Vaccines: The Week in Review
20 December 2010
Center for Vaccine Ethics & Policy
http://centerforvaccineethicsandpolicy.wordpress.com/
A program of
- Center for Bioethics, University of Pennsylvania
http://www.bioethics.upenn.edu/
- The Wistar Institute Vaccine Center
http://www.wistar.org/vaccinecenter/default.html
- Children's Hospital of Philadelphia, Vaccine Education Center
http://www.chop.edu/consumer/jsp/microsite/microsite.jsp

This weekly summary targets news and events in the global vaccines field gathered from key governmental, NGO and company announcements, key journals and events. This summary provides support for ongoing initiatives of the Center for Vaccine Ethics & Policy, and is not intended to be exhaustive in its coverage.

Vaccines: The Week in Review is now also posted in a blog format at http://centerforvaccineethicsandpolicy.wordpress.com/. Each item is treated as an individual post on the blog, allowing for more effective retrospective searching. Given email system conventions and formats, you may find this alternative more effective. This blog also allows for RSS feeds, etc.

Comments and suggestions should be directed to
David R. Curry, MS
Editor and
Executive Director
Center for Vaccine Ethics & Policy
david.r.curry@centerforvaccineethicsandpolicy.org

The PATH Malaria Vaccine Initiative (MVI), Merck (MSD), and NYU Langone Medical Center announced that they are working together to evaluate an approach targeting the circumsporozoite protein (CSP), a major surface protein on the malaria parasite. The organizations said that researchers working on this project are focusing on a new approach that targets a region of CSP important to a critical function of the protein. By blocking this function, it is hoped that invasion of the parasite into the liver, an essential step in causing malaria disease, can be prevented. Dr. Elizabeth Nardin, professor in the Department of Medical Parasitology at NYU Langone Medical Center, said, "We think we can improve the way sub-unit vaccines are designed by strategically targeting this critical protein function. Other vaccine approaches targeting CSP have required extremely high levels of antibody, which are difficult to elicit and to maintain. This approach has the potential to address that problem." Dr. Christian Loucq, director of MVI, said, "We are very pleased that one of the world's largest pharmaceutical companies and a major academic medical center have committed to testing a promising new way to defend children against malaria." More technical detail at:
http://www.businesswire.com/news/home/20101213006891/en/PATH-Malaria-Vaccine-Initiative-Merck-NYU-Langone

GAVI announced the rollout of pneumococcal conjugate vaccine in Nicaragua "paving the way to introductions in more than 40 developing countries." GAVI said that Nicaraguan children will receive pneumococcal vaccines on a routine basis as part of a regular childhood immunisation package provided by the country's Ministry of Health. To support the introduction of pneumococcal vaccine in Nicaragua, GAVI has already approved US$4,732,000 for 2010-2011, and expects to commit another US$10 million through to 2015.
http://www.gavialliance.org/media_centre/press_releases/nicaragua_pneumococcal.php

The Global Fund to Fight AIDS, Tuberculosis and Malaria said its Board of Directors approved 79 grants with a two-year commitment of US$1.7 billion, representing "the tenth time the Global Fund Board approved new proposals to support programs fighting the three diseases. The total approved funding for these ten rounds is US$21.7 billion for 150 countries since it was created in 2002." The Global Fund said the US$1.7 billion is made up of US$732 million for HIV and AIDS, US$574 for malaria and US$299 million for TB and US$128 million for health systems strengthening. The 79 proposals which were found to be of sufficient technical quality to be funded constitute a success rate of just over half of the submitted proposals. The announcement noted that the Board also "adopted a series of measures to enable future funding opportunities, including the launch of Round 11 on 15 August 2011, with a submission due date for applicants on 15 December 2011."
http://www.theglobalfund.org/en/pressreleases/?pr=pr_101215

Dow Jones Indexes said it is launching the Dow Jones Global Fund 50 Index: a new index in collaboration with the Global Fund to Fight AIDS, Tuberculosis and Malaria, "which will help generate resources for the Global Fund's work." The new index measures the performance of the largest companies that support the mission of the Global Fund. A portion of revenues generated through the licensing of the index will go to the Global Fund. Dow Jones said the new index "is the flagship of a new index series, which will include indexes with overlaying strategies and additional themes." The index has been licensed to db X-trackers, the leading ETF platform of Deutsche Bank, to serve as a basis for a financial product, the db x-trackers Global Fund Supporters ETF. The ETF is now trading on the Frankfurt stock exchange.

