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MADURAI

'India open to adopting genomics in tackling malaria'



STAFF REPORTER

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Soumya Swaminathan, Director General, Indian Council of Medical Research, speaking at the two-week Malaria Genomics and Public Health conference organised by Centre for Research in Medical Entomology in Madurai through videoconferencing on Monday. | Photo Credit: [R_ASHOK](#)

Social, ethical, legal aspects should be considered, says Director General, ICMR

Pointing out that genomics can play a bigger role in handling vector-borne diseases, particularly Malaria, Soumya Swaminathan, Director General, Indian

Council of Medical Research said that India was open to adopting genomics, which can lead to genetic modification of parasite-carrying mosquitoes, in its fight against malaria.

In her address through videoconferencing at the inauguration of two-week lecture course on 'Malaria Genomics and Public Health' organised by Centre for Research in Medical Entomology (CRME) here on Monday, Ms. Swaminathan said that the country needed a multi-pronged approach to tackle malaria focussing on parasites, vectors and the human beings.

She said that advanced research is needed in all these focus areas, particularly in the emerging area of genomics that has the potential to cut down transmission of the disease by altering the genetics of the mosquitoes and also to develop effective drugs.

Highlighting that India had set a target to become malaria-free by 2030, she said that a malaria eradication project has already begun in Madhya Pradesh in 1200 high endemic villages to demonstrate the feasibility of eradication. She, however, stressed that the social, ethical and legal aspects should be taken into consideration before the adaptation of new technologies for handling vector-borne diseases.

Speaking at the function, Aditya P. Dash, Vice-Chancellor, Central University of Tamil Nadu, said, "Genomic tools have revolutionised malaria research by providing access to annotated genome sequences of malaria parasites, their vectors and the human host."

He added that tremendous advances in genetic and genomic technologies, now available at low cost, can be leveraged to develop newer tools to not only tackle malaria but also to monitor the effectiveness of those tools.

Caution needed

Acknowledging that genomics promise exciting opportunities, Malla Rao, a senior researcher on parasitic diseases from the USA, who spoke on 'Linkage between epidemiologic and vector research,' urged for adequate caution before introducing genetically modified mosquitoes in the biosphere.

"While advancing research on this area, countries should also be focussing in parallel on evolving regulatory framework and the engagement of various stakeholders in the society to understand potential challenges," he said.

He also stressed on the importance of developing proper biosphere prototypes for accurate testing of these technologies as the process was difficult to reverse, once genetically modified mosquitoes are released into the real world.

Aparup Das, Director, CRME, one of the research institutes functioning under ICMR, said that the institute was expanding its infrastructure in Madurai to focus more on genomic technologies.

On the course being organized in collaboration with European Molecular Biology Organization, Mr. Das said that the primary objective was to bring international experts on malaria, public health and genomics on a single platform to discuss how genomics can be used to tackle vector-borne diseases. Fifty experts from various countries are participating in the programme.