

The Association of HIV, Age, Sex, and Other Chronic/Latent Viruses with Inflammation

Simrat Binning^{1,2}, Renying Cai^{1,2,7}, Nancy Yang^{1,2,7}, Melanie CM Murray^{3,4,5}, Mel Krajden^{1,6}, Hélène CF Côté^{1,2,3,7} for the CIHR Team in Cellular Aging and HIV Comorbidities in Women and Children (CARMA)





¹Pathology and Laboratory Medicine, University of British Columbia (UBC); ²Centre for Blood Research (CBR), UBC; ³Women's Health Research Institute, British Columbia (BC) Women's Hospital and Health Centre; ⁴Oak Tree Clinic, BC Women's Hospital and Health Centre; ⁵Division of Infectious Diseases, UBC; ⁶BC Center For Disease Control, ⁷Edwin S.H.

Leong Healthy Aging Program, UBC. Results



| | | | barrier, resulting in MPT. |
|---|---------------------------|---------------------------------------|---|
| Intestinal Fatty Acid Binding Protein (IFABP) | Enterocytes | Late intestinal damage | MPT occurs when bacteria normally confined to the |
| Lipopolysaccharide Binding Protein (LBP) | Hepatocytes | Microbial product translocation (MPT) | intestinal lumen, instead enter the bloodstream. |
| Soluble Cluster of Differentiation 163 (sCD163) | Macrophages and monocytes | Macrophage and monocyte activation | This can lead to chronic inflammation in PLWH. |

Methods & Study Sample



| Age (years), median (range) | 36 (3-68) | 32 (2-76) | 0.49 | 25 (4-70) | 28 (1-74) | 0.25 |
|---------------------------------|-----------|-----------|------|-----------|-----------|------|
| Tobacco smoking, n (%) | | | | | | |
| current | 21 (26) | 16 (19) | 0.14 | 21 (33) | 17 (25) | 0.25 |
| past | 15 (18) | 9 (11) | | 11 (18) | 9 (13) | 0:35 |
| never | 45 (56) | 59 (70) | | 31 (49) | 42 (62) | |
| Ethnicity, n (%) | | | | | | |
| White | 34 (42) | 39 (46) | | 22 (35) | 28 (41) | |
| African/Black/Caribbean | 29 (36) | 20 (24) | 0.3 | 18 (29) | 20 (29) | 0.19 |
| Indigenous | 13 (16) | 15 (18) | | 14 (22) | 6 (9) | |
| Other* | 5 (6) | 10 (12) | | 9 (14) | 14 (21) | |
| Self-reported HCV status, n (%) | 12 (15) | 6 (8) | 0.14 | 10 (16) | 7 (10) | 0.31 |
| Self-reported HBV status, n (%) | 6 (7) | 1 (1) | 0.06 | 2 (3) | 0 (0) | 0.23 |

| 0 | | • | • 1 1 | |
|-------------|-------------|-------------|-------------|--|
| Female Male | Female Male | Female Male | Female Male | |

Figure 5. Comparisons between sex with selected markers of inflammation, while segregating HIV. Error bars depict median and IQR; Mann-Whitney test.

Conclusions & Future Directions

- Our findings suggest differences in inflammation pertaining to age, sex, and number of viruses. These data can enhance our understanding of the role of age, sex, HIV, and chronic or latent viruses on gut inflammation and immune activation.
- These findings underscore the need for **sex-segregated analyses**, to better understand differences in inflammation between females and males.
- We will perform **sex-segregated** and **multivariable analyses** to investigate independent associations to better understand chronic inflammation and accelerated aging in PLWH.

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