

HIV Seroconversion Panels: Tools to Study Evolving Infection

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ABSTRACT

The poster presents previously unpublished information about how seroconversion panels are found and characterized, and provides data on common patterns and individual differences using recently developed seroconversions as examples.

Seroconversion is the evolution of plasma markers of infection following pathogen exposure. Plasma collection (for fractionation into immune globulins, etc.) gives rise to unique circumstances that allow the identification of serial samples collected at short intervals from a recently infected donor:

- Plasma can be donated by plasmapheresis twice a week.
- Plasmapheresis collections are 600-880 mL.
- Every unit collected is tested for anti-HIV-1/2, anti-HCV, and HBsAg; most are tested for HIV, HBV and HCV nucleic acid.
- Nucleic acid tests are performed on pools of 24-512 units.
- Donors who test positive for HIV or HCV are permanently deferred from donation.
- Units with a positive test result, and previous units from the same donor, are removed from the fractionation supply.

HIV Seroconversion Panels (SCP) were first identified in 1987. A data sheet comparing most test methods then available was developed, and SCP were made available to researchers worldwide. New information on viral dynamics and human immune response in very early infection has resulted from study of more than 100 SCP for HIV alone, but new SCP are becoming rare. Results from 7 new SCP, 3 collected in 2006, will be presented.