

Cheap, rapid check for HIV developed

November 2 2005

Scientists from two New York universities say they've developed an inexpensive, hand-held sensor that can check a HIV patient's immune system in seconds.

Prices of antiretroviral therapy for HIV have dropped in poorer nations, but a lack of cheap, simple diagnostics to enable doctors to use those treatments remains a stumbling block.

The sensor measures the quantity of key immune cells called CD4+ cells in the blood. Physicians rely on CD4+ measurements to decide when to start drug treatments and to gauge how a patient is responding to treatment.

To make the device, researchers from Cornell University in Ithaca and the University at Albany coated electrodes with antibodies specific to CD4+ cells. When a small sample of blood is placed on a chip bearing those electrodes, the antibodies grab hold of the CD4+ cells. The captured cells then impede the flow of current across the electrodes, allowing the density of CD4+ cells to be calculated.

The study appears in the journal *Biosensors & Bioelectronics*.

Copyright 2005 by United Press International

Citation: Cheap, rapid check for HIV developed (2005, November 2) retrieved 23 April 2024

from <https://phys.org/news/2005-11-cheap-rapid-hiv.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.