



**DCVMN**  
**INTERNATIONAL**

Developing Countries Vaccine  
Manufacturers Network International

# 2023 ANNUAL REPORT



**We Connect to Protect!**



## FOREWORD FROM DCVMN'S BOARD CHAIR

Dear DCVMN members and colleagues,

Firstly, I would like to take this opportunity to extend my gratitude to all members for entrusting me with the responsibility as Board Chair of DCVMN for the period of 2023 – 2025. On behalf of DCVMN Board, I am happy to present to you the DCVMN Annual Report for 2023.

Since its establishment in 1999, DCVMN has evolved as one of the key players in the vaccine industry. During the pandemic we have seen many manufacturers in the DCVMN network contributing to more than 60% of COVID-19 vaccines. This is strong justification on the contribution made by DCVMN manufacturers in combating global COVID-19 Pandemic.

In 2023, DCVMN actively participated in numerous international events such as CEPI Joint Coordination Group (JCG), Regional Vaccine Manufacturing Collaborative organized by World Economic Forum, G-20 Health Working Group, Strategic Advisory Group of Experts on Immunization (SAGE) meetings, WHO World Local Production Forum, World Leadership Dialogue at 17th World Congress on Public Health (WCPH), Rome, to name a few. DCVMN's participation in these events is a reflection of its commitment in improving the public health through a vibrant vaccine industry.

DCVMN members have experience and knowledge on numerous areas in the vaccine ecosystem. To this point, may I encourage all members to participate in activities organized by the DCVMN secretariat. Among activities organized are the establishment of numerous working groups such as supply chain, regulatory and pharmacovigilance. I believe more working groups will be developed in 2024 touching on numerous strategic topics. These working groups stimulate collaborative efforts among our members with the potential of voicing out new ideas thus enriching the vaccine landscape.

At the 24th Annual General Meeting in Cape Town, four new prospective full members have been voted to join DCVMN, namely Aspen Pharmacare Holdings (Holding Headquarter based in South Africa), Instituto Mechnikov (Nicaragua), Institute Torlak (Serbia) and Zhifei (China). May I extend our warm welcome to these new members. With a five-year strategy and roadmap in place, DCVMN is set to take a leap forward in 2024 with focus on the following priorities:

1. Effectively coordinating between member companies and international stakeholders including private sector to spur sustainable regional vaccine manufacturing strategies and initiatives;
2. Developing work force development programs & organizing tech transfer training programs with focus on building capacity for Pandemic Prevention Preparedness and Response;
3. Entering the digital space through focus on Virtual Reality;
4. Accelerating Healthy Industry Framework (HIF).

May I wish you a successful year.

**ADRIANSJAH AZHARI**

*DCVMN Board Chair*

# MESSAGE FROM THE CEO



Honorable members, dignitaries and all stakeholders,

2023 marks third year of the cultural change in the organization which was initiated in 2021 after taking over as CEO. While I am delighted to report that as a well-knit team at the DCVMN Secretariat, we have successfully completed this challenging task, we continue to strive for excellence and thereby give our best on a daily basis!

Some of the key achievements have been to register a much higher voice share on the global platforms where now we are not only being heard but also being sought out to participate and contribute because DCVMN's views now matter.

Another big change is that our continuous and effective communication at the right forums has helped take notice of the product development funding leading to a big spike in development funding to the member companies.

Considering training as one of the core strength areas, we have embarked upon strengthening our Learning & Development efforts and for the first time, steered into a hybrid format of Tech Transfer Training, that too exclusively for Africa to exhibit our wholehearted solidarity with Africa CDC and PAVM.

Going forward, continuing the trend of innovation, in 2024 we are launching several novel initiatives including but not limited to a pilot on Environmental sustainability (Net Zero), initiating the process of becoming official partner with WHO in Private Sector Engagement, selecting more partners for Tech Transfer Training in different geographies to name a few. You will be hearing more soon on these and other initiatives.

Here's the Annual report 2023 and we would be keen to hear a word of advice to improve further.

**RAJINDER SURI**

*CEO-DCVMN*

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# 2023 HIGHLIGHTS

## Amplified Voice Share

Our voice share amplified by effective participation in prestigious global forums including G20, BRICS, Gavi MTR and many others, resulting into a spike in wallet share to member companies.



## Five-year Strategy

The five-year strategy and training roadmap have been launched as part of DCVMN's commitment to growth and development.



## Tech-Transfer Training

30 executives from vaccine manufacturers in developing countries, with 50% hailing from Africa, have participated in specialized Tech Transfer Training, aiming to achieve self-sustainability.



## Train the Trainers Task Force

A task force of 24 adept and experienced executives has been established. We have developed a comprehensive workshop plan and curriculum with the collaboration of a European GMP expert and a PATH IDD expert.



## Virtual Reality Program

Virtual Reality program, the first of its kind in the vaccine industry, expanded with 3 new modules. So far, 16 participants from 7 member companies have undergone training, with one member company aiming to train 100 individuals.



## Publications & Webinars

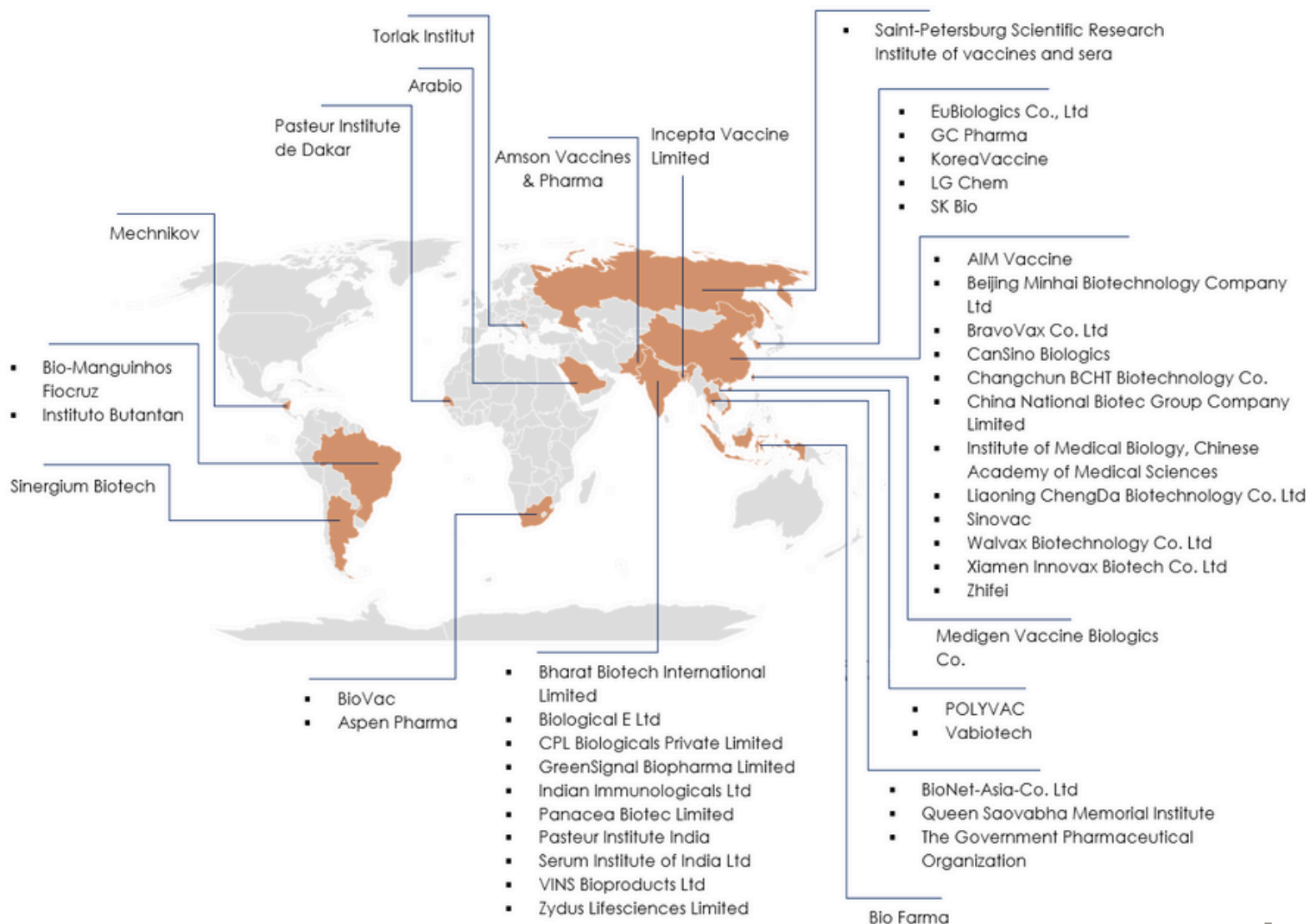
Five crucial publications have been meticulously crafted to ensure wide dissemination, aligning perfectly with our commitment to Global Access. We broke our record of most webinars in a year with 21 webinars.



