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C DAC focusing on cancer treatment using supercomputers as a tool

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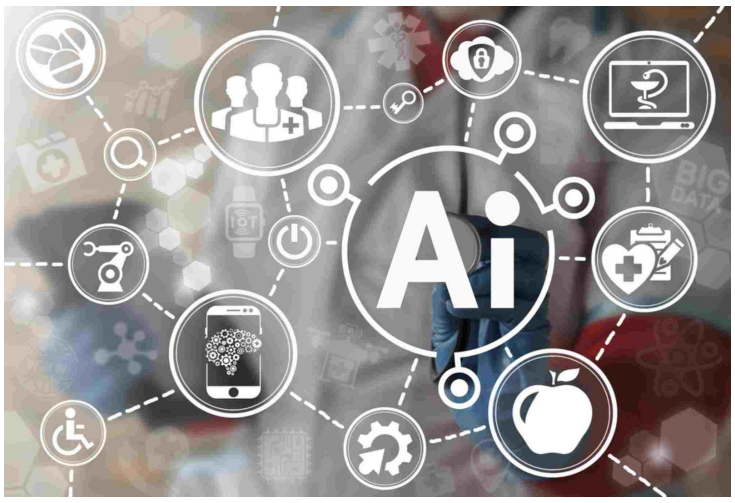
The new supercomputer will help its users to extend the reach beyond traditional domains of design manufacturing and entertainment



The pioneers in supercomputing in India, Pune-based Centre for Development of Advanced Computing (C-DAC) will be putting a major thrust on cancer research in future through supercomputing.

“We are doing a lot of research in the area of bio-informatics, which is coming up in a big way. Our major focus is on cancer treatment using supercomputers as tool. We have interacted with Tata Memorial Hospital, Mumbai, National Cancer Institute in US for doing simulation on ‘P53’ molecule on our system,” Director General C-DAC, Dr Hemant Darbari said.

‘P53’, also known as TP53 or tumor protein is a gene that codes for a protein that regulates the cell cycle and hence functions as tumor suppressor.

Speaking at the unveiling of CDAC’s new super computer the PARAM Shavak-Virtual Reality (VR), Darbari said that his team is also working on ‘Drug repurposing’.

Drug repositioning (also known as drug repurposing) is the application of known drugs and compounds to treat new diseases.

Under this concept, C-DAC is working on repurposing, in which drugs used for diabetes can be used for breast cancer research.

These are some of the major initiatives that will be backed up with artificial intelligence.

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The diabetes drug used on human beings is promising and work is on to redirect it towards breast cancer treatment. The team is also trying to use some ancient knowledge from Ayurveda and check its impact on cancer treatment.

"PARAM Shavak provides the computing power necessary to keep academic institutions on the leading edge in today's competitive market at affordable cost.

This system is meant for research organizations and academic institutions that are on the verge of adopting high performance computing (HPC) culture in their institutions," DG C-DAC said.