EB Report

Dear International Society for Vaccine Members:

On behalf of the ISV Executive Board, we thank you for being a member of the International Society for Vaccines (ISV). ISV just concluded its most successful Vaccine Congress held in Seoul, South Korea. The 10th International Society for Vaccines Congress will be held in Boston, USA and is scheduled 2-4 October 2016. Two well-established specialty vaccine conferences will also join the 2016 ISV Congress: Vaccine Renaissance 10 led by Dr. Annie De Groot and the 2016 DNA Vaccine Conference led by Dr. David Weiner and the International DNA Vaccine Society. With inclusion of participants from these two conferences, it can be expected that the 2016 ISV Congress will be an extraordinary gathering for the global vaccine community. Drs. Margaret Liu, Frédéric Tangy, David Weiner, and Annie De Groot will serve as Co-chairs of the 2016 ISV Congress.

As we approach a new year, ISV is kicking off its Annual Membership drive for 2016.

In 2015, ISV updated its membership policy to an annual renewal of all ISV memberships with a renewal date of January 1st. All members are requested to renew his/her 2016 annual membership no later than January 31, 2016. Any member that paid for renewal in 2015 or started a new paid membership while registering for the 9th Annual Vaccine and ISV Congress will be credited for the 2016 annual membership. Membership is valid for the entire 2016 calendar year. Members may pay his/her annual membership dues of $100 USD via the ISV website immediately and receive full membership until December 31, 2016.

ISV is offering two other opportunities for full membership: a full 3-year membership for $250 USD or full 5-year membership for $400 USD.

For documented Graduate Students and Post-doctoral Associates, he/she may join ISV as associate member for the reduced rate of $35 USD/year. ISV may ask for documentation of status.

Lastly, ISV members will receive a discount on registration for the 10th International Society for Vaccines Congress in Boston, and ISV is pursuing arrangements to allow ISV members to use their membership to receive discount registrations to attend Vaccine-related conferences. Please check the ISV website for partners that offer discounts on registration for ISV members. Additional benefits to ISV members will be announced via the ISV website and in the ISV monthly Newsletter.

ISV has several new initiatives that will be announced in 2016 and we look forward to another exciting year with you. We always appreciate feedback and comments, so please contact any ISV Executive Board member directly or send us a message at ISV: http://www.isv-online.org/contact-us

ISV is a 503c Non-Profit organization. If you have questions or comments please contact us by visiting our website.
Amid Failure and Chaos, an Ebola Vaccine

By TINA ROSENBERG

Ebola lingers. A 15-year-old boy in Monrovia, Liberia, his father and his brother are sick with the disease, the first cases in Liberia since June. How the boy caught Ebola is a mystery, but it is likely he had contact with an Ebola survivor. The virus also lingers in the body — and can sicken its host and infect others — even months after recovery.

There will most likely be more cases in this epidemic. But now, greater awareness and new tools are in place to contain them better, including a tool we have never had before: an effective vaccine.

Last year, Ebola became an international crisis that killed 11,300 people because of a failure of political will, according to a new report from Harvard and the London School of Hygiene and Tropical Medicine. Countries with the outbreak played down the initial cases and delayed reporting the outbreak to the World Health Organization until March 2014, three months after it began. The international response was unconscionably late. The W.H.O. did not declare an emergency until August, and only in September did large-scale international help reach the scene.

But since then, one thing has moved with record speed. In October 2014, researchers began Phase 1 safety trials of potential Ebola vaccines. By late March, one of them was saving lives in Guinea. A process that normally takes years had been compressed into six months.

The Ebola vaccine is a double achievement. Researchers proved the effectiveness not just of a novel vaccine, but also of a novel method of testing it rapidly, in chaotic conditions and without traditional clinical trials. Even as it was being tested, the vaccine was helping to contain Ebola. Today, hopes are high that it will administer the coup de grace to the epidemic.

How was this achieved? And what can the world learn that will save lives and money in fighting future outbreaks of Ebola or other pathogens?

Ebola is a fearsome virus — but not to vaccine researchers. Making an Ebola vaccine has proved to be straightforward. By the time of the outbreak, in fact, several vaccine candidates had already been tested in animals and been found safe and effective. That had happened because of the very fear the disease inspires — paradoxically not in Africa, but in North America.

“None of these vaccines were designed to protect Africans during an outbreak,” said Adrian Hill, director of the Jenner Institute, a vaccine research group at the University of Oxford.

Influenza vaccination strategies have targeted elderly individuals because they are at high risk of disease complications and mortality. Statins are a class of drugs used to treat hypercholesterolemia and are frequently used in the elderly population to reduce the risk of cardiovascular disease. However, statins are also known to have immunomodulatory effects that could impact influenza vaccine response. In a post hoc analysis, we performed a cross-sectional observational study nested within a comparative immunogenicity clinical trial of adjuvanted versus unadjuvanted influenza vaccine in elderly persons to evaluate the influence of statin therapy on the immune response to vaccination.