# Who we are

The Developing Countries Vaccine Manufacturers Network (DCVMN) International is a voluntary alliance of over 45 vaccine manufacturers from 17 developing countries, firmly engaged in innovation, research, development, manufacturing, and supply of high-quality vaccines to 170 countries striving to empower vaccine manufacturers from the developing world, enabling them to globally provide high-quality, affordable vaccines. Our purpose is to fortify vaccine producers through advocacy, professional training programs for technological advancements, and serving as a catalyst for partnerships and funding. Moreover, DCVMN champions technology transfer initiatives and diligently informs the public about the accessibility of safe, effective, and economical vaccines for all.

## The Member Manufacturers of DCVMN



# VISION

To protect people of all age groups in low-middle income countries and emerging economies against dreaded infectious diseases by augmenting the capacity of vaccine manufacturers in developing countries, to innovate, develop, produce and deliver a consistent and sustainable supply of quality vaccines at affordable prices to accelerate and reach the goal of global vaccine equity!

# MISSION

To foster a voluntary alliance of vaccine manufacturers from developing countries to develop collaborations and communication amongst them and with other industry associations and academia to leverage research, production and roll-out efforts to meet vaccine needs, strive for international recognition and attaining the status of WHO pre-qualification for a range of vaccines.

## STRATEGIC OBJECTIVES



To augment the capacity of vaccine manufactures and potentially other health technology producers, in developing countries, to innovate, develop, produce and deliver quality vaccines and other health technologies effectively at affordable prices for introduction in the national immunization programs in a sustainable manner;



To encourage and support sustainable public-private partnerships, while also aiming for global governance strategies that focus on economic incentives for vaccine manufacturers, is essential. This ensures sustainability in the market and helps provide technical assistance to manufacturers in developing countries throughout all stages of vaccine production and distribution;



To promote the sharing of ideas and experiences between DCVMs and their counterparts in developed nations through innovative ownership models and intellectual property sharing related to health advancement. Encourage the involvement of vaccine and health technology manufacturers from developing countries in global strategic planning and decision-making processes;



To disseminate comprehensible information to the broader public health community and the general public to increase vaccine confidence;



To encourage compliance of members of the network with National Regulatory Authority (NRA) and WHO requirements.

# DCVMN IN NUMBERS



**> 170**

Countries supplied with vaccines manufactured by DCVMN members, covering many MICs, LMICs and LICs



**+15**

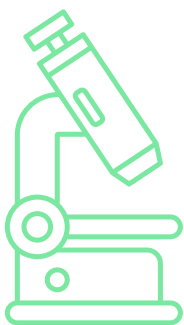
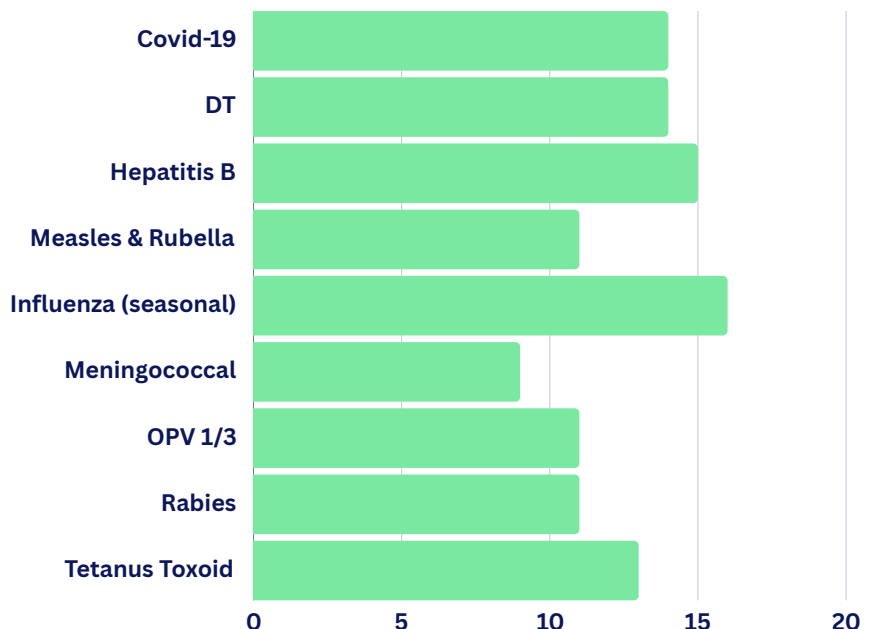
Publications in 2021-2023



**400+**

Vaccine products manufactured by DCVMN member companies, covering the most used and needed vaccines worldwide

## Vaccines manufactured by most members



**8**

Different vaccine technology platforms are being used to develop COVID-19 vaccines between all of our 20 members that are engaging in the COVID-19 vaccine effort



**80+**

Of the vaccines manufactured in the Network have WHO Prequalification

# Our 2024 Objectives

To collaborate with stakeholders to support initiatives aimed at establishing sustainable vaccine manufacturing capabilities

To augment professional development through meaningful training programs

To amplify DCVMN's voice share in influential global health institutions

To increase the focus on environmental sustainability in the vaccine field

## Our 2024 Strategies

1

Collaborate actively and support: Pandemic Preparedness Prevention & Response (PPPR).

2

Continue promoting Equity, Inclusivity, and Transparency in the field of vaccines.

3

Actively participate in the Regional Sustainable Vaccine Manufacturing Initiative.

4

Continue to undertake the 'Train the Trainers' program with Africa CDC to build capability and capacity in Africa for Africa!

5

Launch two new Working Groups Learning & Development (L&D) and Healthy Industry Framework (HIF). Re-launch Clinical Development and Medical Affairs Working Groups.

6

Initiate a pilot on environmental sustainability - Net Zero.



# News from Members and DCVMN

## LG CHEM LOCKS IN \$200M VACCINE SUPPLY DEAL WITH UNICEF

Seoul, 14 Mar. 2023 - LG Chem inked a \$200 million contract with Unicef to supply polio and pentavalent vaccines to 80 million children all over the world. The deal includes \$100 million worth of Eupolio, a polio vaccine, the contract for which lasts for two years starting from 2024. The other \$100 million is for Eupenta, a five-in-one vaccine against diphtheria, tetanus, pertussis, hepatitis B and Haemophilus influenza. Eupenta will be supplied for five years beginning in 2023.

