

Quarterly Newsletter Fall 2010

The Johns Hopkins Vaccine Initiative promotes collaborative and interdisciplinary vaccine research, education, and implementation efforts to improve health worldwide.

Johns Hopkins Vaccine Initiative

Vaccine Day 2010

The third annual Vaccine Day will be held on October 29, 2010 at the Johns Hopkins Bloomberg School of Public Health. JHVI is pleased to announce that Dr. Stanley Plotkin, emeritus Professor of Pediatrics at the University of Pennsylvania and former Scientific Director at Aventis-Pasteur, will deliver the keynote address.



Dr. Stanley Plotkin

Dr. Plotkin is a pre-eminent vaccinologist who has mentored or advised many current leaders in vaccine research and policy, including a number of the faculty at the Bloomberg School of Public Health. He has been chairman of the Infectious Diseases Committee and the AIDS Task Force of the American Academy of Pediatrics, liaison member of the Advisory Committee on Immunization Practices and Chairman of the Microbiology and Infectious Diseases Research Committee of the National Institutes of Health.

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He was elected to the Institute of Medicine of the National Academy of Sciences in 2005.

Dr. Plotkin developed the rubella vaccine now in use throughout the world, and has worked extensively on the development of other vaccines for polio, rabies, varicella, rotavirus and cytomegalovirus.

Dr. Plotkin's address, "My Life in Vaccinology", will be a retrospective, personal examination of some of the seminal events that have shaped our approach to vaccine development and policy. Following his address, a panel of JHSPH faculty will converse with Dr. Plotkin about the future of vaccines. Topics for this discussion may include targets for new anti-infective and anti-cancer vaccine development, the role of novel adjuvants, changes in regulatory requirements, and the global marketplace. A poster session highlighting student and faculty work will follow this discussion, where awards will be given for the best student presentations. Vaccine Day will conclude with a school-wide reception.

For more information, visit our website at JHVI.

Johns Hopkins Berman Institute of Bioethics Faculty Discuss Parents' Fears about the Pertussis Vaccines

Anxiety about autism may be partly to blame for the resurgence of whooping cough in California. But faculty at the Johns Hopkins Berman Institute of Bioethics say the message that teens and adults should get revaccinated also needs a boost.

To read more, please see the Berman Bioethics Bulletin for news and analysis from the Institute.



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The Johns Hopkins Malaria Research Institute Faculty Developing Malaria Vaccine

JHMRI investigators Fidel Zavala, M.D. and Rhoel Dinglasan, Ph.D., M.P.H. recently received financial support from the Program for Appropriate Technology in Health-Malaria Vaccine Initiative (PATH-MVI) for the development of malaria vaccines. Dr. Zavala is using transgenic rodent malaria parasites expressing antigens from sporozoites from human Plasmodium parasites. He is also involved in the pre-clinical

evaluation of several malaria vaccine candidates developed by federal agencies as well as private research institutions. Dr. Dinglasan is developing a transmission-blocking vaccine to halt the spread of human malaria parasites through the anopheles mosquito vector.

For more information about the Malaria Research Institute, visit the website [here](#).

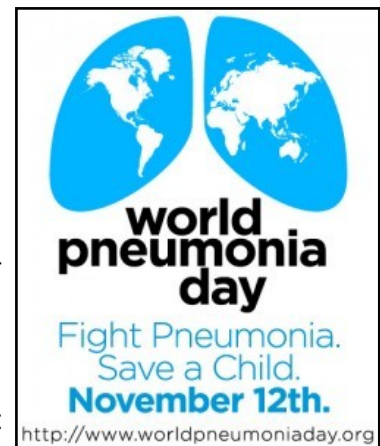
International Vaccine Access Center News

IVAC provided technical support to WHO and other groups who were able to secure the passage of a World Health Assembly resolution on May 20, 2010, which would require the 172 signing nations to prioritize comprehensive pneumonia prevention and control plans. The resolution unites global and government policy makers, donor agencies and civil society to work together to fight childhood pneumonia by accelerating access worldwide to proven pneumonia prevention and treatment interventions. [Read more.](#)

On July 15th, IVAC was pleased to support and participate in an educational event at JHSPH featuring immunization successes in Baltimore and abroad entitled “Breakthrough for Child Survival in the Poorest Countries and America’s Cities”. [Read more about the event.](#)

On September 20th, during the United Nations MDG Summit week, IVAC helped to launch a partnership with producers of American Syrah wine to benefit efforts to make pneumococcal vaccines accessible to children in low-income countries. Participating wineries will donate \$10 for each case of Syrah sold in the month of November to the GAVI Campaign. For more information and photos, please visit the [Pneumonia’s Last Syrah](#).

