

**THE INSTITUTE OF HUMAN VIROLOGY (IHV) at the University of Maryland was established to create and develop a world-class center of excellence focusing on chronic viral diseases and virally linked cancers. The IHV is dedicated to discovery, research, treatment, and prevention of these diseases and cancers. Its unique structure seeks to connect cohesive, multidisciplinary research and clinical programs so that new treatments are streamlined from discovery to patient. The IHV serves patients locally and the scientific community globally.**

## **The Case for Grassroots AIDS Vaccine Advocacy** by Huntly Collins, AIDS Vaccine Advocacy Coalition

The AIDS vaccine enterprise is at an important juncture. A new generation of promising AIDS vaccine candidates, aimed at stimulating a cellular immune response to the virus, is moving into Phase 1 clinical trials around the globe. Scientists, led by the International AIDS Vaccine Initiative and the federal government's Dale and Betty Bumpers Vaccine Research Center, are working on a rational design for vaccines that might also elicit an effective antibody response to the virus. And the Bill & Melinda Gates Foundation has laid out a possible new paradigm for organizing AIDS vaccine research, with research centers dedicated to particular scientific challenges at the heart of the plan.

For certain, there is a long road ahead in the quest for a vaccine that can control or end the global AIDS epidemic. Although the research effort in both the public and private sectors has expanded, it still does not match the magnitude of the global need for an AIDS vaccine. But at least the right scientific questions are being asked and rational approaches are being taken to address them.

As AIDS vaccine research moves into a new phase, community-based AIDS vaccine advocates will play an increasingly important role, both in the United States and abroad. As C.P. Snow, the British author and physicist famously argued in his 1959 Rede lecture, "The Two Cultures," science can't go it alone. If it is to succeed in solving the world's most important problems, it must be informed by other disciplines. In the case of an AIDS vaccine, good politics as well as good science will be required to make it happen.

What is the role for community-based AIDS vaccine advocates?

Informed advocates at the grassroots level can play an important watchdog role over the scientific enterprise, making sure it is honest, open, tackling

the most significant scientific challenges, accountable to ordinary citizens, mindful of their safety and responding to the changing dynamics of the pandemic, including the tremendous growth of HIV among poor women of color around the world. Without such accountability, science loses its moral authority and its benefits are lost to society.

AIDS vaccine advocates can also keep the heat on governments, particularly those in the United States and other industrialized countries, to invest in the long-term payoffs of AIDS vaccine research. At a time when the threat posed by terrorism has rattled the walls of Congress, vaccine advocates can help put budget priorities into perspective by pointing out the horrendous loss of life due to HIV. The AIDS virus infects *four times* as many people *in a single day* as those killed in the 2001 terrorist attack on the World Trade Center. Despite the advances made in antiretroviral therapy, HIV infection still cannot be cured – and may never be.

Advocates can also play an important role in lobbying for federal legislation that will provide economic incentives to get the pharmaceutical industry and biotech companies more involved in the quest for an AIDS vaccine. Among the carrots that need to be offered are advance purchase agreements by government, direct government funding of vaccine manufacturing plants, and non-negligent liability protection coupled with a compensation system for consumers. In exchange, industry must commit to making an AIDS vaccine available at prices that are affordable to poor countries where the epidemic has claimed the most lives.

As AIDS vaccine trials roll out in South Africa, Malawi, Botswana, India and other countries over the next few years, AIDS vaccine advocates at the grassroots level can be powerful allies of medical

professionals. Community advocates can help scientists address questions about Western medicine. They can help educate and inform volunteers who are willing to roll up their sleeves and take part in trials. And they can serve on community advisory boards to insure that the rights of trial participants are protected and that no one is inoculated without quality risk-reduction counseling or their fully informed consent.

Of course, in order to benefit from what community advocates have to offer, the scientific enterprise must invite them to the table. That is exactly what is now happening in Thailand as the country prepares to test Aventis Pasteur's canarypox-vectored AIDS vaccine followed by a boost of VaxGen's AIDSVAX B/E among 16,000 uninfected Thai volunteers. The trial, which is expected to begin by year's end, will be the largest for any experimental AIDS vaccine to date. And whether the vaccine proves effective or not in the double-blind, placebo controlled experiment, the Thai government and the U.S. Army, which are co-sponsoring the trial, have taken major steps to involve Thai NGOs and community representatives in planning the huge undertaking. As the trial advances over the next five years, all eyes will be on the sponsors to ensure that community involvement remains a vital part of the process and not mere window-dressing.