Overall, data on >5000 trial participants were available for analysis. Comparison of hemagglutination-inhibiting geometric mean titers to influenza A(H1N1), A(H3N2), and B strains revealed that titers were 38% (95% confidence interval [CI], 27%-50%), 67% (95% CI, 54%-80%), and 38% (95% CI, 28%-29%) lower, respectively, in subjects receiving chronic statin therapy, compared with those not receiving chronic statin therapy. This apparent immunosuppressive effect of statins on the vaccine immune response was most dramatic in individuals receiving synthetic statins. These effects were seen in both the adjuvanted and unadjuvanted vaccine groups in the clinical trial. These results, if confirmed, could have implications both for future clinical trials design, as well as for vaccine use recommendations for elderly individuals.

To read more, click here.
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"Their development was all funded to protect North Americans against bioterrorists using the Ebola virus.”
Animal testing is the easy part; what’s hard is moving beyond it. Vaccine development requires lots of money and attention, and the cruel fact is that both are always scarce for poor-country diseases. That is even more true for pathogens that begin with small outbreaks in remote areas. Vaccines may be needed only at some future day, in tiny quantities — or, hopefully, not at all. “Everybody realizes there is no market for the industry,” said Marie-Paule Kieny, assistant director-general of the World Health Organization for Health Systems and Innovation. “You can’t just rely on the private sector to invest — there is no revenue for them. You need a coalition of the willing — philanthropists, but this is mainly the responsibility of governments.” Outbreak pathogens include Ebola; Severe Acute Respiratory Syndrome, which caused 774 deaths 12 years ago; and its cousin, Middle East Respiratory Syndrome. They hold the world’s attention while they rage — and then are quickly forgotten. “There were many vaccines in development for SARS, and after it ended they all stopped,” said David Heymann, head of the Center on Global Health Security at Chatham House. “If they had continued, now we would have a vaccine platform into which you could put a related virus” — like MERS, which has killed some 600 people and is not yet extinguished.
Another obstacle: Medicine’s standard of evidence is the Phase 3 clinical trial, which divides thousands of patients at random into vaccinated or vaccinated-with-placebo groups, and then counts how many get sick in each. But for that, you need a big outbreak.
To read more, click here.

History of Vaccines
Centers for Disease Control and Prevention
10/15/1958
First Measles Vaccine Is Tested
Sam Katz, MD, an infectious disease specialist working with Thomas Peebles and other researchers in the Boston lab, tested the first version of the lab’s vaccine on mentally retarded and disabled children at a school outside of Boston. Each of the 11 vaccinated children developed measles antibodies, but nine also developed a mild rash — the vaccine didn’t cause full-blown measles, but it did cause symptoms. The researchers realized the virus used for the vaccine had to be weakened even more.
Watch Dr. Katz talk about these trials, copy/paste this link into your browser: http://media.historyofvaccines.org/mobile/video/320/000524.mp4
1962
Attenuated Measles Vaccine Developed
Maurice Hillemann and colleagues developed an attenuated measles vaccine by passaging John Enders’s measles virus strain over 80 times through different cell types. The resulting vaccine, Rubeovax, was given with a dose of gamma globulin antibodies to reduce reactions (mainly fever and rash).

Newsletter articles chosen by Dr. Ted Ross (University of Georgia)
Newsletter design and edit by Chalise Bloom (University of Georgia)

Point of View
Dr. Paul Offit. Vaccine Education Center - The Children’s Hospital of Philadelphia.

Of interest, in the past couple of months, an influenza vaccine is now on track for licensure. It's called Fluad®. It is different from all of the other vaccines that we have ever used in this country in that it contains an adjuvant named "squalene." Squalene is derived from shark oil. We all have squalene in our bodies. It's part of cholesterol synthesis.
Adding squalene to an influenza vaccine is the third time that an adjuvant has been used in the United States. The first adjuvant was aluminum salts, which are contained in a number of vaccines. The second was monophosphoryl lipid A—a detoxified lipid A product that is present in one of the human papillomavirus vaccines. Squalene will be the third adjuvant used in this country.
Squalene has been used in other countries, and it’s an excellent adjuvant. If you look at the data with the squalene adjuvant in influenza vaccine, you can see that in people over age 65 years, it induces a better immune response than the inactivated influenza vaccine that is not adjuvanted. And it's more likely to induce broader cross-reactivity when there is a mismatch of strains.
Read more here.

Wishing you the Best in 2016
International Society for Vaccines

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