IVAC is gearing up for the 2nd Annual World Pneumonia Day on November 12th. Activities will take place around the world from JHSPH to Jordan and from Washington to Nairobi. For more information on how you can participate, please visit the [World Pneumonia Day website](#) or ask an IVAC team member.



IVAC Blogs:

IVAC’s Executive Director, Dr. Orin Levine posts a blog on the [Huffington Post](#) which featured entries from students in his Vaccine Policy class during the month of August.

IVAC’s Director of Alliances and Information, Lois Privor-Dumm, IMBA is a regular contributor to “[Disruptive Women in Health Care](#)”, a blog designed to “To serve as a platform for provocative ideas, thoughts, and solutions in the health sphere.”

Links to blogs by IVAC staff can be found [here](#).

JHSPH Faculty Build Linkages with Xiamen University, China

Ken Nelson and Alain Labrique made a formal visit to Xiamen University in Xiamen, China in September to explore potential collaborations between their National Institute of Diagnostics and Vaccine Development in Infectious Diseases and Johns Hopkins Bloomberg School of Public Health. Faculty at Xiamen University have recently completed a very successful trial of an Hepatitis E virus vaccine, which may be tested in Bangladesh in the coming years. Dr. Labrique reports that the researchers at Xiamen University are also eager work on the development of new diagnostic assays – which they have considerable expertise in and resources for – in collaboration with JHSPH and the Huantai Corporation.

JHSPH Faculty Publish Human Subjects Research Ethics Field Training Guide

JHSPH faculty from the Berman Institute of Bioethics, Department of International Health and the JHSPH Institutional Review Board have produced a Field Training Guide freely available to the public to assist in the training of field workers in Human Subjects Protection for large-scale field trials. The guide is currently translated into French, Mandarin and Thai; Bangla and Nepali translations are in progress. The October 05, 2010 edition of *PLoS Medicine* included a report written by several contributors describing the process of writing the guide, challenges and potential uses.

For more information, visit the [JHSPH IRB](#) or view the [guide in English and other translations here](#).

PLoS Medicine authors: Maria W. Merritt, Alain B. Labrique, Joanne Katz, Mahbubur Rashid, Keith P. West Jr., Joan Pettit

Summary Points

- Community trials of interventions to address major global causes of illness and death are often located in low-resource settings, where research findings will be most directly applicable.
- Although investigators delegate research activities involving human subject contact to local field workers, they retain ultimate responsibility for human subject protection and scientific integrity.
- To train every cadre of field worker in research ethics requires simplified training guidelines that can be easily translated and adapted for use in a wide variety of settings and cultural frameworks, especially where field workers have limited formal education.
- Field workers need appropriate training materials, tailored to varying levels of human subject responsibility, that focus on basic principles of community research.
- We have produced a Field Training Guide for Human Subjects Research Ethics, which is freely available to the public. In this article we address how to identify field training needs and meet high standards of research ethics at every level of human subject interaction.