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a center of



**UMBI**  
University of Maryland  
Bioscience Institute



# Discovery

The Newsletter of  
the Institute of  
Human Virology

FROM LABORATORY TO CLINIC



**ROBERT C. GALLO, M.D.**  
Director of the Institute

## Message From The Director

International AIDS Society Meeting: *Opening Remarks*

*Following is a modified version of Dr. Robert Gallo's opening remarks at the "Plenary Session Extraordinaire" of the International AIDS Society Meeting on Pathogenesis and Treatment held July 14 at the Palais de Congress, Paris, France. The session featured opening remarks by Drs. Gallo and Luc Montagnier with major overviews by Dr. Anthony Fauci, Director, NIAID, NIH and Mr. Nelson Mandela.*

Thank you President Lange and also thanks to Dr. Kazatchkine and Mr. Peter Hale for the invitation to be with you at this international AIDS Society meeting. Before my introduction of our first special lecturer I have time for some comments looking back on the early history of HIV research and attempting to draw a few lessons from them.

Just before we knew of AIDS, that is, in the late 1970s, a dramatic shift in thinking occurred in the scientific community which fostered three biases.

The first bias was that viruses, which were once suspected as possible causes of some human cancers, never caused human cancer, evidenced by closure of the NIH's Virus Cancer Program and by conclusions made at various scientific meetings.

The second bias was that retroviruses, which caused many diseases in animals and were long sought for in humans, in fact did not exist in humans. It was even stated that human retroviruses could not exist!

The third and most troubling bias was that microbes causing serious epidemic diseases were no longer a problem for the industrial world. This was evidenced by closure of some Departments of Microbiology in the U.S., a threat of reduction or closure of the Centers for Disease Control in the U.S., and by books from Europe in agree-

ment with this thinking. Microbes were simply to be the "play things" for molecular biologists.

Amazingly, and ironically, within a few years, that is by the early 1980s, these biases were shattered.

Viruses were identified as being involved in the cause of about 20 percent of human cancers; we discovered human retroviruses (HTLVs) that cause some human leukemias and neurological disease, and the greatest pandemic in history, AIDS, emerged and was ultimately shown to be caused by another human retrovirus.

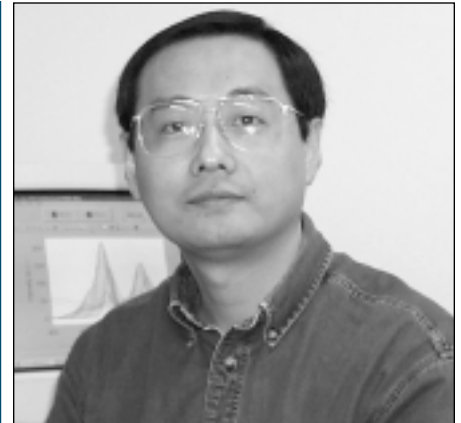
The discovery of HIV was not made in a vacuum. It was preceded by more than 13 years of basic science aimed at finding human retroviruses, particularly work of the 1970s, that paved the way.

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**Never again should we leave to chance our capacity to solve a new emerging plague, and never again should we leave out our brothers in the developing world.**

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Firstly, following the discovery of reverse transcriptase by Temin and Baltimore, by the subsequent development of sensitive and specific assays for a human reverse transcriptase which could then be used as a footprint of a human retrovirus by Baltimore's and my group. Secondly, by the development of techniques to grow primary human T cells in laboratory cell culture for the first time, notably by the discovery of what we called T-cell growth factor later renamed interleukin-2 or IL-2. These techniques were key to all human



**Dr. Wuyuan Lu, Assistant Professor**

## Enhancing Natural Immunity Using Human Defensins

For Dr. Wuyuan Lu, Assistant Professor in the Basic Science Division, good things do come in small packages—proteins called defensins. Small, positively charged proteins, with high numbers of the sulfur-containing amino acid cysteine, defensins constitute part of the body's natural immunity against infection. They possess antimicrobial, antiviral, and chemotactic (cell attracting) activities. Lu is focusing on human  $\alpha$ - and  $\beta$ -defensins, found primarily in leukocytes and epithelial cells.

Defensins possess anti-HIV properties, a fact Lu hopes to exploit and improve on. "Our ultimate goal is to develop defensin-derived molecules with enhanced function, for antiviral therapy," he says. The death of prior

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# Peptides and Patents

## Opening Remarks, *continued from page 1*

retrovirus discoveries.