## DCVMN AT THE 17TH WORLD CONGRESS ON PUBLIC HEALTH

Rome, 10 May 2023 – DCVMN CEO and DCVMN Board were invited by the World Federation of Public Health Associations to participate in the session of the World Leadership Dialogue “Equitable Access to Vaccines: Contributions from the Global South”, during the 17th World Congress on Public Health. During their session the panelists discussed the challenges of developing, producing and distributing vaccines by public health-driven manufacturers based in the Global South. Furthermore, they discussed that to respond to future health emergencies, it is necessary to invest heavily in R&D and infrastructure and establish technology transfers to build local competencies, together with accelerating product availability, relying on highly qualified professionals at all stages of development and manufacturing.

## MARKET AUTHORIZATION OF FIRST R21 MALARIA VACCINES IN GHANA

Accra, 13 Apr. 2023 - The R21/Matrix-M malaria vaccine, developed by the University of Oxford and manufactured and scaled up by DCVMN member Serum Institute of India, received regulatory clearance for use in Ghana. Together with existing interventions, it is hoped this vaccine will help protect communities and save lives. Ghana's FDA approved the vaccine for use in children aged 5 to 36 months, the age group at the highest risk of death from malaria. R21 has a three-dose primary series with a fourth dose a year later. The vaccine has demonstrated high levels of efficacy and safety in Phase II trials, including amongst children who received the booster dose. This vaccine is a low-dose vaccine that can be manufactured at mass scale and modest cost, enabling as many as hundreds of millions of doses to be supplied to African countries which are suffering a significant malaria burden.

## DCVMN IN BIO KOREA INTERNATIONAL CONVENTION

Seoul, 11 May 2023 - Mr. Suri represented DCVMN at the 2023 BIO KOREA International Convention. He emphasized key vaccine supply chain issues discussed included traceability, stockpiling, and new packaging and delivery technologies. Mr. Suri also presented successful initiatives by DCVMN and its members, such as barcode identification for vaccine packaging, digitalized distribution tracking, and temperature and security monitoring during delivery. Effective collaboration, technology utilization, and robust supply chain management are crucial for ensuring global vaccine supply reliability.



## **SK BIOSCIENCE RECEIVES MARKETING AUTHORIZATION OF COVID-19 VACCINE FROM UK MHRA**

Seongam, 30 May 2023 - DCVMN member SK Bioscience, has been granted marketing authorization for its COVID-19 vaccine, SKYCovion™, by the UK Medicines and Healthcare products Regulatory Agency. This authorization allows SK Bioscience to distribute SKYCovion™ in the UK market. The protein-based vaccine developed with GSK's pandemic adjuvant can be stored between 2-8 degrees Celsius, making it suitable to use in countries where ultra-low cold chain channels are not available. The authorization follows the completion of a comprehensive review process by the MHRA, which assessed the safety, efficacy, and quality of the vaccine. SK Bioscience plans to continue expanding the global distribution of its COVID-19 vaccine to contribute to the fight against the pandemic, as it has applied for an EUL.

## **MICROARRAY PATCHES (MAPS) CAN REVOLUTIONIZE VACCINE DELIVERY IN DEVELOPING COUNTRIES**

Geneva, 11 July 2023 – DCVMN wrote an article discussing the potential of vaccine patches to revolutionize immunization coverage, particularly in lower-income countries. These patches, which resemble band-aids, could offer a simpler and more accessible alternative to traditional needle-based vaccinations. The article highlights how vaccine patches are designed to be administered painlessly, without requiring refrigeration, and can potentially be self-administered, thus overcoming logistical challenges associated with traditional vaccines. This innovative vaccine delivery method has now reached an important milestone with positive results from measles-rubella MAP studies in Africa.

## **DCVMN PARTICIPATION AT THE G-20 HEALTH WORKING GROUP MEETING**

Hyderabad, 4-6 Jun. 2023 - DCVMN had the honor and opportunity to make an intervention during the 2nd Session 'Strengthening Cooperation in Pharmaceutical Sector with Focus on Access and Availability to Safe, Effective, Quality and Affordable Medical Countermeasures'. During his statement, DCVMN CEO, Rajinder Suri, underlined the continued commitment of DCVMN to collaborate and cooperate with G-20 and International Health & Funding agencies to ensure equitable and timely access to vaccines for all populations in LICs and LMICs by building regional manufacturing capacities and capabilities, through training and developing the workforce, which is a key result area identified by DCVMN.

## **G20 HEALTH MINISTERS DISCUSSIONS**

Gandhinagar, 18-19 Aug. 2023 - DCVMN participated to the G20 Health Ministers discussions on major global health priorities & challenges and reaffirmed our commitment to continue strengthening the Global Health Architecture. Throughout the two days, consensus was reached on the importance of building more resilient, equitable, sustainable and inclusive health systems and equitable access to safe, effective and affordable vaccines and therapeutics, especially in LMICs and Small Island Developing States, leaving no one behind. A focus on One Health and Antimicrobial Resistance was applied throughout the discussions addressing the nexus between climate change and health. As DCVMN, we are proudly continuing to contribute to the Presidency's theme of 'One Earth, One Family, One Future'.

## MEDIGEN OUT-LICENSING AGREEMENT WITH WHO

Geneva, 29 Aug. 2023 - Our member Medigen Vaccine Biologics Corp (MVC) accomplished a significant move towards equitable global vaccine distribution. MVC announced an out-licensing agreement with the World Health Organization's COVID-19 Technology Access Pool (C-TAP) initiative and its implementation partner Medicines Patent Pool. Through the C-TAP initiative, MVC will out-license its COVID-19 vaccine, its technology and critical know-how and provide training to licensees, fostering widespread availability and accessibility of life-saving vaccination technology worldwide. The agreement will enable licensing of IP facilitating technology transfer and staff training. This makes MVC the first private manufacturer to out-license COVID-19 vaccine technology and know-how!

## SUSTAINABLE ACTION FOR CLIMATE AND HEALTH

17 Nov. 2023 – DCVMN took a step towards a sustainable & healthier future by signing the SACH pledge, part of the Sustainable Action for Climate and Health Initiative by USAID, PATH and CHRI. The initiative brings together a diverse set of stakeholders, to innovate and co-create solutions to mitigate the impact of climate change on health to make a responsive health system. The pledge is designed to encourage private sector participation in raising awareness and committing resources to advance sustainable and healthy practices. This pledge will support and drive action by equipping private-sector corporations with resources and training to implement sustainable and health-focused practices.

## DCVMN PARTICIPATION AT THE 2ND WORLD LOCAL PRODUCTION FORUM

8 Nov. 2023 - The forum aims to leverage regional and global partnerships for local production and technology transfer for timely and equitable access worldwide. During the first session of the forum on DCVMN CEO discussed – Exploring policies, investment mechanisms, and incentives to build sustainable local production capacity. Mr. Suri talked about the importance of eliminating trade and regulatory barriers between different developing countries, mandating a certain percentage of vaccine components to be locally sourced, and establishing government-backed insurance or risk-sharing mechanisms to protect manufacturers. Mr. Suri discussed different forms of investments for strengthening local manufacturing such as revolving funds and push programs. Additionally, he also touched upon the crucial role played by partnerships, new platform technologies, and building a skilled workforce.

