

In the news

KEEPING HIV OUT

HIV infection paralyzes the host's immune system, resulting in a fatal susceptibility to infections. According to a recent study, it is not only HIV-positive individuals who are unprotected against infections. Christine E. Jones *et al.* report that uninfected infants who were prenatally exposed to HIV display lower levels of antibodies against infectious agents, such as *Haemophilus influenzae* type b, than unexposed infants (*JAMA*, 9 Feb 2011).

The low antibody levels were attributed to the defective maternal immune system, as Jones reports that “once the HIV-exposed, uninfected babies received their routine vaccinations, they had antibody levels similar to, or higher than, HIV unexposed infants” (*Bloomberg*, 8 Feb 2011). Therefore, the researchers suggest that it is now imperative “to establish whether babies exposed prenatally to HIV could be better protected against infections through earlier vaccination, or through vaccine shots given to mothers” (*Bloomberg*, 8 Feb 2011).

Also this month, our progress in the battle against HIV infection is reinforced by the findings of French scientists. Bomsel *et al.* report that a vaccine comprised of envelope subunit gp41 antigens contained in virosomes blocks the entry of the virus at mucosal sites before primary infection takes place (*Immunity*, 10 Feb 2011). “Our results clearly challenge the paradigm that mucosal protection requires significantly high levels of antibodies with virus neutralizing capacity in the blood”, concludes Bomsel (*ScienceDaily*, 10 Feb 2011). The vaccine induced IgA and IgG production in the mucosa, and this could stop viral entry. Interestingly, the authors suggest that “these findings may help to explain why a small population of highly exposed, but HIV-negative, women who exhibit gp41-specific IgA in their vaginal secretions are protected from infection” (*ScienceDaily*, 10 Feb 2011).

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