Unlike as was recently rather naively reported, the AIDS virus was not discovered by a simple electron micrograph of virus particles. Obviously, normal people carry viruses and immune deficient people many more. Critically, first came the culturing of the virus and showing it was unique by Luc Montagnier and co-workers, and second, by the clear demonstration that the new retrovirus found in 1983 was the cause of AIDS. In other words to call those particles the AIDS virus or human immunodeficiency virus, took another year of intense and solid basic research which was only reported in early 1984. It was at that point that the field moved and the cause of AIDS established.

Further, it is notable that no individual or group was really responsible for finding the cause and developing a blood test, etc. My group and Luc Montagnier's group simply got involved from interest and perhaps even by chance.

What are the lessons from this history?

The first is that scientists should never believe they have conquered nature and to realize that microbes will always be with us. Second, this could include any class of virus. None can be excluded. The third lesson is that detecting a new virus is not the same as demonstrating it as the cause of a disease; showing a cause takes preparation, technology, and ideas. For the future I believe this can be best fulfilled by the creation of Centers of Excellence in Virology throughout the world.

Drawing from our experiences with HIV, these centers need to have a deep basic

research focus and collectively cover all known classes of viruses. Each center should be responsible for new epidemic disease, especially the center with expertise that best fits the new problem. Each center in turn should be intimately related to a few centers in a few developing nations.

Finally, in order to respond promptly and in order to be sure adequate technology is available, the financial support should (at least in part) come from outside the funding of the traditional academic models. In short, never again should we leave to chance our capacity to solve a new emerging plague, and never again should we leave out our brothers in the developing world. This is why we must have such centers.

Though it will be great to have massive funding for anti-HIV drugs for developing nations, this must also come with massive infrastructure improvements, or we may create new epidemics of HIV drug resistant mutants. New drugs will continuously be needed; and they are coming. A preventive vaccine in my view is possible. Medical science can and will solve the problem. I think there is now much more, not less, reasons for hope than only a few years ago.

## IHV Grants Update

**F**ourteen research grants totaling \$6.8 million were awarded to the IHV this summer. Though not the largest grants to the Institute, a significant portion of the new funding represents success among a talented group of young and first-time basic science faculty who have "broken into" the highly competitive NIH peer review process.

More than 75% of the funding is via the National Institutes of Health.

Clinical investigator David Oldach, M.D., and Gallo, M.D will power a newly funded investigation into the testing of the Toshiba eChip™ detection system for molecular genomic studies of HIV and HCV pathogenesis and a second collaboration led by Oldach and Dr. Alfredo Garzino-Demo will address important questions regarding the observation that HIV patients who are co-infected with Hepatitis G virus have dramatically enhanced survival.

Two awards supplement one of the largest projects in the IHV, AIDS/HIV research and prevention in Nigeria. An additional \$365,000 was awarded by the Centers for Disease Control and Prevent to expand the IHV's Nigerian Technical Assistance Project, with supplements covering training for health care workers and clinical and laboratory quality assurance and control programs (Blattner/Abimiku). Another CDC contract funds the collection of a seroconversion panel of subtype A/G HIV serum specimens that will allow the validation of existing and new serologic assays for use in West Africa (Blattner/Abimiku).

## Human Defensins, *continued from page 1*

research on defensins likely stems from "the incredible difficulty getting them to fold correctly, in solution," Lu feels. Indeed, this was his most formidable obstacle; however, his laboratory colleagues and he were up to the challenge.

Lu and his associates first had to develop methods for obtaining high yields of pure defensins. In a cell,  $\alpha$ -defensins result from cleavage of a protein fragment (the pro region) from larger precursor molecules (pro-defensins). Lu discovered that the pro region functions to prevent defensins from aggregating, thus enabling proper folding. "Through repeated trial and error we devised methods to enable correct folding of  $\alpha$ -defensins in solution, without the pro region. Finally, we could work with them," says Lu. "We now possess the most comprehensive collection of  $\alpha$ -defensins," he states.

Currently, Lu's laboratory is exploring three main research avenues with  $\alpha$ -defensins. First, they are discerning the mechanism of action of  $\alpha$ -defensins. Do multiple defensin molecules aggregate to form a "pore" in a microbe that then destroys its integrity, as previously suggested? Second, they will identify the amino acids in  $\alpha$ -defensins that are essential for their antimicrobial, chemotactic, and antiviral functions. Last, they will study how the pro regions may affect these functions.

