

Future human home may be 20 light yrs away

Paris: A rocky world orbiting a nearby star has been confirmed as the first planet outside our solar system to meet key requirements for sustaining life, scientists said on Monday. Modelling of Gliese 581d shows it has the potential to be warm and wet enough to nurture Earth-like life, they said.

It orbits a red dwarf star called Gliese 581, located around 20 light years from Earth, which makes it one of our closest neighbours. Gliese 581d orbits on the outer fringes of the star's "Goldilocks zone", where it is not so hot that water boils away, nor so cold that water is perpetually frozen. Instead, the temperature is just right for water to exist in liquid form.

"With a dense carbon dioxide atmosphere — a likely scenario on such a large planet — the climate of Gliese 581d is not only stable against collapse but warm enough to have oceans, clouds and rainfall," France's National Centre for Scientific Research (CNRS) said in a press release.

Gliese 581d has a mass at least seven times that of Earth and is about twice our planet's size, according to the new study, which appears in a British publication, *The Astrophysical*

Smallest satellite to look for ET

US scientists have developed what they claim is the world's first satellite the size of a loaf of bread which is designed specifically to look for extra terrestrial life. The nano-satellite, called the ExoPlanet-Sat, will be launched next year with the task of finding exoplanets beyond our solar system having life-supporting environment like like the Earth. The £3 million device measures 10cm wide and 30cm long. **PTI**

Journal Letters. The planet, spotted in 2007, had initially been dismissed as a candidate in the hunt for life.

It receives less than a third of the solar radiation Earth gets, and may be "tidally locked", meaning that one side of it always faces the sun, which would give it permanent dayside and nightside. But the new model showed potential.

Its atmosphere would store heat well, thanks to its dense CO₂. And the red light from the star would also penetrate the atmosphere and warm the surface. "In all cases, the temperatures allow for the presence of liquid water on the surface," say the researchers. **AFF**