having heart attacks and other problems sooner in the aging process than we normally find in non-infected patients. That is going to be a big focus of the CFAR heading forward — evaluating the complications of living with HIV for a long time.”

Another focus for the UAB CFAR is prevention and detection. When HIV is detected early, treatments are less expensive, more effective and help lower the probability of spreading the disease to others, Saag said.

About the UAB Center for AIDS Research

The UAB CFAR is one of the seven original centers established in 1988 by the federal government to stimulate research and advances in fighting AIDS and HIV. The UAB AIDS medical training program is consistently ranked among the nation's top 10 graduate programs by *U.S. News & World Report*. The UAB CFAR provides prevention and HIV patient care in its 1917 Clinic at UAB and in Africa through a partnership with the Center for Infectious Disease Research in Zambia.

Funding for Pilot Awards in HIV-Associated Malignancies Research

In collaborative efforts with the UAB Comprehensive Cancer Center, the UAB CFAR received a National Cancer Institute supplement in late 2008 to fund 2-4 pilot projects focused on HIV-Associated Malignancies (\$100,000 each). Multi-investigator research projects examining cancers that predominately affect, or have an increased incidence in HIV infected individuals and the basic mechanisms of HIV virus infection that leads to cancer were solicited for funding. The studies that were selected for funding will enhance collaborative efforts between members of the CFAR and the Comprehensive Cancer Center. Supplemental funds have been solicited for fiscal year 2009/2010 from the NCI's Office of HIV and AIDS Malignancy (OHAM) to fund additional awards this year.

Multi-Investigator Pilot Awards in AIDS Malignancies Research:

- *Identifying ligands on HPV-infected cells which are recognized by cytolytic gamma-delta T-Cells*
 - Drs. Richard Lopez/CCC & Louise Chow/CFAR
- *Integrated HIV Promotes Aberrant Macrophage Gene Expression to Catalyze Lymphoma*
 - Drs. Ety Benveniste/CCC & Casey Morrow/CFAR
- *Molecular mechanism of HIV targeting and assembly on the plasma membrane*
 - Drs. Jamil Saad/CFAR & Peter Prevelige/CCC



SPOTLIGHT ON THE CFAR CLINICAL CORE

In many ways, the establishment of the Clinical Core component of the UAB CFAR was unique. First, whereas most other Clinical Centers had established their AIDS-related clinical activities first, followed by the recruitment of basic science investigators, the UAB CFAR Clinical Core was built upon an established core of basic and clinical investigators who had already formed collaborative relationships. Second, the epidemic arrived later in Alabama, with the explosive number of cases seen early in the urban epicenters not arriving in Alabama until the end of the 1980's. This allowed a more proactive and carefully planned approach to the development of a clinical program that could incorporate the special needs of basic science and clinical investigators. The delayed impact of the epidemic also allowed UAB investigators to visit other clinical sites to observe their clinical operations and to anticipate the problems encountered there. Third, the UAB CFAR clinical investigators who established the Clinical Core had substantial experience in basic research and, therefore, were cognizant of the need to closely coordinate clinical investigation with bench investigation whenever possible. Moreover, they were intimately familiar with the programmatic directions of the UAB basic and clinical science investigator projects.

This interface between clinical investigation and bench research has been strengthened with the appointment of Paul Goepfert as CFAR Clinical Core Director. He has extensive experience in clinical and translational research and is well aware of the importance of well-characterized patient samples for this work. These qualifications, along with enthusiastic support from the institution, established the foundation of a highly effective, multi-disciplinary clinical science and shared facility program.

Specimen Repository

The Clinical core maintains and provides patient samples from a comprehensive and efficient Specimen Repository obtained from well-characterized patients for collaborative investigations involving multiple research disciplines. The Core provides samples to young and established UAB investigators. The Core also provides samples to other CFARs and outside investigators to aid scientific research. Contact the Clinical Core to have samples processed or obtain samples for research purposes. The forms to request core services can be found on the CFAR website under the Clinical Core link at www.uabcfar.org. These forms are necessary for investigators who need samples processed or to request samples for research purposes. More information regarding the policies for specimen/data collection, storage and access can be found on the CFAR website using the links: Clinical Core Policies / Procedures / Chargebacks and Database and Informatics Data Collection.