Dow Jones described the Fund as comprising the top 50 companies (based on float-adjusted market capitalization) that contribute to the mission of the Global Fund. The index is quoted in U.S Dollars (USD). Float-market capitalization measures the amount of shares in a company that are readily available to be traded by investors. No more than 15 companies are selected from any individual country. The weight of individual countries is capped at 40% and single components are capped at 20%. The composition of the index is reviewed annually, in June. Float factors, shares and weights are updated quarterly. As of October 29, 2010, the year-to-date performance calculated in USD for the Dow Jones Global Fund 50 Index is -4.29%. Back-tested historical data has been calculated daily back to December 31, 2004, the date at which the index base value is set at 1000.

http://www.theglobalfund.org/en/pressreleases/?pr=pr_101213

WHO announced that its Commission on Information and Accountability for Women's and Children's Health "will propose a framework for global reporting, oversight and accountability on women's and children's health, and will "create a system to track whether donations for women's and children's health are made on time, resources are spent wisely and transparently, and whether the desired results are achieved." WHO reported that the accountability framework proposed by the Commission will:
- track results and resource flows at global and country levels;
- identify a core set of indicators and measurement needs for women's and children's health;
- propose steps to improve health information and registration of vital events - births and deaths - in low-income countries;
- explore opportunities for innovation in information technology to improve access to reliable information on resources and outcomes. The Commission will report in May 2011.
http://www.who.int/topics/millennium_development_goals/accountability_commission/en/index.html

The **MMWR for December 17, 2010 / Vol. 59 / No. 49** includes:
Announcement: 14th Annual Conference on Vaccine Research
December 17, 2010 / 59(49);1620

The 14th Annual Conference on Vaccine Research, the largest scientific forum devoted exclusively to the research and development of vaccines and related technologies for prevention and treatment of disease through immunization, will be held May 16--18, 2011, at the Baltimore Marriott Waterfront Hotel in Baltimore, Maryland. The conference brings together the diverse fields of human and veterinary vaccinology to encourage collaboration and multidisciplinary approaches among disease-specific and methodologic experts.

One Health initiatives, herpesvirus vaccines, the status of human immunodeficiency virus vaccines, genomics, special populations in immunology, and alternative animal models in vaccine discovery are among topics scheduled for discussion during the conference. New this year is a preconference workshop in academic vaccinology, Writing and Submitting a Vaccine Research Paper.
…The vaccine research conference is sponsored by the National Foundation for Infectious Diseases, in collaboration with CDC and 13 other national and international agencies and organizations. Additional information is available at
http://www.nfid.org/conferences/vaccine11

Journal Watch
[Editor's Note]

Vaccines: The Week in Review continues its weekly scanning of key journals to identify and cite articles, commentary and editorials, books reviews and other content supporting our focus on vaccine ethics and policy. ***Journal Watch* is not intended to be exhaustive, but indicative of themes and issues the Center is actively tracking.** We selectively provide full text of some editorial and comment articles that are specifically relevant to our work. Successful access to some of the links provided may require subscription or other access arrangement unique to the publisher. Our initial scan list includes the journals below. If you would like to suggest other titles, please write to David Curry at david.r.curry@centerforvaccineethicsandpolicy.org

Clinical Infectious Diseases
15 December 2010 Volume 51, Number 12
http://www.journals.uchicago.edu/toc/cid/current
[Reviewed earlier]

Emerging Infectious Diseases
Volume 16, Number 12–December 2010
http://www.cdc.gov/ncidod/EID/index.htm
[Reviewed earlier]

Human Vaccines
Volume 6, Issue 12 December 2010
http://www.landesbioscience.com/journals/vaccines/toc/volume/6/issue/12/
[Reviewed earlier]

JAMA
December 15, 2010, Vol 304, No. 23, pp 2559-2658
http://jama.ama-assn.org/current.dtl
Commentaries
The Right to Health as the Unheralded Narrative of Health Care Reform
Eric A. Friedman,
Eli Y. Adashi
JAMA. 2010;304(23):2639-2640.doi:10.1001/jama.2010.1845
Extract (per JAMA convention)
In passing the Affordable Care Act, the United States took a giant, if partial, step toward joining other nations wherein the right to health constitutes an inalienable moral and legal right. Although not widely appreciated, the right of every person to enjoy the highest attainable standard of physical and mental health 1 (the right to health for short) is not merely an abstract moral imperative. Rather, it is an established international legal precept still to be fully embraced in the United States. Even though the right to health was overshadowed during the health care debate by other narratives, such as insurance reform, cost control, and care delivery, this right remains a central if unheralded narrative of the Affordable Care Act and its legacy. What is this right that

engenders these bold claims? It is an assertion of the responsibility of governments to strive for "the highest attainable standard of physical …

