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13th Edition of Vaccines World Summit 2023 discusses Indiaâ??s way forward for vaccine development

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Speakers delve deep into various issues related to vaccine manufacturing and development



The 13th edition of Vaccines World Summit and 2nd Annual Biologics Festival India 2023 was held in Pune between 27th and 30th March 2023, and was organised by IMAPAC. Leaders in manufacturing, R&D and supply chain from vaccine manufacturing companies came together to debate on the best practices in vaccine manufacturing in India and share intelligence and network.

Ranjan Chakrabarti, Former Vice President and Global Biologics, United States Pharmacopeia, India gave the opening address. He provided insights on “Indian Biologics- Present and Future” and shared his thoughts on how to address the challenges faced by the Indian biotech industry.

This was followed by a leadership panel discussion on exploring partnerships in developing and manufacturing vaccines in the international sector. The panel held discussions on challenges for vaccine development, lessons learnt from the pandemic for vaccine development and creating vaccine equity.

During the panel dicussion, Rajinder Suri, CEO, Developing Countries Vaccine Manufacturers Network opined on pandemic preparedness and response, challenges and opportunities in developing countries, and emphasised on how public private partenrships (PPPs) can encourage R&D in vaccine manufacturing.

Further, Arani Chatterjee, Joint President, Cadila Pharmaceuticals divulged in detail the advancements in clinical trials for infectious diseases like malaria, pneumonia, meningitis, TB vaccines and novel tetravalent dengue vaccines. He emphasised on policy actions that will be able to stimulate investments in vaccine R&D and promote regional cooperation.

During another session at the Summit, Sarah McMullen. Country Director, US FDA – India Office along with Preetha Rajaraman, Regional Representative for South Asia in the Office of Global Affairs/Office of the Secretary, Department of Health and Human Services gave an overview of US India collaboration on vaccines and opined about the regulatory challenges faced by vaccine manufacturers.

New approaches of vaccine development

A key element of the Summit was the deliberations held on embracing newer approaches to develop vaccines, particulalrly with the rise of emerging infectious diseases across the globe.

Sanjay Singh, CEO, Gennova Biopharmaceuticals gave a speech on how mRNA vaccines are revolutionising the vaccine space. He also mentioned about how the company is working on triple-negative breast cancer vaccine along with its work with Tata Memorial Centre in Kolkata. He spoke about the advantages of the mRNA platform, challenges of democratisation of platform technology, mRNA degradation and lastly emphasised speed which is important in today’s life.

Puneet Kalra, Therapy Lead, Takeda South Asia talked about the future directions to vaccine development and a newer understanding of protective immunity with difficult-to-target pathogens and antigenic variations.

Adding another perspective, Vickram Srivastava, Head Planning-Global Supply Chain, Sun Pharma gave an overview on the supply chain impact, challenges in the vaccine/biopharma supply chain, risk mitigation strategies to build resilience, innovation in supply chain and logistics etc.

The Summit also saw interesting observations being shared by Swapan Kumar Jana, Director, R&D and manufacturing, Serum Institute of India talking about data-driven decision-making in complex vaccine process development and manufacturing.

Rajendar Burki, AVP-Research and Development, Biological E provided inputs on analytical and biophysical methods that can be used to characterise biopharmaceuticals and vaccines. He mentioned about antibody-based immunoassays that offer individual antigen quantification in combination/multivalent vaccines.

More discussions were also held towards the development of nano vaccines and oral vaccines platforms.

From the Academia

The industry experts were joined by a panel of scientists from the academic sector to share their perspective of new research areas of vaccine development in India.

Dr Nimesh Gupta, Chief Vaccine Immunology Laboratory, National Institute of Immunology, gave a glimpse of how to deploy immunology for developing highly effective, durable immunity and protective vaccines. He also mentioned how vaccine candidates must be designed and tested based on multi-dimensional mediators of protection.

Gupta emphasised on academia-industry partnership for vaccine development, on how investment in disruptive innovations can overcome the current challenges in developing potent cost-effective vaccines in a short duration and the development of challenging human infection models for vaccine design and efficacy assessment.

Adding on, Dr Ravi PN Mishra, Principal Scientist & Group Leader, CSIR-Institute of Microbial Technology, talked about reverse vaccinology. He mentioned about the rational design and development of recombinant vaccines against bacterial and viral pathogens.

Besides these interesting discussions, fireside chats on IT innovations in warehousing and materials management were also conducted during the Summit, making it an impactful and successful event.

Image caption- (L-R) Sanjay Singh, CEO, Gennova Biopharmaceuticals; Rajinder Suri, CEO, Developing Countries Vaccine Manufacturers Network; Rajendar Burki, AVP-Research and Development, Biological E and Arani Chatterjee, Joint President, Cadila Pharmaceuticals during the panel discussion at the Summit.

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