

Gallic Acid is an Antagonist of Semen Amyloid Fibrils that Enhance HIV-1 Infection

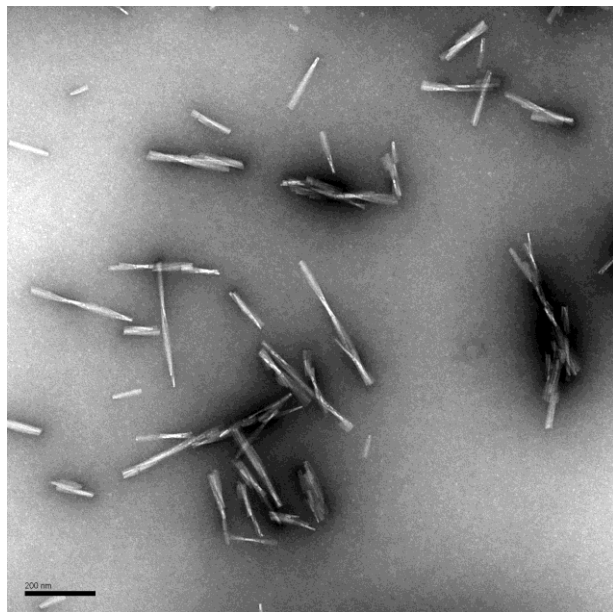
Josephine G. LoRiccio¹, Changmingzi Sherry Xu¹, Jason Neidleman², Magnus Bergkvist³, Warner C. Greene², Nadia R. Roan^{2,4*}, George I. Makhatadze^{1*}

¹ Center for Biotechnology and Interdisciplinary Studies and Department of Biological Sciences, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY 12180, ² Gladstone Institute of Virology and Immunology, San Francisco, CA 94158, ³ SUNY Polytechnic Institute, Colleges of Nanoscale Science and Engineering, 257 Fuller Road, Albany, NY 12203, ⁴ Department of Urology, University of California, San Francisco, 94158, USA.

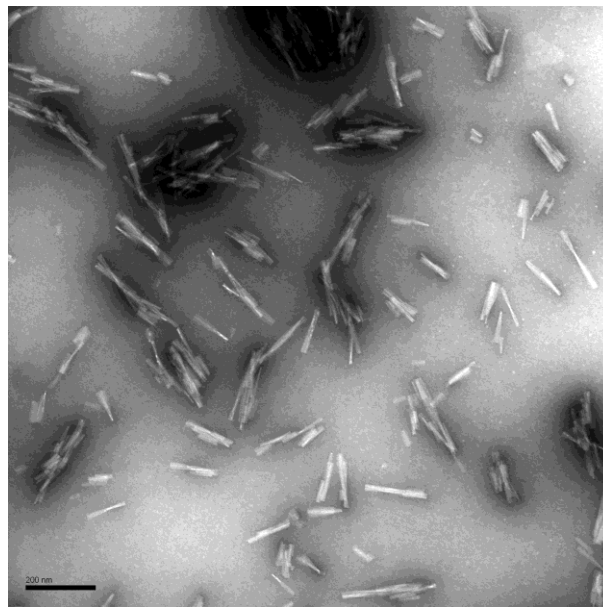
* Corresponding authors: Nadia Roan nadia.roan@ucsf.edu and George Makhatadze makhag@rpi.edu.

SUPPLEMENTAL DATA

A. SEM1 fibril 0 mM gallic acid



B. SEM1 fibril 1.0 mM gallic acid



Supplemental Figure 1: Images of SEM1 fibrils in the absence (Panel A) or presence of 1.0 mM gallic acid (Panel B). SEM1 fibrils (2.5 mg/ml) were incubated in the absence or presence of 1 mM gallic acid for 24 h at 37°C and then prepared on Parlodion-film carbon-coated grids with 2% potassium phosphotungstate pH 6.5 using the drop method (1). The samples were then imaged at 80 kV in a JEOL 1230 electron microscope (JEOL) using a USC1000 digital camera (Ultrascan), using approaches similar to those previously described (2,3).

References

1. Hamilton, R. L., Jr., Goerke, J., Guo, L. S., Williams, M. C., and Havel, R. J. (1980) Unilamellar liposomes made with the French pressure cell: a simple preparative and semiquantitative technique. *J Lipid Res* **21**, 981-992
2. Roan, N. R., Munch, J., Arhel, N., Mothes, W., Neidleman, J., Kobayashi, A., Smith-McCune, K., Kirchhoff, F., and Greene, W. C. (2009) The cationic properties of SEVI underlie its ability to enhance human immunodeficiency virus infection. *J Virol* **83**, 73-80
3. Roan, N. R., Sowinski, S., Munch, J., Kirchhoff, F., and Greene, W. C. (2010) Aminoquinoline surfen inhibits the action of SEVI (semen-derived enhancer of viral infection). *J Biol Chem* **285**, 1861-1869