Types of specimens available include:

- Fresh blood
- Plasma
- Serum
- Peripheral blood mononuclear cells
- Mucosal secretions
- Mucosal biopsies
- Lymph node biopsies
- Skin biopsies

The Core also provides plasmapheresis and leukopheresis to CFAR members and network organizations in order to provide a greater volume of samples from a few patients with unique characteristics (e.g. long term nonprogressors).

Clinical Database

The evolution of the original database project into a 'home-grown', fully-functional Electronic Medical Record (EMR) is perhaps one of the most innovative research developments by any CFAR Clinical Core, and this project fostered the transition from interval cohort to clinical cohort with unparalleled data integrity. The initial database was populated with data extracted daily from paper charts by trained technicians. The charts were designed with forms filled in by physician and nurse practitioners in a standardized fashion and were returned to Medical Records at the end of each day. Within 24 hours, all new data was transcribed into the database and the charts re-filed. Each patient record was assigned a repository, or REPO, number that corresponded to all stored specimens on that patient, thereby facilitating translational research. In the mid-1990s, the database team desired more 'granular' data that would better enable 'outcomes' research in the HAART era. Over 200 existing EMR systems were evaluated and none could provide the dual missions of both patient care and research; rather all commercially available EMRs systems served *either* the role of clinical care without capturing discrete, analyzable data elements *or* the few research-based EMRs were not user-friendly and were rejected by clinicians. In 2000, the UAB CFAR began development of its own EMR system that allows BOTH patient care and research in a seamless interface. Launched in August 2004, this system has evolved into a highly functional EMR system that collects key clinical data as discreet, fully analyzable elements, all entered by clinician providers at point of care in real time. A unique feature of the UAB CFAR EMR is that ALL key data elements are 100% quality assured on a daily basis. This means that any data analysis can be conducted immediately without the need for further chart review or data clean-up.

The Clinical Core provides a Computerized Database and Informatics Service to store and access complex, interactive data to assist with study design and to conduct appropriate data analysis. For more info on the database, please visit the UAB 1917 Clinic Cohort website at www.uab1917cliniccohort.org.

The core works with young and established UAB investigators and well as outside researchers to provide data queries and identification of potential research subjects who meet clinical or scientific criteria for retrospective or prospective translational research studies. The Clinical core will collaborate with other CFARs and institutions in the form of computerized informatics and biostatistics expertise to assist with launching their own databases.

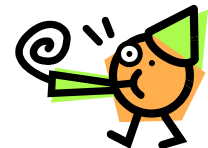
For more information on core services, visit the CFAR website at: www.uabcfar.org, and follow the links to the Clinical Core Services.

Investigators seeking additional assistance should contact the Core Leadership:

Dr. Paul Goepfert paulg@uab.edu

Dr. Michael Mugavero mmugavero@uab.edu

Dr. James Willig jwillig@uab.edu



The CFAR is happy to welcome our new financial administrator, **Mary Dougherty**. After > 15 years of service, Tina Stone has retired to spend more time with her family. Mary is not new to UAB, she has worked in the past with Susan Allen, the UAB Vaccine Unit, and most recently as a Program Coordinator in the ID Division, where she totally revamped and reorganized the Ryan White grants program. Mary comes with tremendous experience with UAB and BA systems on campus and will receive her Bachelor's degree in Accounting by the end of the summer. Mary may be reached by email at mdougher@uab.edu or at 4-0342 for any CFAR financial matters. Please join us in welcoming Mary to the CFAR!

Novel Strategies to Reduce Visceral Fat in HIV Lipodystrophy-The Role of Growth Hormone”

Presented by

Steven K. Grinspoon, MD

**Professor of Medicine, Harvard Medical School
Boston, MA**

September 15, 2009

12:00 Noon

LRC, Room 114

Co-Sponsored by Clinical Nutrition Research Center, the Department of Nutrition Sciences and the Center for Aids Research (CFAR)

THE CFAR website (www.uabcfar.org/announcements) has been updated to include a link for CFAR-related news. Press releases announcing newly published studies from **Dr. Beatrice Hahn** and her colleagues in *Nature* (23 July 2009 issue) and a Wall Street Journal article highlighting efforts by **Dr. Michael Saag** and the UAB 1917 Clinic to reach underserved populations in Alabama are posted there.