

## **DBT-NII wins a patent for a vaccine candidate for Leishmaniasis**

New Delhi, Feb 25: Leishmania, a protozoan pathogen, is the causative agent of various forms of leishmaniasis like cutaneous, mucocutaneous and visceral leishmaniasis; of which visceral Leishmaniasis is fatal.



Leishmaniasis affects people worldwide and drugs used for chemotherapy of leishmaniasis, such as antimonials, miltefosine, paromomycin and amphotericin B are very toxic, expensive and frequent resistance occurs against these drugs in endemic areas. There is an immense need to develop an effective vaccine against it.

Recently, considerable progress has been made and large numbers of Leishmania antigens have been tried as potential vaccine candidates including surface expressed antigens like gp63, gp46, PSA-2, receptors of activated C kinase (LACK), cysteine proteases (CP), kinetoplastid membrane protein-11 (KMP- 11) etc with varied immune response and diverse species specific protection.

DBT-National Institute of Immunology has won a patent (Patent no. 339437) for a vaccine candidate. This invention in general relates to Hemoglobin receptor or its part. Specifically, it envisages HbR DNA to elicit immune response in a mammal. Additional aspect of this invention is related to a vaccine composition for inducing immune response.

Leishmaniasis is a complex diseases varying from cutaneous to visceral leishmaniasis, caused by diverse species of Leishmania. Ideally, an antigen used for developing effective vaccines against different forms of leishmaniasis should be present in different species of Leishmania. In the present innovation, HbR is found to be conserved among different species of Leishmania. Thus, the present invention is related to use of HbR or its part as vaccine composition against different forms of leishmaniasis.

Reference:

Mukhopadhyay A, Roy S, Gupta D, Guha R and Rastogi R (2013) Hemoglobin receptor as novel vaccine for leishmaniasis. (Patent no. 339437; Granted on 25.06.2020)

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