## IIL LAUNCHES MEASLES, RUBELLA VACCINE FOR CHILDREN

India, 28 Nov. 2023 – Indian Immunologicals Limited (IIL) recently launched the Mabella (Measles and Rubella) vaccine for children, a significant achievement in exclusive partnership with other DCVMN member Polyvac Institute, Vietnam. Through rigorous human clinical trials, Mabella has proven its safety and efficacy, marking a crucial step in combating Measles and Rubella, which tragically claim about 100,000 children's lives worldwide. Anand Kumar, Managing Director at IIL, emphasizes the company's commitment to disease elimination and eradication over sales figures, reflecting their dedication to global health. Notably, IIL stands as a major supplier of human vaccines to the UIP, Ministry of Health and Family Welfare, and exports vaccines to over 50 countries. Their pioneering efforts have transformed vaccine landscapes, introducing vital childhood vaccines and revolutionizing disease prevention.

## **USA NATIONAL INSTITUTE OF HEALTH (NIH) SUB-LICENSED DENGUE TECHNOLOGY TO DCVMN MEMBERS**

28 Nov. 2023 - Serum Institute of India is gearing up to commence Phase I/II trials of a dengue vaccine in India, bringing India closer to generating its first indigenous dengue vaccine. The Dengusiil vaccine virus strain has been developed by NIH USA. After conducting multiple clinical trials, NIH sub-licensed this technology to SII and other DCVMN members, such as Instituto Butantan, Panacea Biotech and Indian Immunologicals Limited. Instituto Butantan has successfully completed Phase II and III studies in Brazil, demonstrating the vaccine's high immunogenicity and safety. Remarkably, the vaccine exhibited an efficacy rate of 80% in preventing symptomatic dengue of any severity caused by various dengue virus serotypes. The potential market release of the Dengusiil vaccine is anticipated by 2027.

## **PANACEA BIOTECH LAUNCHES EASYFOURPOL® IN INDIA AND RECEIVES REGISTRATION OF VALGANCICLOVIR POWDER FOR ORAL SOLUTION IN GERMANY**

Singapore, 14 Dec. 2023 – DCVMN member's, Panacea Biotech, EasyFourPol stands out as the world's first fully liquid wP-IPV Pentavalent vaccine, protecting children against five severe diseases: Diphtheria, Tetanus, Pertussis, Polio, and invasive infections caused by Haemophilus Influenza Type b. This ready-to-use combination vaccine matches the protection level of single-antigen vaccines, minimizing clinic visits, and cutting overall immunization costs for all involved. By reducing vaccinations and shots for children, it ensures greater comfort for parents and better compliance for healthcare providers. Moreover, fewer shots mean the reduction carbon emissions by lessening the demand for vials, syringes, packaging materials, and visits to vaccine centers.

## **COVAX SUNSETTING CEREMONY**

London, 13 Dec. 2023 - The COVAX Sunsetting ceremony marked a significant milestone. It was the culmination of the last COVAX townhall meeting, symbolizing a remarkable chapter in global vaccination efforts. DCVMN proudly stood alongside this historic initiative and contributed through our members who played pivotal roles in manufacturing a substantial portion of the 2 billion doses delivered to 146 countries by COVAX. This momentous occasion underscores the collective efforts and dedication toward global vaccine equity. We celebrate the collaborative spirit that made this achievement possible and remain committed to advancing vaccine equity worldwide.

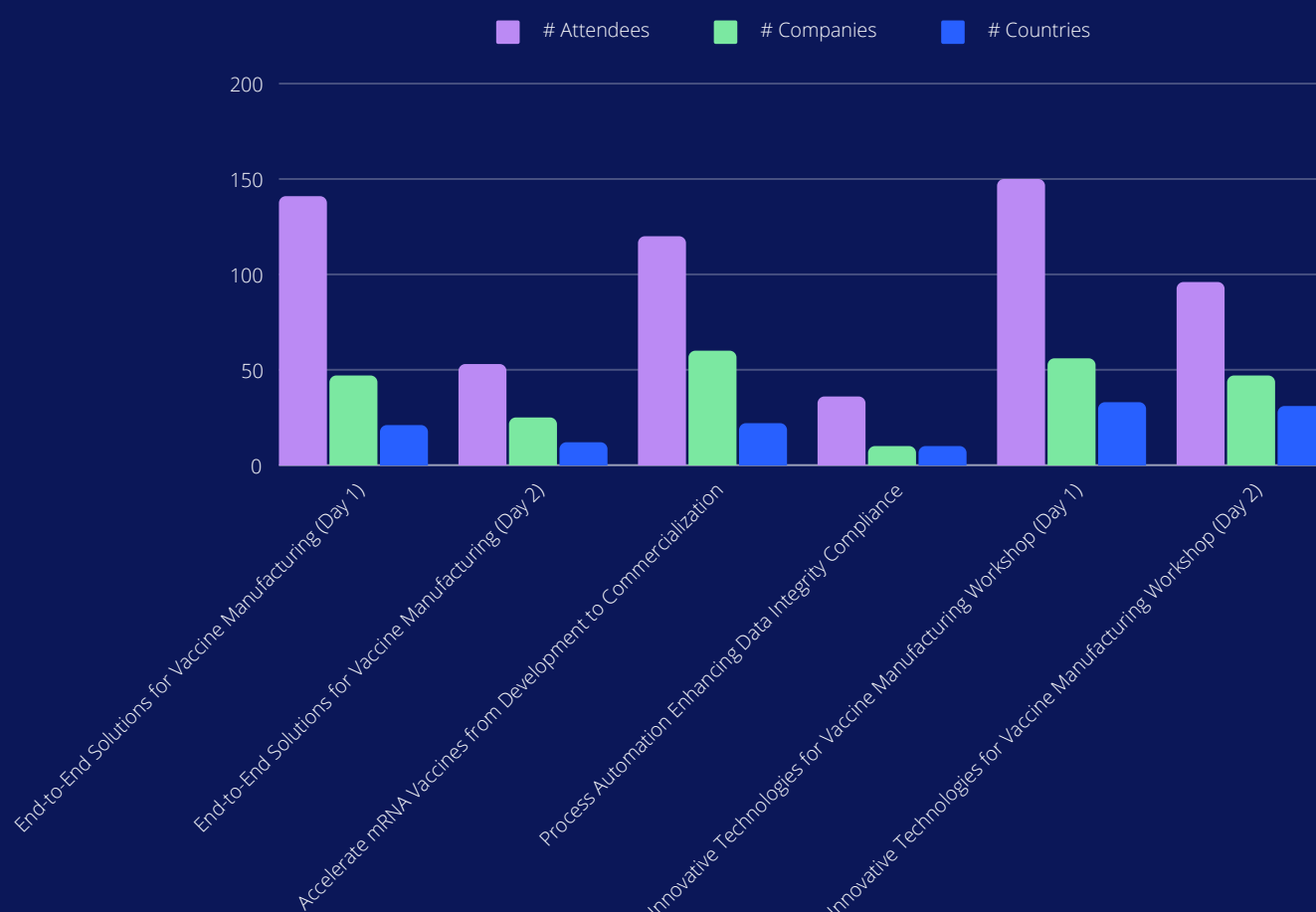
# DCVMN Training Programmes

## WORKSHOPS

DCVMN has been actively facilitating interactive training workshops since 2013 [1], aimed at enhancing the expertise of professionals within its member companies. In 2023, the Network continued this tradition by organizing three workshops with its Expert Working Groups. Two workshops were convened by the Pharmacovigilance WG, one held in Geneva and the second in Barcelona, while the Regulatory Affairs WG conducted one in Singapore.