Medical News & Perspectives

Mothers Take Physicians' Advice on Vaccines

Bridget M. Kuehn

JAMA. 2010;304(23):2577-2578.doi:10.1001/jama.2010.1785

Extract (per JAMA convention)

Women are more likely to get a pertussis vaccination for their infants or a prenatal flu shot for themselves if a physician has advised them to do so and provides them with information, according to a pair of studies presented at the Infectious Diseases Society of America (IDSA) meeting in October. The findings suggest a simple recommendation from a physician can have a powerful effect on vaccination rates.

PERTUSSIS PREVENTION

In 2009, there were nearly 17 000 reported cases of pertussis, including 14 deaths, according to the US Centers for Disease Control and Prevention (CDC). Cases have been rising among US teens and infants since the 1980s, according to the agency, and some scientists have suggested that parents refusing to vaccinate themselves or their children may be driving the increase. Currently, the CDC recommends that infants and young children receive a 5-dose series of diphtheria, tetanus, and pertussis (DTaP) and that adults receive …

Journal of Infectious Diseases

15 December 2010 Volume 202, Number 12
http://www.journals.uchicago.edu/toc/jid/current

[Reviewed earlier]

The Lancet

Dec 18, 2010 Volume 376 Number 9758 Pages 2041 - 2116
http://www.thelancet.com/journals/lancet/issue/current

Comment

Artemisinin resistance—the clock is ticking

Nicholas J White

Preview

Artemisinin resistance in falciparum malaria has emerged in western Cambodia.1 Chloroquine resistance arose in exactly the same place 50 years ago, spread to Africa, and killed millions of children.2–4 Resistance to sulfadoxine-pyrimethamine (the antimalarial combination that followed chloroquine) in Africa can be traced to the same origin. The parallels are chilling. If artemisinin resistance spreads widely, it will derail current initiatives to control and eliminate malaria. The consequences will be disastrous.

The Lancet Infectious Disease

Dec 2010 Volume 10 Number 12 Pages 813 - 892
http://www.thelancet.com/journals/laninf/issue/current

[Reviewed earlier]

Nature
Volume 468 Number 7326 pp867-996 16 December 2010
http://www.nature.com/nature/current_issue.html

World View

Drug development needs a new brand of science

We need to break with the past to develop new medicines, says Garret FitzGerald. An interdisciplinary NIH centre points the way.

Garret FitzGerald

Last week, the US National Institutes of Health (NIH) voted to launch a National Center for Advancing Translational Sciences, focusing on translational medicine and therapeutics (TMAT), the growing field that aims to speed therapies from the laboratory to the clinic. NIH director Francis Collins called the decision "momentous" — a "disruptive innovation on an institutional scale" — and I think he is right. Only a translational approach can address the fact that the current model of drug discovery and development is unsustainable. Paradoxically, as we have witnessed a successful revolution in drug discovery, a crisis has emerged in drug development. Targets, and the chemistry needed to probe them, can be selected more rationally than ever — yet more and more candidate drugs are proving expensive failures.

One reason is that too many steps are pursued in specialist isolation, in both academia and industry. Too few people can bridge the translational and interdisciplinary divides. This has led to crucial and expensive mistakes in phase II of drug development — when there is often a failure to see an impact on efficacy, a propensity to ignore risks, or a danger of making errors in dose selection for phase III.

"We must revise how we reward ideas and will need common standards of data protection."

The new NIH centre promises to catalyse a much-needed restructuring of the drug-development process. The centre can foster training by absorbing the Clinical and Translational Science Awards (CTSAs) and their educational infrastructure. This will allow scientists to partner in a modular approach to drug development, in which expertise is drawn from distinct sectors and regions as needed to address particular therapeutic challenges. Furthermore, the broad CTSA-supported programmes and infrastructure — from preclinical science to community outreach — could be harvested to support a more efficient approach to drug development, approval and dissemination. Why has the need for such a radical change emerged? Thirty years ago, the best clinical pharmacology units housed experts from a range of disciplines. Cell biologists worked side by side with colleagues studying model systems and those involved in mechanistic studies of physiology, disease and drug action in humans and pharmacokinetics. Others were trained in chemistry, statistics and toxicology. Blending these heterogeneous talents fostered what we would now call interdisciplinary science, and, in the context of drug development, T1 translational research.