"Our preliminary data suggest an  $\alpha$ -defensin dimer (2 molecules) is not a mediator," says Lu. "We have created an  $\alpha$ -defensin lacking the ability to form a dimer, and a permanent dimer (by tethering two molecules), and we saw no significant differences in antimicrobial or anti-HIV activities between them and native  $\alpha$ -defensin," he states.

For  $\beta$ -defensins, Lu has been investigating the role of disulfide bonds (fixed connections between sulfur atoms in different cysteines) in influencing the structure and function of human  $\beta$ -defensins. After either rearranging or blocking cysteine pairs, he assayed for antimicrobial activity.

"We could alter or block native disulfide bonds and still retain antimicrobial activity," states Lu. His finding seems to suggest that pore formation by  $\beta$ -defensins, if occurring at all, may not be a functionally critical step in bacterial killing. "Our future plans are to obtain results for all possible disulfide bond combinations," he adds. With knowledge of defensin structure and function, nature may be improved upon by leaps and bounds.

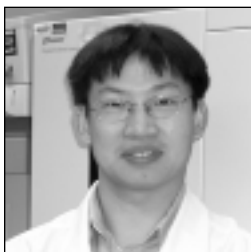
**Discovery** is a quarterly newsletter of the Institute of Human Virology. Copies are available upon request. Please send comments to:

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## The Ingredients for HIV Vaccines: Sugar, Protein, and Some Novel Recipes



**Dr. Lai-Xi Wang,**  
Assistant Professor

For carbohydrate biochemist Lai-Xi Wang, Assistant Professor in the Basic Science Division, the road to an HIV vaccine is lined with trees adorned with carbohydrate branches and sugar residues. Wang is betting on the innate ability of these often neglected molecules to fine-tune the function of proteins to which they are added.

Wang has been designing and characterizing two types of HIV vaccines: peptide-based and carbohydrate-based. Both types will ultimately use the structure of simple sugars to reproducibly create the three-dimensionally fixed, biosynthetic molecules he envisions.

His peptide-based vaccine is simple, yet ingenious. Four identical pieces of an HIV coat protein—gp41, involved in fusing HIV with its host cell—are affixed to a galactose molecule. The configuration of galactose dictates the orientations and interactions between

these protein pieces, producing a stable, molecular mimic of the fleeting configuration of gp41 during HIV-host fusion—a so-called “transition state.” “The key,” says Wang, “was to design a structure that could accurately reproduce the gp41 transition state, which exists as a gp41 trimer (three associated proteins).”

After validating this success, Wang raised antibodies against his transition state mimic, rationalizing that using them “could then block HIV fusion and subsequent infection.” To date, his peptide has raised high levels of peptide-specific antibodies in mice and Rhesus monkeys, and his mouse antibodies can neutralize SHIV (a chimeric virus of HIV and the relative of HIV in monkeys known as SIV). “The next step is to see whether Rhesus antibodies can neutralize HIV,” Wang states, adding “and if that works we can challenge monkeys with SHIV and ask whether the peptide vaccine protects them.”

Wang also is working on his “carbohydrate vaccine.” Here, he has attached four sugar chains containing large numbers of the sugar mannose to a single galactose sugar. The number and sugar content of the chains were based

on his discovery that this precise combination is the best mimic of native sugar chains found clustered together on another HIV coat protein, gp120. “These high-mannose sugar chains are essential for HIV binding and recognition,” says Wang.

He discovered the exact combination first by testing multiple mannose-containing chains found on gp120 for their ability to bind to an unusual human antibody, called 2G12. “2G12 recognizes a part of gp120 that consists solely of sugar components,” Wang notes, “and is able to broadly neutralize HIV,” thereby preventing it from infecting host cells. Sugar chains that bound 2G12 the best were sought, and one chain, called man-9, was the most efficient.

He deduced the number of chains required. By varying the number of chains attached to his single galactose, his preliminary results showed that four man-9 chains provided the optimal recognition “cluster.” “Now that we have the cluster structure,” Wang says, “if we can make this cluster immunogenic, we are likely to be broadly active [against HIV].”

