

Shigella Vaccine





Every year about 170000 children suffer from this enteric disease. At times adults also get infected with the bacteria through ingestion of contaminated water & food.



Shigella is the second most fatal organism after rotavirus that causes severe **bloody diarrhoea or shigellosis** in mostly children.



Intestinal cramp, fever, watery diarrhoea and finally stool with mucus and blood are the primary clinical symptoms.



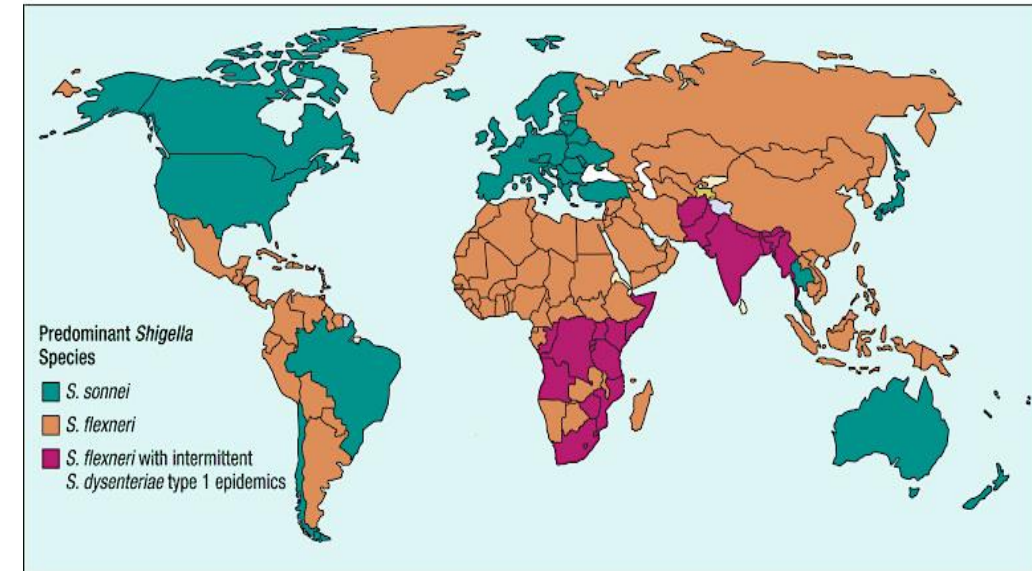
Children aged 1–4 years, travelers to endemic areas and immunocompromised people are mainly at risk.

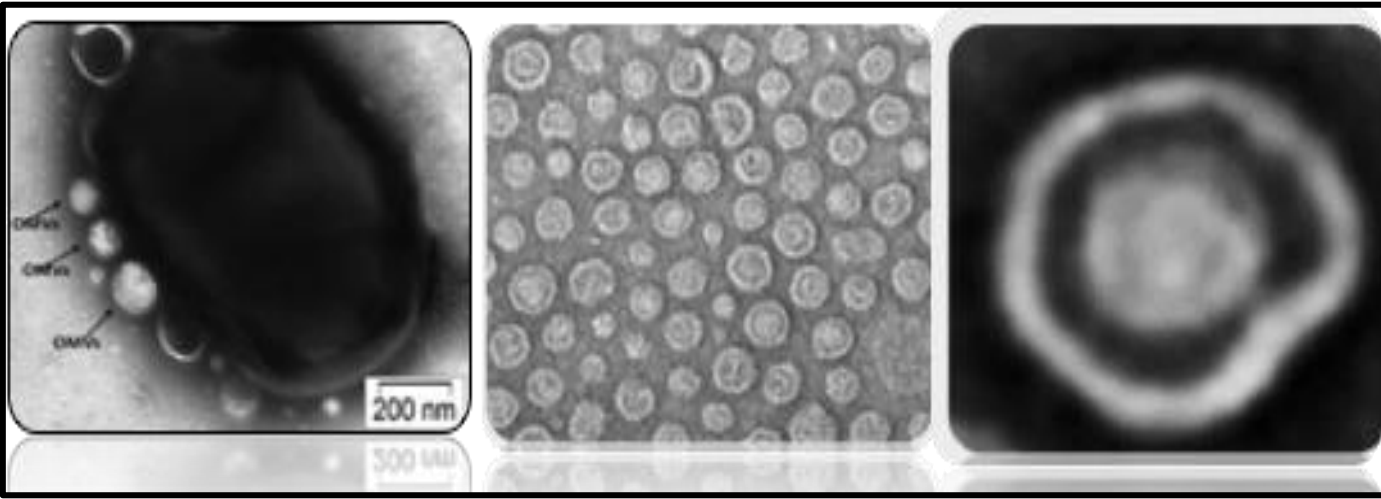


Unfortunately, till date no vaccine is available for public health use.

