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■ PARIS

Gamers crack AIDS puzzle in three weeks

ONLINE gamers have achieved a feat beyond the realm of *Second Life* or *Dungeons and Dragons*: they have deciphered the structure of an enzyme of an AIDS-like virus that had thwarted scientists for a decade.

The exploit was published yesterday in the journal *Nature Structural & Molecular Biology*, where — exceptional in scientific publishing — both gamers and researchers are honoured as co-authors.

Their target was a monomeric protease enzyme, a cutting agent in the complex molecular tailoring of retroviruses, a family that includes HIV.

Figuring out the structure of proteins is vital for understanding the causes of many diseases and developing drugs to block them.

But a microscope gives only a flat image of what to the outsider looks like a plate of one-dimensional scrunched-

up spaghetti. Pharmacologists, though, need a 3-D picture that "unfolds" the molecule and rotates it in order to reveal potential targets for drugs.

This is where *Foldit* comes in.

Developed in 2008 by the University of Washington, it is a fun-for-purpose video game in which gamers, divided into competing groups, compete to unfold chains of amino acids using a set of online tools.

To the astonishment of the scientists, the gamers produced an accurate model of the enzyme in just three weeks.

Cracking the enzyme "provides new insights for the design of antiretroviral drugs," says the study, referring to the lifeline medication against HIV.

It is believed to be the first time that gamers have resolved a long-standing scientific problem. — AFP