“The *Field Training Guide for Human Subjects Research Ethics* is the first step toward developing locally adaptable research ethics training tools for study teams working in a variety of settings around the world.”
 Maria Merritt, PhD, lead author

Selected Faculty Publications and Faculty in the News

[A single dose of unadjuvanted novel 2009 H1N1 vaccine is immunogenic and well tolerated in young and elderly adults.](#)

Talaat KR, Greenberg ME, Lai MH, Hartel GF, Wichems CH, Rockman S, Jeanfreau RJ, Ghosh MR, Kabongo ML, Gittleson C, Karron RA. *J Infect Dis.* 2010 Nov 1;202(9):1327-37. PMID: 20874515

[Association of serotype with risk of death due to pneumococcal pneumonia: a meta-analysis.](#)

Weinberger DM, Harboe ZB, Sanders EA, Ndiritu M, Klugman KP, Rückinger S, Dagan R, Adegbola R, Cutts F, Johnson HL, O'Brien KL, Anthony Scott J, Lipsitch M. *Clin Infect Dis.* 2010 Sep 15;51(6):692-9. PMID: 20715907

[The cholesterol recognition/interaction amino acid consensus motif of the influenza A virus M2 protein is not required for virus replication but contributes to virulence.](#)

Stewart SM, Wu WH, Lalime EN, Pekosz A. *Virology.* 2010 Sep 30;405(2):530-8. Epub 2010 Jul 24. PMID: 20655564

[Progress and barriers for the control of diarrhoeal disease.](#)

Santosham M, Chandran A, Fitzwater S, Fischer-Walker C, Baqui AH, Black R. *Lancet.* 2010 Jul 3;376(9734):63-7. Review. PMID: 20609988

[Tyrosines in the influenza A virus M2 protein cytoplasmic tail are critical for production of infectious virus particles.](#)

Grantham ML, Stewart SM, Lalime EN, Pekosz A. *J Virol.* 2010 Sep;84(17):8765-76. Epub 2010 Jun 23. PMID: 20573832

[Long-term Sequelae of Childhood Bacterial Meningitis: An Underappreciated Problem.](#) Chandran A, Herbert H, Misurski D, Santosham M. *Pediatr Infect Dis J.* 2010 Jul 30. PMID: 20683377

[Efficacy of pentavalent rotavirus vaccine against severe rotavirus gastroenteritis in infants in developing countries in Asia: a randomised, double-blind, placebo-controlled trial.](#)

Zaman K, Dang DA, Victor JC, Shin S, Yunus M, Dallas MJ, Podder G, Vu DT, Le TP, Luby SP, Le HT, Coia ML, Lewis K, Rivers SB, Sack DA, Schödel F, Steele AD, Neuzil KM, Ciarlet M. *Lancet.* 2010 Aug 21;376(9741):615-23. Epub 2010 Aug 6. PMID: 20692031

[Delivery of woodchuck hepatitis virus-like particle presented influenza M2e by recombinant attenuated Salmonella displaying a delayed lysis phenotype.](#)

Ameiss K, Ashraf S, Kong W, Pekosz A, Wu WH, Milich D, Billaud JN, Curtiss R 3rd. *Vaccine.* 2010 Sep 24;28(41):6704-13. Epub 2010 Aug 5. PMID: 20691653

[Maternal Influenza Vaccination and Effect on Influenza Virus Infection in Young Infants.](#)

Eick AA, Uyeki TM, Klimov A, Hall H, Reid R, Santosham M, O'Brien KL. *Arch Pediatr Adolesc Med.* 2010 Oct 4. PMID: 20921345



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Selected Faculty Publications and Faculty in the News (cont'd)

Lancet. 2010 Jul 24;376(9737):225.

Profile of Chris Beyrer: advocate for social justice and health as a human right. Das P.

Supporting new vaccine introduction decisions: lessons learned from the Hib Initiative experience. Hajjeh RA, Privor-Dumm L, Edmond K, O'Loughlin R, Shetty S, Griffiths UK, Bear AP, Cohen AL, Chandran A, Schuchat A, Mulholland EK, Santosham M. *Vaccine*. 2010 Oct 8;28(43):7123-9. Epub 2010 Jul 24.

Prevention of rotavirus gastroenteritis in infants and children: rotavirus vaccine safety, efficacy, and potential impact of vaccines. Chandran A, Fitzwater S, Zhen A, Santosham M. *Biologics*. 2010 Aug 9;4:213-29.

