

Poster presentation

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Association Between the Presence of CCR5-specific Antibodies and Long Term Non Progression

Lucia Lo palco*[‡], Claudia Pastori, Caterina Uberti-Foppa, Guido Poli, Greta Taskaris, Chiara Alberti, Adriano Lazzarin and Renato Longhi

Address: Immunology and Infectious Disease Dep., San Raffaele Scientific Institute, Milano, Italy; Duke University Medical Center, SORF Bldg, Durham, NC

Email: Lucia Lo palco* - lopalco@duke.edu

* Corresponding author [‡]Presenting author

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Most transmitted HIV-1 strains use CCR5 as coreceptor. Antibodies (Abs) to CCR5 have been detected in highly exposed to HIV-1 but uninfected subjects, thus they could be involved in HIV protection. To assess whether these Abs may also contribute to slow HIV-disease progression, we searched for anti-CCR5 Abs in 499 subjects, including 87 Long Term Non Progressors (LTNP), 70 Progressors, 135 HIV+ HAART treated, and 207 seronegative donors. We found anti-CCR5 Abs in a fraction of LTNP (22.9%), but not in the other populations studied ($p < 0.0001$). These Abs efficiently prevent infection of HIV-R5 strains representing subtypes B, C and A by inducing a stable and long last down regulation of CCR5 on surface of T lymphocytes. Follow-up studies showed that the loss of anti-CCR5 Abs, occurred in some subjects, was significantly associated with a progression toward disease. Thus, the anti-CCR5 Abs could be relevant to vaccine design and therapeutics.