Higher susceptibility of CD4+RA- T lymphocytes expressing CD300a to HIV-1 infection

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OBJECTIVES:
1. To analyze the expression of CCR5 and activation markers on CD300a expressing CD4+CD45RA- T cells
2. To study the susceptibility to in vitro HIV-1 infection of CD300a expressing CD4+CD45RA- T cells from healthy donors
3. To determine CD300a expression on in vivo HIV-1 infected CD45RA-CD4+ T lymphocytes from cART naïve HIV-1 infected patients
METHODS

FLOW CYTOMETRY → Expression of CCR5, CD38, HLA-DR and PD-1
- HEALTHY DONORS: Basal, Day 3 and Day 7
- HIV PATIENTS: Basal, Day 7 and Day 13
RESULTS

Cell surface markers expression levels are different between CD300a+RA- and CD300a-RA- cells.
RESULTS

CD300a+RA- CD4+T lymphocytes are more susceptible to HIV-1 infection

Healthy Donors

HIV patients

Day 3
Day 7

% p24+ cells

CD300a-
CD300a+

Day 7
Day 13

% CD300a+ cells

p24-
p24+

HD1
HD2
HD3

CD300a-
CD300a+

p = 0.0625
1. CD300a+RA- CD4+ T lymphocytes exhibit higher CCR5 expression levels than CD300a-RA- cells.

2. Non-activated CD300a+RA- CD4+ T lymphocytes display a lower expression of activation markers, while after stimulation and infection they exhibit higher expression of activation markers than CD300a- cells.

3. CD300a expressing CD4+RA- T lymphocytes are more susceptible to in vitro HIV-1 infection.

4. In vivo HIV-1 infected CD4+RA- T lymphocytes are predominantly CD300a+.
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