Targeted mutagenesis as a rational approach to dengue virus vaccine development. Blaney JE Jr, Durbin AP, Murphy BR, Whitehead SS. *Curr Top Microbiol Immunol*. 2010;338:145-58. Review.PMID: 19802584

Dengue vaccine candidates in development. Durbin AP, Whitehead SS. *Curr Top Microbiol Immunol*. 2010;338:129-43. Review.PMID: 19802583

Peruvian FSWs: Understanding HPV and barriers to vaccination. Brown B, Carcamo C, Blas MM, Valderrama M, Halsey N. *Vaccine*. 2010 Oct 4

Universal influenza vaccination: an optimal goal--but how and when? Henderson DA. *Biosecur Bioterror*. 2010 Sep;8(3):219-21

The dengue threat to the United States. Franco C, Hynes NA, Bouri N, Henderson DA. *Biosecur Bioterror*. 2010 Sep;8(3):273-6.

Safety and Immunogenicity of a Novel Staphylococcus aureus Vaccine: Results from a First-in-Human Dose-Ranging Study. Harro C, Betts R, Orenstein W, Kwak EJ, Greenberg HE, Onorato MT, Hartzel J, Lipka J, Dinubile MJ, Kartsonis N. *Clin Vaccine Immunol*. 2010 Oct 13

Characterization of the HPV-specific memory B cell and systemic antibody responses in women receiving an unadjuvanted HPV16 L1 VLP vaccine. Dauner JG, Pan Y, Hildesheim A, Harro C, Pinto LA. *Vaccine*. 2010 Jul 26;28(33):5407-13. Epub 2010 Jun 17

Functional immunogenicity of baculovirus expressing Pfs25, a human malaria transmission-blocking vaccine candidate antigen. Mlambo G, Kumar N, Yoshida S. *Vaccine*. 2010 Oct 8;28(43):7025-9. Epub 2010 Aug 13.

Vaccines, international health, respiratory infections, epidemiology

Spatial and socio-demographic predictors of time-to-immunization in a rural area in Kenya: Is equity attainable? Moisi JC, Kabuka J, Mitingi D, Levine OS, Scott JA. *Vaccine*. 2010 Aug 9;28(35):5725-30. Epub 2010 Jun 27.

INCIDENCE OF INFLUENZA VIRUS INFECTION IN EARLY INFANCY: A PROSPECTIVE STUDY IN SOUTH ASIA. Henkle E, Steinhoff MC, Omer SB, Roy E, Arifeen SE, Raqib R, McNeal M, Breiman RF, Moss WJ, Zaman K. *Pediatr Infect Dis J*. 2010 Sep 16.PMID: 20856162

The urgent need for recommendations on re-vaccination of HIV-infected children after successful antiretroviral therapy Rainwater-Lovett K, Moss WJ. *Clin Infect Dis*. 2010 Sep 1;51(5):634-5. PMID: 20684683

A modeling framework for the analysis of HPV incidence and persistence: A semi-parametric approach for clustered binary longitudinal data analysis. Kong X, Gray RH, Moulton LH, Wawer M, Wang MC. *Stat Med*. 2010 Sep 13. PMID: 20839368

Do children infected with HIV receiving HAART need to be revaccinated? Sutcliffe CG, Moss WJ. *Lancet Infect Dis*. 2010 Sep;10(9):630-42. Review.PMID: 20797645

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Mucosal trafficking of vector-specific CD4+ T lymphocytes following vaccination of rhesus monkeys with adenovirus serotype 5. Masek-Hammerman K, Li H, Liu J, Abbink P, La Porte A, O'Brien KL, Whitney JB, Carville A, Mansfield KG, Barouch DH. *J Virol*. 2010 Oct;84(19):9810-6. Epub 2010 Aug 4.PMID: 20686023

JHVI Spark Program

Accepting Applications

The Johns Hopkins Vaccine Initiative (JHVI) Spark Program is now accepting applications for faculty awards on an ongoing (rolling) basis. The Spark Program is meant to assist JHSPH faculty in their efforts to improve vaccine-related training and education opportunities for students and to create an opportunity for new or expanded collaborative research in the vaccine sciences.

The total budget for proposed activities cannot exceed \$1,500. For more information, please see the [JHVI Spark Award website](#).