ICMR invites partners to launch and sell its new malaria vaccine

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The Indian Council of Medical Research (ICMR) has invited the country's vaccine manufacturers to partner with it to launch and sell a malaria vaccine that its Regional Medical Research Centre, Bhubaneshwar, has developed.

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Malaria is a parasitic infection transmitted by mosquitoes. While the current vaccine protects against the most common one that causes infection in humans called plasmodium falciparum, there are at least four other parasites from the same family known to cause infection in humans.

P. vivax is the other one that commonly causes malaria infections, especially in India. The others — p malariae, p ovale, and p knowlesi — cause fewer infections. While the pre-clinical studies have already shown positive indications, the company that collaborates with the ICMR will be

responsible for further development, human clinical trials, and scale-up for commercial production.

The vaccine contains the genetic material of two targets — one for a major protein called CSP found on the surface of the malaria parasite and another for a combination of parts of two proteins that affect the pathogen's lifecycle.

"There are some key differences in the ICMR vaccine as compared to the other two currently in the market. One, this vaccine used the DNA for the whole CSP protein instead of just a few parts, meaning it is likely to produce a stronger immune response. Two, the other target that is used prevents the development of the p. falciparum in the mosquito's midgut during its lifecycle. What this essentially means is that it prevents the infection not only in the vaccinated person, but stops the further spread of the disease by disrupting the lifecycle of the pathogen even when it has already been picked up by a mosquito from an infected person for further transmission," said Dr Subhash Singh, project manager for development of the vaccine.

Senior scientist Dr Susheel Singh and director Dr Sanghamitra Pati were part of the development process. The pre-clinical validation was done in collaboration with ICMR-National Institute of Medical Research and the National Institute of Immunology.

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