## Soil Microbe Helps Researchers Discover Compound that Blocks Infection

In the Clinical Division, researcher Alonso Heredia and his dedicated laboratory colleagues are at their prospects for developing another weapon against HIV—rapamycin. Isolated decades ago from a soil microorganism on Easter Island, and FDA-approved for immunosuppression in kidney transplantation, rapamycin has recently been proven, by Heredia and associates, to strongly reduce HIV infection of targeted lymphocytes and macrophages. Its potential for therapy and prevention of HIV/AIDS is impressive.

Heredia and associates were working initially on compounds that stalled immune cells during their growth cycle at a “resting stage” (G1), during which they make proteins in preparation for DNA synthesis. Building on work by Robert Gallo using hydroxyurea, they showed that these compounds also substantially enhanced secretion of immunomodulating chemicals called chemokines (CKs). Since specific CKs bind to cell surface receptors that are also used as co-receptors during HIV infection, enhanced CK concentrations are viewed as competitors with HIV that could reduce or eliminate infection.

One such CK receptor/HIV co-receptor is

CCR5, which binds HIV strains isolated predominantly from newly infected persons, the R5 strains. Without CCR5, HIV cannot infect and replicate—a fact borne out by “individuals lacking expression of functional CCR5 on their cells, who are healthy and generally resistant to HIV,” says Heredia.

Rapamycin was shown to block G1 and increase CK production, and also block intracellular signaling via the Interleukin-2 (IL-2) receptor—an event required for expression of CCR5 on the cell surface. “The key idea was to see if rapamycin could eliminate or reduce CCR5 expression on the cell surface,” Heredia notes. “So, we decided to reproduce a natural phenotype, where people still remain healthy, by conducting an ‘experiment of nature,’” he says. Would rapamycin allow HIV-targeted cells to escape attack, by “removing” CCR5?

To their joy, rapamycin reduced the expression of CCR5, which, in turn, reduced infection and replication of R5-using HIV in T cells (lymphocytes) and macrophages. Doses to elicit these responses were 100- to 1000-fold lower than doses for kidney transplants and were associated with minimal toxicity. “Rapamycin specifically prevents transcription (synthesis of



**Dr. Alonso Heredia,**  
Research Associate

RNA from DNA) of CCR5,” says Heredia. In addition, when used in conjunction with another drug that is a known CCR5 antagonist (blocks CCR5 receptor use), HIV inhibition was even higher.

Heredia feels their results have “major implications for use of rapamycin, alone or with existing or developing pharmaceuticals, in HIV therapy. We’re already talking with several companies about collaborative and clinical studies.” Also underway are two patent applications, one for “the use of G1 arrest compounds for HIV inhibition” Heredia enthuses, and the other for “inhibition of CCR5 expression by rapamycin.”

## News Briefs from the IHV

### New COO Aboard



Dave Wilkins, MBA

The Institute of Human Virology welcomes aboard new Chief Operating Officer Dave Wilkins. A former Navy hydrofoil pilot with an MBA from the Wharton School,

Wilkins most

recently was Senior Director of Operations at the Institute for Systems Biology in Seattle.

At ISB, a world-renowned research institute led by Dr. Leroy Hood, who invented the automated sequencing machine that led to the Human Genome Project, Wilkins held responsibility for a \$22 million annual financial plan, including Direct Research and Discretionary Funding. He also led executive management through the setting of scientific strategy dealing with proteomics,

DNA arrays, genotyping and sequencing and oversaw Information Technology, Research Support and Technology Transfer.

At Deloitte and Touche Consulting Group, Wilkins managed \$20 million of IT service lines and led 160 people through ERP implementations in biotechnology and high tech industries.

"Dave brings to the Institute a background of excellent leadership and training experience as well as impressive project management results," says Dr. Robert Gallo, founder and director of the IHV.

In addition to day-to-day administration, Wilkins' immediate priorities at the IHV will include the implementation of fundraising and development strategies for the Institute, as well as identifying unique partnership opportunities to further scientific research, clinical care and global prevention initiatives.

The Institute opened in 1996 and was the first center of virology in the world to combine the disciplines of basic science, epidemiological research and actual patient care. In its first seven years of operation, the IHV has been awarded 21 patents, its patient base has increased from 250 to more than 4,000 and the Institute has had a pioneering presence in global prevention efforts

in Africa and the Caribbean.

"Dave's arrival comes at an exciting time in the history of the Institute," says Gallo. "The IHV is at a new juncture and Dave's strengths coincide with the critical needs of the Institute and its immediate and long-term direction. We are proud to have him join the team."

