Nanoparticles May Transport HIV Meds to the Brain

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Researchers have had early success in a method that might one day thwart the powerful blood-brain barrier and effectively deliver antiretrovirals (ARVs) to the brain, The Miami Herald reports. Scientists have long been flummoxed in their attempts to deliver treatment to the organ, where HIV can have seriously damaging effects. Scientists at Florida International University's Herbert Wertheim College of Medicine used magneto-electric nanoparticles (MENs) to increase by up to 97 percent the delivery of the HIV med AZTTP to infected cells in a laboratory facsimile of the human brain.

The researchers bound the drug to MENs inserted into macrophage immune cells. They then used magnetic energy to draw the drug through a cell membrane manufactured as a laboratory version of the blood-brain barrier. Next the use of a low-energy electrical current prompted the drug's release from the nanoparticle. Tests confirmed the functional and structural integrity of the drug after its release.

To read the Miami Herald story, click here.

To read the study abstract, click here.

To read a release on the study, click here.

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