Over the past year, DCVMN hosted four dynamic workshops led by experts from our sponsors. Renowned for their immersive experiences, extended durations, and comprehensive content, these workshops offer participants a deep exploration of crucial subjects. Spanning a range of innovative technologies in vaccine manufacturing, our workshops delved into diverse themes. From discussions on expediting mRNA vaccine development to commercialization, to insights into process automation for heightened data integrity compliance, each workshop provided invaluable knowledge and insights.

*Number of attendees, companies, and countries represented in DCVMN's 2023 workshops, with the understanding that one connection might correspond to a group of people attending together. Chart graciously prepared by Ms. T. Lacerda.*



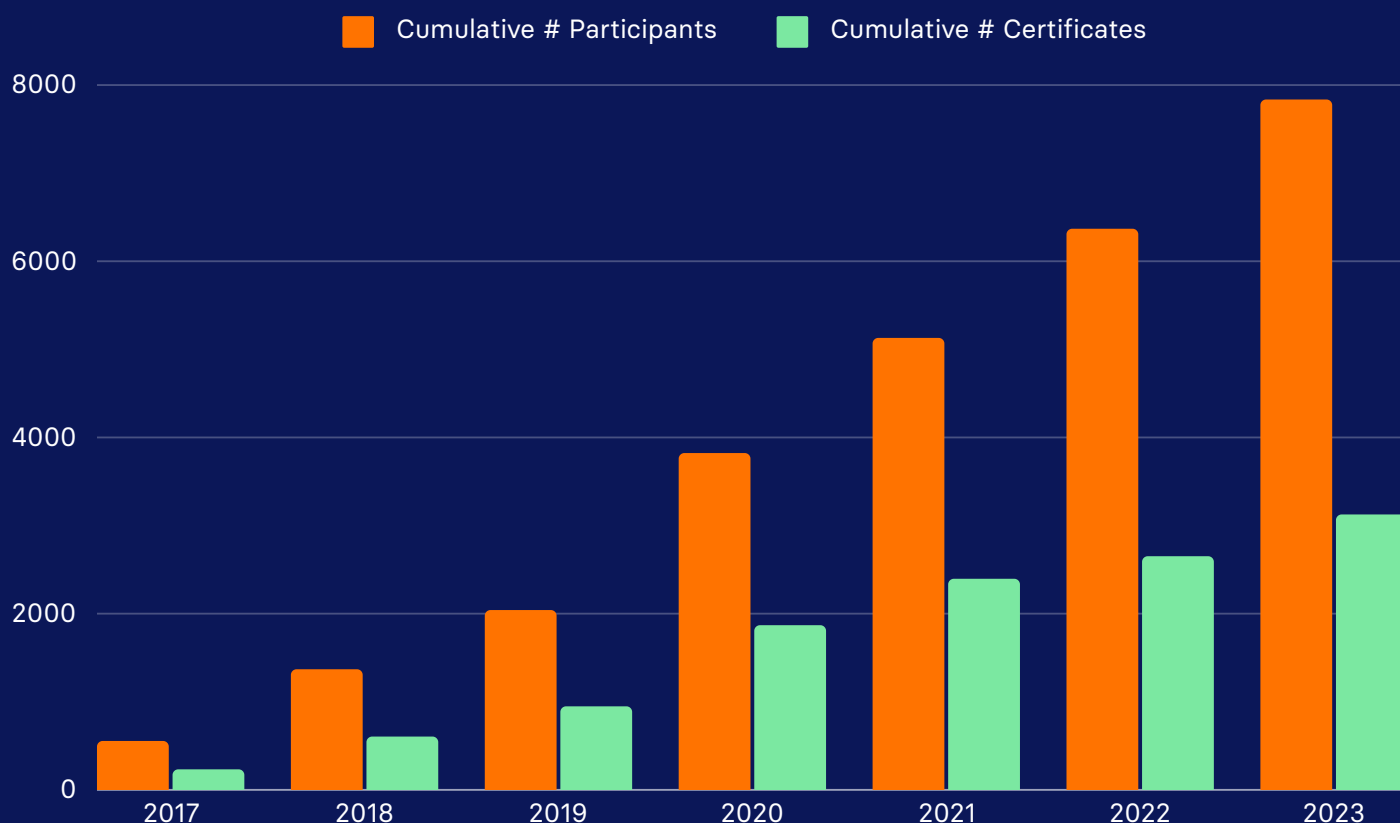
[1] Training materials are openly available at <https://dcvmn.org/dcvmn-training-workshops/>

# E-LEARNING

Our E-Learning Platform has undergone a significant transformation. It has been re-designed and you can provide direct feedback on the courses, all to provide you with an even better and smoother learning experience. Our platform offers meticulously-crafted courses by industry experts. Whether you're starting your career or aiming to enhance your skills, you'll find valuable insights that empower you in the field. Accessing the platform is only subject to dedication and keenness towards learning. Since 2016, the platform has already served more than 7,840 enrolments comprising global vaccine workforce, educators, researchers, etc. With our self-paced courses, you have the flexibility to study when and where you want. Take control of your education and explore the enhanced features by visiting our E-Learning Platform. We are already in the process of developing new courses set to launch in 2024.

DCVMN E-Learning platform currently hosts 26 self-paced modules designed to enhance professional skills, share best practices, and impart specific knowledge to vaccine manufacturers. Upon successful completion of a course, participants receive a Certificate of Achievement by scoring 80% or more in the final knowledge check at the end of the course. In 2023, the platform received nearly 600 enrollments with 92 certificates awarded, making the total count of certificates issued 3,126. E-courses are accessible at <https://moodle.dcvmn.net/>, upon registration.

*Cumulative number of e-training enrollments and cumulative number e-certificates achieved from 2017 to the end of 2023. Chart graciously prepared by Ms. M. Sharma.*