However, as the economics of academic departments shifted, clinical pharmacology fell from favour. Even the term clinical pharmacology has lost its lustre, and now covers only some of what we need. To attract the best and brightest, we need a new brand, backed by funders, academics and industry. Potential students must perceive the field to be hot.

So what shall we call this interdisciplinary, translational endeavour? It is difficult to imagine anyone rushing to join something called 'T1 translational research'. 'TMAT', on

the other hand, captures the fashion for translation, places the discipline in the heart of medicine and indicates the focus on developing novel therapeutics. Adoption of this term by the NIH follows a training programme in TMAT funded by the UK Wellcome Trust. Now we need to realize the potential of this brand and push the idea more widely. The NIH centre will signal, both to Congress and the biomedical research community, the intimate connection between fundamental science and the accelerated delivery of cures to the general public. This is not a zero-sum game: success of translation requires investment in basic science. By developing sustainable career structures in TMAT, the centre can reverse the flow of bright young scientists into specialist silos. Joint investments in training, infrastructure and programmes would ensure that the efforts of the new centre would improve, not compete with, the translational efforts of disease-focused institutes and centres within the NIH.

The new TMAT centre could also act as a visible point of contact for extramural partners, including industry, charitable foundations and the US Food and Drug Administration, to buy into the restructuring required to move to a more modular approach to drug discovery and development. A looser, more distributed model spanning pharma, biotech and academia could then draw on knowledge more easily, and apply it more efficiently.

It is a big challenge, and two particular obstacles come to mind. First, we must revise how we reward ideas. At present, defence of intellectual property relies on patents on the composition of matter, usually molecules, most of which never become approved drugs. To make sure that they do, many people with diverse skill sets have to work effectively together. Inside a company, it is easy to reward everybody involved. As companies fragment, we should consider new models of intellectual property. Perhaps the financial rewards of a patent should be postponed until a drug is a profitable success — and a formal mechanism found to distribute rewards among all those who helped to make it happen.

Second, we will need common standards of data protection and privacy, and shared infrastructure that allows secure and compliant sharing of diverse types of information, including clinical data, across countries and sectors. This is the foundation upon which a global TMAT enterprise can be established. In some ways, this is the greatest challenge of all, but it can be done. As T. S. Eliot said: "Only those who will risk going too far can

Garret FitzGerald is director of the Institute of Translational Medicine and Therapeutics at the University of Pennsylvania in Philadelphia. e-mail:garret@exchange.upenn.edu

Nature Medicine
December 2010, Volume 16 No 12
http://www.nature.com/nm/index.html
[Reviewed last week]

New England Journal of Medicine
December 16, 2010 Vol. 363 No. 25
http://content.nejm.org/current.shtml
[No relevant content]

The Pediatric Infectious Disease Journal
December 2010 - Volume 29 - Issue 12 pp: A9-A10,1067-1157,e80-e99
http://journals.lww.com/pidj/pa ges/currenttoc.aspx
[Reviewed earlier]

Pediatrics
December 2010 / VOLUME 126 / ISSUE 6
http://pediatrics.aappublications.org/current.shtml
[Reviewed earlier]

PLoS Medicine
(Accessed 12 December 2010)
http://medicine.plosjournals.org/perlserv/?request=browse&issn=1549-1676&method=pubdate&search_fulltext=1&order=online_date&row_start=1&limit=10&document_count=1533&ct=1&SESSID=aac96924d41874935d8e1c2a2501181c#results
[No relevant content]

Science
17 December 2010 vol 330, issue 6011, pages 1573-1716
http://www.sciencemag.org/current.dtl
Policy Forum: Intellectual Property
Turning Patent Swords into Shares
Geertrui Van Overwalle
Science 17 December 2010: 1630-1631.[DOI:10.1126/science.1189592]
Compulsory licenses and patent pools will assist modern patent law in fueling genetic test development.

Science Translational Medicine
15 December 2010 vol 2, issue 62
http://stm.sciencemag.org/content/current
[No relevant content]

Vaccine
http://www.sciencedirect.com/science/journal/0264410X
Volume 29, Issue 2 (16 December 2010)
[Reviewed earlier]