A triathlete who played semi-pro football and was captain of the 1988 Navy Soccer Champions, Wilkins' competitive spirit shines through as he welcomes new challenges.

"I think the IHV is uniquely situated to address one of the biggest human problems that exist today," he said. "And the ability to effectively collaborate with other similarly-focused institutes is like never before."

"I like to see the big picture of how things fit together," he observes, "and I'm very driven towards achieving the mission of the Institute within that big picture. I recognize that there are many leadership styles on a team and I look forward to recognizing, utilizing and developing the great talent of the IHV team." Wilkins' arrival to the Institute is a coming home of sorts. A Maryland native, Dave grew up and has family in Annapolis. He and his wife, Laura, have three children, Zach, 9; Emma, 5; and Liam, 1.

### 2003 IHV Lifetime Achievement Award Honors Jan Svoboda

Molecular Biologist Dr. Jan Svoboda, 69, is the recipient of the Institute of Human Virology's 2003 Lifetime Achievement Award.

Dr. Svoboda is best known for his work on the infection and tumorigenic action of Rous sarcoma virus in rats. Independently of Howard Temin's observations these studies led to Dr. Svoboda to postulate the existence of a provirus in the infected cells. This concept opened the way to our detailed understanding of replication, persistence and transformation of host cells by retroviruses at molecular level. In addition, the established in vitro system of Rous sarcoma transformed mammalian cells provided invaluable approaches and methodology that were applied also in isolation and transmission of human retroviruses.

Director of the Institute of Molecular Genetics, Academy of Sciences of the Czech Republic in Prague, Dr. Svoboda also is a professor of cellular and molecular biology at Charles University.

A founding member of the European Tumour Virus Group (London 1962), he co-organized the first international meeting on the Induction of Viruses by Cell Fusion at the Wistar Institute in Philadelphia, attended and presented papers at

four International Cancer Congresses and at four International Congresses of Virology. Research interests include general and molecular biology and genetics, retroviruses and oncogenes.

Dr. Svoboda was honored with the G. Mendel Silver Medal in 1984, elected into the Presidium of Czechoslovak Academy of Sciences in 1990, was a founding member of the Learned Society of the Czech Republic in 1994 and was unanimously elected to the European Molecular Biology Organization in 1995. He has been the recipient of the Jan Coffin Child Memorial Award (1967), the Czechoslovak State Prize in Science (1980), Prix lacassagne, La Ligue Francaise contre le Cancer (1981) and the J.E. Purkyne Medal for his contribution to progress in biological sciences (1999). He has published more than 200 articles, including four monographs. Two papers have been selected by the Institute for Scientific Information in Philadelphia as Citation Classics.

Dr. Svoboda is a member of the European Association for Cancer Research, the American Association for Cancer Research, the International Association for Comparative Research on Leukemia and Related Diseases, the

New York Academy of Sciences, the International Union of Biological Sciences, the European Tissue Culture Society, the European Tumor Virus Group, the Czechoslovak Biology Society, the Czechoslovak Microbiological Society, the Association of UICC Fellows, the Gregor Mendel Genetic Society, the Biotechnological Society, the Czech Society for Biochemistry and Molecular Biology and the Czech Immunological Society.

He also serves on the editorial boards of the International Journal of Cancer, Archives of Virology, Folia Biologica (editor-in-chief), Intervirology, Journal of Genetics and Molecular Biology, Experimental Pathology and Parasitology, Neoplasma, Emerging Infectious Diseases and Gene and is a member of Friends of Nature in the Region of Kolin.



## Spotlight on Aris Melissaratos: IHV Board of Advisors



**Aris Melissaratos**  
Secretary, Maryland Department of  
Business & Economic Development

**A**ris Melissaratos brings almost 40 years of business leadership to his roles as Maryland Secretary of the Department of Business and Economic Development and member of the IHV Board.

Melissaratos is committed to his mission, which includes growing technology and

manufacturing in Maryland, and he thinks and acts on both global and local scales. The 32 years he spent at Westinghouse, playing a strong executive and business visionary role in “a series of phenomenal growth events,” resulted in his finer accomplishments in life, to date—namely, “watching tens of thousands of colleagues grow and achieve.” Melissaratos has similar intentions for the IHV, in concert with the University of Maryland Biotechnology Institute (UMBI).