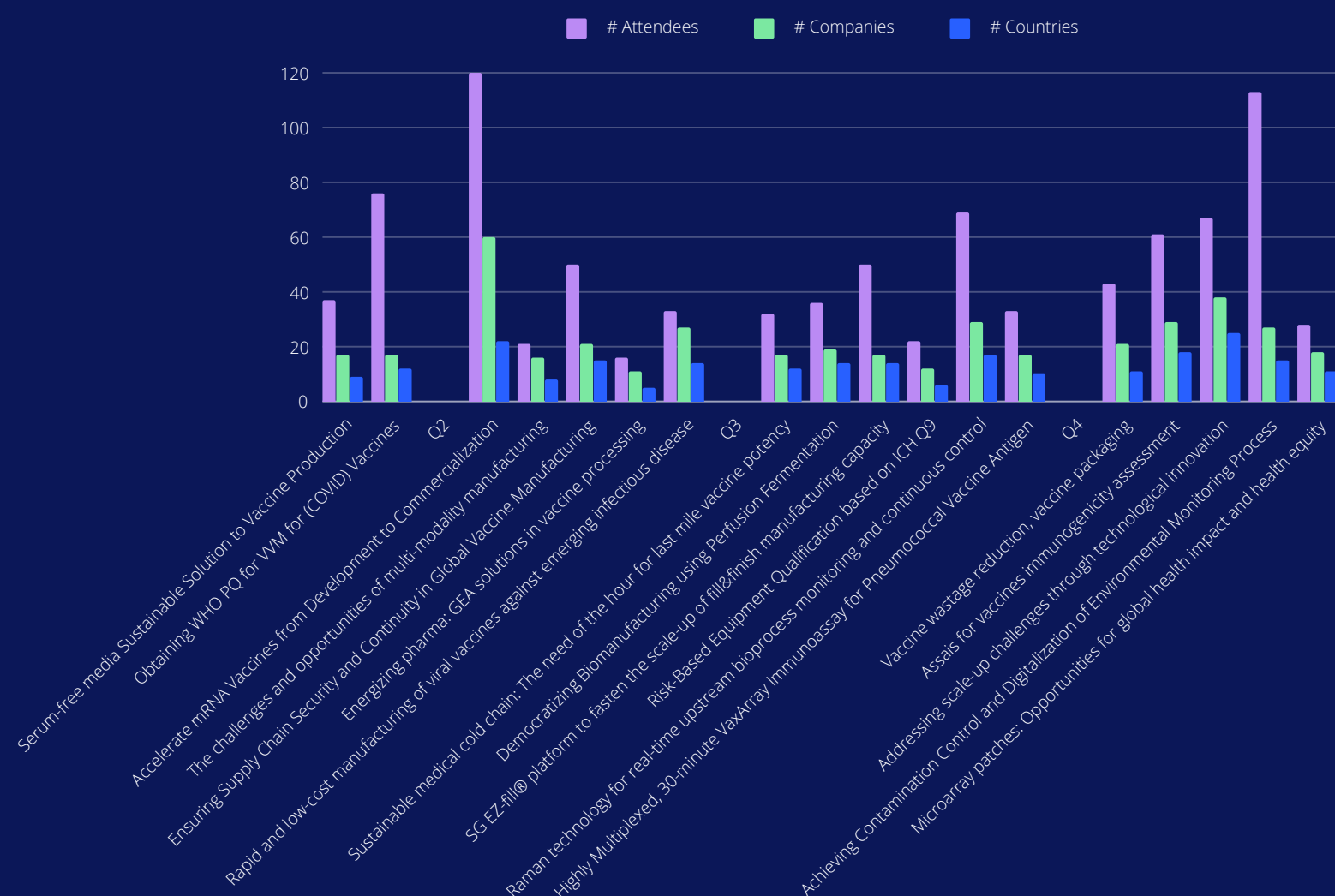


# WEBINARS

DCVMN International conducts interdisciplinary webinars and virtual workshops in collaboration with its resource members, sponsors, and Working Groups. These sessions, held monthly, feature leading experts who voluntarily share recent innovations, best practices, and technical knowledge which are relevant to the vaccine industry. Through presentations and interactive Q&A sessions, participants enhance their professional skills and educational knowledge, gaining valuable insights applicable to excelling in the vaccine industry [2].

In 2023, DCVMN hosted 21 webinars focusing on an array of topics as displayed below. In 2023, the participation by both members and external attendees more than doubled compared to 2020. To continuously meet training needs and enhance participant experience, two Feedback Surveys were circulated on each half of 2023. This helped redesign the format, topic, content and post-event actions for 2024. Overall, the respondents gave an average of 4.45 out of 5 for the relevance of the webinars to their professional expectations, and 96% informed that they would likely recommend the DCVMN Webinar Series to others.

*Number of attendees, companies, and countries represented in DCVMN's 2023 webinars, with the understanding that one connection might correspond to a group of people attending together. Chart graciously prepared by Ms. T. Lacerda.*





# DCVMN TECHNOLOGY TRANSFER TRAINING

In 2023, DCVMN, in collaboration with Hilleman Laboratories, hosted two Technology Transfer Training Programmes in Singapore, extending valuable expertise to our diverse network.

The first Tech Transfer Training program of 2023 gathered participants from our member manufacturers across South America, West Africa, Southeast Asia, China, and India for a two-week intensive program. The curriculum delved into the intricacies of technology transfer, covering fundamental processes, operational aspects of vaccine development, and diverse tech transfer approaches and strategies. Participants collaborated to design and present real-world tech transfer plans, fostering a dynamic exchange of knowledge and experiences.

In partnership with Africa CDC, the second training program was tailored exclusively for the brilliant minds of the African continent. The 10-day training was delivered in hybrid format. The first phase of training featured online sessions coupled with virtual trainer interaction, covering crucial aspects such as when and how to perform technology transfer,



regulatory requirements, legal considerations, and potential pitfalls. The second phase comprised hands-on onsite training in Singapore, offering immersive experiences, exposure to cutting-edge technologies, and consultations with subject-matter experts. This approach ensures participants return to Africa equipped to apply their newfound knowledge effectively.

As we look ahead to 2024, we are looking to expand the locations at which the training will take place in. Stay tuned for upcoming nominations for our transformative Technology Transfer Training Programmes. These initiatives exemplify our commitment to fostering global collaboration and advancing expertise within the vaccine manufacturing community.

# VIRTUAL REALITY



Early in 2023, we proudly launched the DCVMN VR Trainings [3], featuring three immersive modules tailored to provide hands-on experiences crucial for vaccine manufacturing, with a specific focus on laboratory and facility operations. The modules include cleanroom 1-piece unit gowning procedure, vaccine fill-finish machine assembly, and fill-finish machine process interventions. The modules are available for free download on our website!

We are excited to share that DCVMN International is the first global organization leveraging innovative VR technology to deliver training in the vaccine manufacturing field. VR serves as the pivotal link between theoretical learning and practical training. It provides employees with a secure, simulated environment, allowing them to gain crucial hands-on experience even before entering the physical manufacturing setup. Our mission is to continually expand our module library, covering a wide range of topics to better support our member companies and facilitate the seamless adoption and integration of VR technology into their employee training programs.

In August, we hosted our first regional workshop in India. We gathered trainers from our member manufacturers and equipped them with VR know-how and familiarized them with our new modules, paving the way for seamless implementation in their facilities. Looking ahead to 2024, we are actively planning additional regional workshops and are in the process of developing an e-learning course that encapsulates all workshop information.

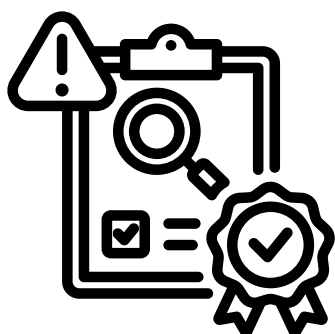
# Expert Working Groups

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The expert Working Groups (WGs) are formed by DCVMN member manufacturers around areas of common interest, including Supply Chain & Traceability, Regulatory Affairs, Pharmacovigilance, Clinical Development & Medical Affairs, and are supported by independent senior expert consultants [4]. The WGs hold regular meetings, sharing best-practices and projects of common interest to most members. The WG activities are currently funded with donors' funds, to develop and analyze surveys, design projects, draft white papers, training & communication materials. Since 2019, the Donors Advisory Committee and WG members act on a voluntary non-remunerated basis, similar to Board members, which empowers the members to get directly involved in leading the working groups and related Network activities.

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## Clinical Development & Medical Affairs Working Group



The Clinical and Medical Affairs Working Group (CDMA WG) identifies and assesses the members' capacity to develop and implement a benefit-risk approach for their Clinical and Medical activities. The purpose of the working group is to ensure that DCVMN member companies are equipped with state-of-the art methodology to provide vaccines according to international standards and guidelines, aligned with national and international regulatory requirements.