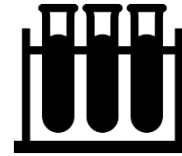


Global Distribution of *Shigella* Species





Outer Membrane Vesicles (OMVs) secreting from *Shigella*.



ICMR-NICED is working day and night to come up with an ideal and cost-effective *Shigella* vaccine. They have already identified some promising vaccine candidates like **Heat-killed *Shigella*** and **Outer Membrane Vesicles of *Shigella***.



ICMR-NICED laboratory has tested several immunogen candidates in different animal models like **Guinea pig luminal model**, **Mice intra-peritoneal model**, **passive mice model** etc.



Guinea pig: Very specific model for *Shigella*



Mice: useful and easy to handle model





Vaccine

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Multi-serotype outer membrane vesicles of *Shigellae* confer passive protection to the neonatal mice against shigellosis

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Heat killed multi-serotype *Shigella* immunogens induced humoral immunity and protection against heterologous challenge in rabbit model

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Recognized works in the search of an appropriate vaccine against blood dysentery.

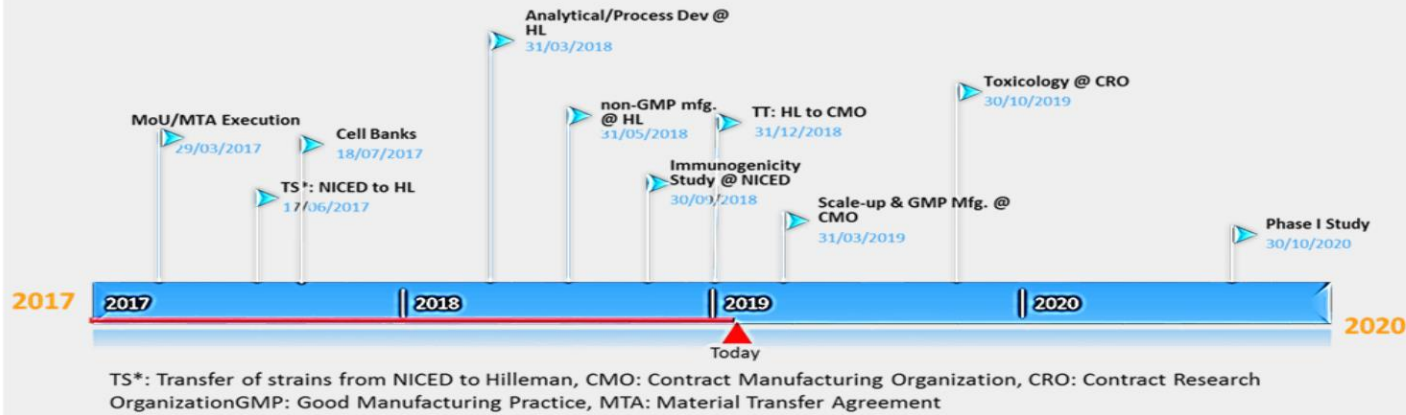


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Commercialisation of Shigella Vaccine : ICMR- MSD - Welcome Trust Hilleman laboratory tie up

Shigella Vaccine Candidate - Timelines



ICMR licensed the technology further scaling up and commercialisation to Hilleman Laboratories Pvt. Ltd., meeting at New Delhi on April 23, 2019 at the ICMR Headquarters.



BCIL executed the License Agreement with Niced on behalf of ICMR and Hilleman Labs.



Shigella vaccine candidate has been awarded a research grant by the European and Developing Countries Clinical Trials Partnership (EDCTP).



MSD Welcome Trust Hilleman Laboratories will be manufacturing the low cost product, Phase I & II proof-of-concept will be in Africa in 2020 .