“I’ve only been to one IHV Board meeting so far, but my impression is that Gallo and his team have the potential to solve some of the most pressing infectious disease problems in the world. I’m very excited by that,” says Melissaratos. He views his specific role as helping the IHV achieve “an appropriate position of strength and visibility,” that will allow it to “obtain funding from the state government and Washington, D.C., and provide the platform it deserves.”

“My main suggestion to the IHV,” says

Melissaratos, “given what they have to offer, is they should mount a \$1 billion global campaign, appealing to the ‘deep pockets’ of the world.” He envisions the IHV building on its superb potential, in addition to that of UMBI. “I had already heard past publicity about the Institutes; now I’ve actually seen, and been impressed by, the facility and staff as well as their research base and projects.”

With his intention of procuring “much greater visibility” for the IHV, there is every likelihood that the outcome he would like to see evolve from his efforts will ultimately come to pass. “I hope to see the IHV develop a vaccine or ‘miracle drug’ to combat HIV/AIDS or make a major oncology breakthrough,” he says. He feels their “hard work and extensive funding, as well as being a focused, non-profit organization” will give them a better shot at solving such massive problems. “Now I just have to spend more time getting to know the Institute better,” Melissaratos says.

### New Foundation Created

**W**ith the help of many friends and colleagues, most notably Drs. Sandro Piacentini, Giovanni Scapagnini and Davide Zella, the Fondazione Ricerca & Progresso (Research and Progress Foundation) was established in Rome in June 2003.

The recipient of numerous awards for his scientific contributions, including recognition from the Sons of Italy Foundation, the National Italian-American Foundation and the Italian-American Society for Cancer Research, Dr. Gallo has always wanted to create a Foundation to help young Italian scientists pursue their dreams and advance in their own careers. This new foundation will make possible cross-training and fellowship opportunities that will both benefit the IHV and laboratories in Italy.

Dr. Gallo, an Italian American, is co-founder and honorary president of the Foundation.

Dr. Zella is director of the Foundation; Dr. Piacentini is secretary general; and Dr. G. Scapagnini is scientific secretary.

Committee members include several members of Italian Parliament and other prominent citizens of Italy, including: Umberto Bertazzoni, Menotti Calvani, Reinhard Gluck, Giovanni Micali, Gianfranco Merizzi, Giuseppe Nistico, Fabio Pistella, Paolo Preziosi, Sergio Rosini, Franco Salvatore, Umberto Scapagnini and Giuseppe Palumbo.

One of the first monetary contributions to the Foundation was donated by Dr. Gallo, who was honored with the Archimede Award from the Sicilian region earlier this year and then donated those funds to the Foundation.

### IHV Faculty News

**D**r. Robert Redfield, who heads the IHV’s Clinical Research & Care Division, has been named Associate Chair of Medicine for Finance and Hospital Relations with the University of Maryland School of Medicine/University of Maryland Medical Center. He also has been named a member of the Board of Advisors for the Elizabeth Glaser Pediatric AIDS Foundation.

He has also been appointed by Secretary Tommy Thompson to serve on advisory councils for NIH’s Office of AIDS Research and NIH’s Fogarty International Center.

**Dr. William Blattner**, director of the IHV’s Epidemiology and Prevention Division, has been named Chair of the Baltimore City Council Commission on HIV/AIDS Prevention and Treatment.

The IHV is located in Baltimore, Md., where more than 50 percent of the state’s HIV/AIDS population resides. With the aid and assistance of both Drs. Redfield and Blattner, a state of emergency was declared last year in order to deal more proactively with the severity of the HIV/AIDS epidemic locally.

**Dr. Yanto Lunardi-Iskandar** has been named director of the University of Indonesia’s Institutes for Human Virology and Cancer Biology, a post he’ll assume in November.



**Dr. Lunardi-Iskandar**

Basic Science researchers **Maria Salvato**, Ph.D. and **David Pauza**, Ph.D., are investigators in the newly awarded \$42 million Regional Center of Excellence in Defense against Biowarfare and Emerging Infection Agents, headed by Myron Levine, M.D., University of Maryland School of Medicine.

The consortium of 15 institutions in the Mid-Atlantic region will test anthrax, hemorrhagic fever and other emerging viruses, pox viruses, tularemia, and low-dose enteric pathogens in addition to developing effective public health responses.

Pauza’s RCE research examines post-exposure vaccination involving bacterial agents.

Salvato’s work examines early responses to flu-like viruses and select pathogens in collaboration with other RCE investigators at The Johns Hopkins Medical School.