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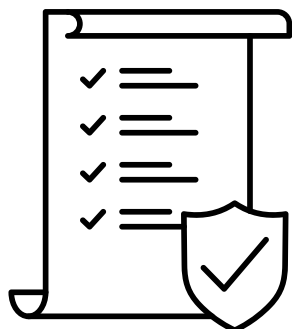
## Pharmacovigilance



The vaccine pharmacovigilance (PV) working group identifies the needs to improve and strengthen pharmacovigilance systems for vaccine manufacturers in emerging countries so that DCVMN member companies are equipped with up-to date knowledge on how to improve global vaccine safety monitoring, operational pharmacovigilance capabilities and proactively identify and respond to potential safety issues, including resource implications, which are aligned with WHO and relevant national regulatory requirements.



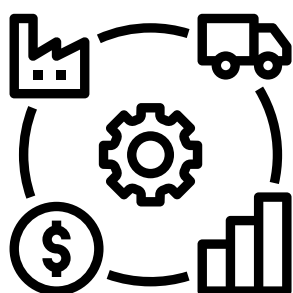
## Regulatory Affairs



The regulatory affairs working group shares the best practices in regulatory science and regulatory approaches. The group seeks to collaborate for the identification of regulatory challenges at both the pre-marketing and post-marketing stages in the vaccine life cycle. It explores potential opportunities for increased efficiency of regulatory processes worldwide, improvement of the vaccine registration procedures and processes (pre-registration stage) in countries, and to identify challenges and opportunities for the improvement of post-approval changes (PACs) management. The proposals from the group are shared widely with partners and vaccine stakeholders who can encourage regulators in implementing some of the proposed changes for improvement.

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## Supply Chain & Traceability



The goal of the supply chain expert group is to share best practices and find common solutions for companies to increase the efficiency and effectiveness of their vaccine supply chain through innovation in the manufacturing and distribution stages. Presently, the group focuses on tracking vaccines (traceability), stockpiling and considering new packaging technologies. It develops position papers that can inform DCVMN members and the wider global immunity community on the specific actions DCVMN members could undertake to improve the vaccine supply chain, including any resource implications.

## Pharmacovigilance Working Group

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The Pharmacovigilance Working Group is engaged in a project on Active Vaccine Safety Surveillance (AVSS). AVSS is a data collection system seeking to ascertain the number or AEFIs in a given population by a continuous organized process. The group had a first workshop on 16-17 February. A total of 35 participants from 18 companies attended. The participants received a detailed training on AVSS.



The level of experience in AVSS varies much amongst the different Developing Countries, not only amongst the manufacturers, but also amongst the NRAs. In October 20-21st the PV WG held another workshop to work on a mock protocol summary to understand better how a protocol shall be prepared. The fourth phase of the four of this project, planned for Q1 2024, will require each member company to work within their teams on a protocol summary for a vaccine of their own. The protocols will be reviewed by experts and feedback will be given to the members. Finally, a publication will be issued. The project will finalize in Q2 2024.



In parallel, the Chair and Co-chair of the WG have participated in the BeCOME initiative representing DCVMN.

# Regulatory Working Group

The Regulatory Working Group convened bi-monthly, occasionally welcoming IFPMA members to certain meetings. With a primary focus on Post Approval Changes (PACs), the group delved into discussions about the regional landscape for PACs and the potential adoption of TRS 993 Annex 4. In parallel, the working group has been working in crafting a new module on Post Approval Changes for the DCVMN e-learning platform, anticipated for completion in Q1 2024.

On November 24-25 the Regulatory WG held a workshop in Singapore. This gathering was a platform for robust exchanges featuring a comprehensive exploration of PAC and TRS 993 Annex 4, featuring valuable insights into NGS shared by esteemed members. Notable regulators, including Koen Brusselsmans from ScienSano, NRA Belgium, and Gibran Horemheb Rubio Quintanares from PEI NRA Germany, contributed constructive insights.

The group decided that while working on the PACs project, in which DCVMN will advocate for them with PAHO and WHO as well as NRAs for the adoption of the TRS 993 Annex 4, the Working Group will work on a project on NGS to promote the adoption of this technology by more DCVMN members and NRAs. As part of the initiative, the WG will kickstart the project with in-depth training, collaborating with regulatory agencies, with specifics to be defined in the near future.





# Supply Chain Working Group

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The Supply Chain Working group worked on two initiatives this year. One was to work on a Supply Chain & Logistic Cost-optimization. This included a volumetric analysis of the tertiary packaging from the different member companies to propose an optimization on shipping containers in order to reduce Air freight cost. Information was analyzed from 8 member companies, having identified an average of 20% dead space in the process. This project will undergo a second phase expanding its scope to involve a more extensive array of member companies. This step aims to refine the proposal, ensuring its suitability for the majority of manufacturers within the network.

The second project involves the sharing of surplus stockpile inventories among members to prevent losses resulting from unused inventory, specifically single-use consumables and packaging materials. By facilitating the exchange of these items between members, the initiative allows for cost-effective transactions at a lower price than if procured directly from suppliers. This collaborative effort not only fosters a sense of community but also provides mutual support among manufacturers in DCVMN.



# DCVMN Representation at Global Meetings

## ADVOCACY AT HIGH LEVEL FORUMS



**ACT-Accelerator Tracking and Monitoring Task Force**



**CEPI Joint Coordination Group (JCG)**



**COVAX Coordination Meeting (CCM)**



**Gavi Vaccine Investment Strategy (VIS) Steering Committee**



**G-20 Health Group 2023**



**Leadership Dialogue: Pandemic Preparedness, Prevention and Response for Health Security - 15th BRICS Summit**



**Partnerships for African Vaccine Manufacturing (PAVM)**



**Regional Vaccine Manufacturing Collaborative (RVMC)**



**World Local Production Forum (WLPF)**



**World Vaccine Congress**

## REPRESENTATION AT SCIENTIFIC FORUMS

Expert Committee on Biological  
Standardization (ECBS)



GAVI Market Shaping



Global Influenza Surveillance and Response  
System (GISRS)



WHO Market Information for Access to  
Vaccines (MI4A)



## DCVMN MEMBERS WERE INVITED TO CONTRIBUTE



BeCOME - Beyond COVID Monitoring  
Excellence



CEPI CMC Templates project



Expert Committee on Biological  
Standardization



Product Development for Vaccines Advisory  
Committee (PDVAC) Meeting



WHO Global Clinical Trials Forum



WHO guidance on best practices for clinical  
trials



WHO Immunization and vaccines related  
implementation research advisory committee (IVIR-AC)



WHO Prequalification (PQ) Webinar for Manufacturers,  
Developers, Procurement Agents, and Partners



# 24th Annual General Meeting

## ACCELERATING SUSTAINABLE REGIONAL VACCINE MANUFACTURING THROUGH GLOBAL PARTNERSHIPS

The 24th Annual General Meeting (AGM) of DCVMN convened from September 19th to 21st, 2023, in Cape Town, South Africa, in collaboration with Biovac and was inaugurated by H.E. Mr. Paul Mashatile, the Honourable Deputy President of the Republic of South Africa.

With over 400 delegates, 100 high-level speakers and several notorious sponsors, the AGM facilitated three days of insightful presentations, engaging discussions, and invaluable networking opportunities. Serving as a pivotal platform, this event provided vaccine manufacturers from developing nations with a voice to share their experiences, challenges, and achievements with global stakeholders.

Across 12 highly productive sessions, the central theme revolved around the diverse forms of partnerships and their indispensable role in accelerating vaccine manufacturing, fostering innovation, and promoting equitable access to vaccines worldwide. Discussions encompassed South-to-South, North-to-South partnerships, collaborations with international organizations, and research institutions, highlighting initiatives like the mRNA Hub in South Africa.

