

【記念講演 1】**「ワクチン開発の最前線から****Prospects for the Development of an AIDS Vaccine: Lessons from Macaques」****■座 長:** 山本直樹 国立感染症研究所**■演 者:** R. Paul Johnson

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Multiple lines of evidence suggest that induction of sterile protection against HIV/SIV infection by conventional vaccine approaches is likely to be a difficult and possibly unachievable goal. A more readily achievable benchmark for an AIDS vaccine would be to reduce viral loads in infected individuals and thereby delay disease progression and reduce the risk of transmission. In the SIV/maaque model, most vaccine approaches have had only limited success in inducing sustained decreased in viral loads of pathogenic SIVmac strains. Although natural transmission of HIV predominantly occurs through mucosal surfaces at low efficiency, few SIV vaccine studies have examined protective immunity using experimental conditions designed to model these circumstances. We investigated the efficacy of a multigenic DNA/MVA prime/boost vaccination regimen to protect against a repeated low-dose vaginal pathogenic SIV challenge. Female rhesus macaques were immunized intramuscularly with DNA vaccine vectors expressing multiple SIV proteins (Gag, Pol, Env, Nef, Tat and Vif) and then boosted with a recombinant poxvirus (modified vaccinia Ankara, MVA) expressing a similar complement of SIV proteins. Starting at week 8 after the MVA boost, animals were vaginally challenged with repeated doses of SIVmac251 over a course of up to 17 weeks

DNA/MVA immunization induced vigorous IFN- γ ELISPOT responses to Gag, Env and Nef, with Gag-specific spot forming cells (SFC) that exceeded 3500 SFCs/ 10^6 PBMC 2 weeks after the MVA boost. SIV Gag tetramer-binding cells in DNA/MVA vaccinees were detected in vaginal and rectal biopsies at similar frequencies to those observed in peripheral blood 2 weeks after the MVA boost. Following repeated low-dose vaginal challenges, 8/8 controls, and 7/8 of DNA/MVA-vaccinated macaques were infected. The DNA/MVA prime boost regimen resulted in a 33-fold reduction in peak viremia at week 2, a 380-fold reduction in viremia at week 6, and a 340-fold reduction in viremia 15 to 17 weeks after infection compared to controls. DNA/MVA vaccinated animals also had better preservation of CD4⁺ T lymphocyte counts and improved survival as compared with naïve controls. Our results demonstrate that a multigenic DNA/MVA prime/boost vaccine can mediate protection against disease progression following repeated low dose vaginal challenge in macaques.

*このセッションは同時通訳がつきます。

【記念講演 2】**「Living Together, Doing It Together, Keeping It Together」****■座 長：樽井正義**（エイズ&ソサエティ－研究会議）**■演 者：Donald (Don) de Gagne C.M.**（Actions Traitements）

AIDS has changed the way in which any other public health approach has been developed and managed. There is no going back, as the way forward has already been engraved through the advocacy efforts, the continued bravery and commitment of those the most affected by the disease that is, People Living with HIV/AIDS (PHA' s).

Twenty five years ago when HIV was first discovered and that the new Acquired Immune Disease Syndrome (AIDS) became part of our lives, the disease was in the realm exclusively of the scientific and medical community. However, this quickly changed as the disease devastated the lives of so many men and women in the developed world. A new type of patient activist was born because there was nothing scientists could do, because governments were irresponsible and not responding appropriately, because of anger, because there was no hope, because of the pain and suffering of so many who lived with, supported and died of AIDS.

A new paradigm was imposed. No longer should PHA be simple patients waiting for death to take their young lives away. No longer should PHA be considered just a client, or a second class citizen whose governments do not care to consider their lives as valuable and worth saving. No, the new paradigm was established as we, PHA as not the problem, but part of the solution.

It also became clear that AIDS is not "owned" by anyone. It goes beyond science, beyond health, beyond governments and...beyond borders. It touches the root causes of injustice, of abuse and violence, of inequality, of apathy and also of compassion and love. It challenges us to look at the most hidden fears and doubts tucked away in our hearts and in our own social and cultural upbringing, in our attitudes and beliefs and forces us to grow, to change, to assert.

Living Together... what and how? Has the past shown us the strong and weak links of living together. How can we live together now and in the future? Living together is our ideal but beyond involvement, beyond simply living together how far are we able to be together, to come from different backgrounds and respect and support each other? Beyond having a voice how can we move to valuing and embracing each others contribution and dignity?

Living together mean also been sick together. The notion of being ill, feeling depressed, or carrying a disease is one that all humans face. What makes AIDS the reason we cannot face our own humanity and reality that one day we all get sick?

Beyond our own microcosm, our own town, our own country, can we live together and truly act to support and care for issues facing others in other parts of the world and how does this impact on us?

Doing it Together... let's do it! Sexuality is a very complex yet very human act, which in the

context of AIDS, yes in this era 25 years after discovering the virus that causes AIDS, still is tabou. Is it possible that HIV, which is mostly transmitted through sexual contact, still holds us hostage to our fears, our cultural and social beliefs and that today without talking about sex and the underlying elements which deny people access to information and safety we can talk about criminalization of people with HIV who have sex? Can we deny that sex is not an important part of our lives? That condoms work? That we can still enjoy a full sexual life and even have a family if we are HIV positive? That we can be key players in prevention and education? That we can also be loved and love?

Keeping it Together ... myself, you and I, and all of us! History teaches us that some things work and others don't. It also teaches us what needs to change. If we can look ahead to 20 years from now, what would be living together in a world of AIDS? Looking back and learning from our own history in the response to AIDS several themes are recurrent, are still not resolved and some are frighteningly moving backwards. The issues that are the most pervasive are stigma and discrimination, abuses to human rights, gender issues, the huge gap between access to care and treatment in developing countries compared to developed countries, the power of women, the mobilization and inclusion of youth, resource mobilization and distribution, civil society movement barriers, and leadership. With these issues still very much present which new strategies can we have to keep it together on a personal, group or collective effort?

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