The critical importance of both short and long-term financial partnerships, rooted in trust and transparency, was emphasized in nurturing sustainable local production. Regulatory harmonization and reliance, whether at a regional level or guided by trusted institutions, emerged as essential for expediting the manufacturing-to-vaccination process.

Moreover, partnerships were underscored as pivotal for enhancing communication between stakeholders and manufacturers, particularly in gauging vaccine demands crucial for instilling confidence among manufacturers.

Workforce development emerged as a key focus, advocating for continual skill enhancement and talent management to meet evolving industry demands. Special emphasis was placed on fostering a culture of lifelong learning, utilizing online resources, and integrating innovative technologies such as VR into training programs.

Lastly, to ensure the transformation of vaccines into vaccinations, advocacy was highlighted as vital to combat hesitancy, and leveraging the significant role of women in local vaccination initiatives.



# 24th Annual General Meeting



# Financial Statements

## BALANCE SHEET AS AT 31 DECEMBER 2023

<b>ASSETS</b>		<b>31.12.203</b>	<b>31.12.2022</b>
		USD	USD
<b>Current assets</b>			
Liquidities		686'607.63	2'868'688.09
Investments with a quoted market price		2'646'657.32	0.00
Membership fee to receive		52'000.00	45'000.00
Provision for loss on membership to receive		-20'000.00	-15'000.00
Advance deposit for expenses		5'000.00	10'000.00
Regus deposit		654.69	62.69
Prepaid expenses and accrued income		32'751.10	22'743.65
<b>Total current assets</b>		<b>3'403'670.74</b>	<b>2'931'494.43</b>
<b>TOTAL ASSETS</b>		<b>3'403'670.74</b>	<b>2'931'494.43</b>
<b>LIABILITIES</b>			
<b>Short-term liabilities</b>	Notes		
Payables		29'862.29	39'719.09
Donations carryover	3.1	104'948.88	82'251.16
Accrued expenses		42'805.34	31'042.98
<b>Total short-term liabilities</b>		<b>177'616.51</b>	<b>153'013.23</b>
<b>Unrestricted reserves</b>			
Capital		2'778'481.20	2'834'634.25
Net result for the year		447'573.03	-56'153.05
<b>Total unrestricted reserves</b>		<b>3'226'054.23</b>	<b>2'778'481.20</b>
<b>TOTAL LIABILITIES AND RESERVES</b>		<b>3'403'670.74</b>	<b>2'931'494.43</b>



# INCOME AND EXPENSES STATEMENT FOR THE YEAR ENDED 31 DECEMBER

		2023	2022
		USD	USD
<b>Income</b>	Notes		
Members contributions		920'000.00	573'000.00
Provision for loss on members contributions for previous year		-20'000.00	-15'000.00
Reversal provision for loss on members contributions for previous year		15'000.00	0.00
Loss on members contributions		-21'000.00	0.00
Sponsors contributions		287'250.00	220'000.00
Restricted donations received		797'750.00	490'000.00
Donations carryover from previous year		82'251.16	496'909.02
Donations carryover to the next year	3.1	-104'948.88	-82'251.16
Annual meeting contribution participants		23'864.60	12'742.35
<b>Total income before financial income</b>		<b>1'980'166.88</b>	<b>1'695'400.21</b>
<b>Total income</b>		<b>1'980'166.88</b>	<b>1'695'400.21</b>
<b>Operating expenses</b>			
Best practice supply WG		-3'687.31	-221'213.63
Training Initiative		-301'969.38	-243'003.35
VR Program		-17'821.24	0.00
Workshops		-39'923.14	0.00
Consultants TBD-Business Modeling		-30'000.00	0.00
Regulatory Forum initiative		-43'797.50	-207'682.37
Knowledge exchange and databases initiative		-9'790.37	-13'109.22
Pharmacovigilance initiative		-57'539.07	-83'858.97
Travel		-5'307.47	-15'573.19
Shipment		-1'100.10	0.00
Annual General Meeting		-144'001.55	0.00
<b>Total operating expenses</b>		<b>-654'937.13</b>	<b>-784'440.73</b>
<b>Staff Costs</b>			
Salaries		-611'478.49	-630'464.91
Social contributions AVS/AI/APG/AC/PCFam		-16'929.97	-29'843.96
Social and accident insurances		-3'473.79	-5'979.25
LPP contribution		-9'799.96	-20'905.56
<b>Total staff costs</b>		<b>-641'682.21</b>	<b>-687'193.68</b>
<b>Other operating expenses</b>			
Office rental		-8'481.82	-7'659.48
Office supplies		-29'543.86	-20'924.89
Accounting services		-28'716.16	-26'414.24
Legal consulting		-36'292.20	-36'767.30
HR and payroll services		-18'954.06	-19'931.82
Other services		-42'552.44	0.00
Membership fee and donation		-26'000.00	-26'000.00
Financial audit		-12'960.49	-10'847.60
Publications		-2'193.57	0.00
Management expenses		-408.31	-23'575.18
Travel expenses		-98'849.36	-65'799.17
Miscellaneous		-644.25	-116.14
<b>Total other operating expenses</b>		<b>-305'596.52</b>	<b>-238'035.82</b>
<b>EARNINGS BEFORE INTEREST AND TAXES</b>		<b>377'951.02</b>	<b>-14'270.02</b>
<b>Financial income and expenses</b>			
Interests paid		-77.44	-16.95
Gain on investments		127'283.57	0.00
Bank charges		-15'488.51	-5'430.80
Foreign exchange loss		-18'875.09	-20'067.43
<b>Total financial income and expenses</b>		<b>92'842.53</b>	<b>-25'515.18</b>
<b>EARNINGS BEFORE TAXES</b>		<b>470'793.55</b>	<b>-39'785.20</b>
<b>Prior-period and extraordinary income and expenses</b>			
Others income		509.09	862.75
Taxes on previous year		-729.61	2'610.66
<b>Total prior-period income and expenses</b>		<b>-220.52</b>	<b>3'473.41</b>
<b>RESULT BEFORE TAXES</b>		<b>470'573.03</b>	<b>-36'311.79</b>
Local taxes		-23'000.00	-19'841.26
<b>NET RESULT FOR THE YEAR</b>		<b>447'573.03</b>	<b>-56'153.05</b>

# Notes to the Financial Statements

## 1. Overview

### Purpose of the association

DCVMN is a public health driven, international alliance of manufacturers, working to strengthen vaccine manufacturers through the provision of information and professional training programs, technology improvements, innovative vaccine research and development, encouraging technology transfer initiatives, and educating the public about the availability of safe, effective and affordable vaccines for all people.

## 2. Accounting principles applied in the preparation of the financial statements

These financial statements have been prepared on the basis of the following elements:

### Foreign currency translation

Assets and liabilities in foreign currencies are translated into US Dollar at the exchange rate in effect at the balance sheet date. Transactions in foreign currencies are translated into US Dollar at the rate in effect at the average monthly rate.

### Liquidities

Cash and cash equivalents are carried in the balance sheet at their nominal value.

### Investments with a quoted market price

Investments with a quoted market price are valued at the market price.

### Membership fee to receive

Members contributions to receive are carried at their nominal value. Charges are calculated for these assets on an individual basis.

### Payables

Payables are recorded in the balance sheet at their nominal value on the basis of invoices corresponding to services made on the date of closing.

### Recognition of revenues and expenses

Revenues are recorded on the principle of periodicity, i.e., when revenue-generating transactions or events occur rather than on the basis of cash flows. Expenses are recorded according to the principle of periodic delimitation, i.e. when the operations or events generating expenses occur and not according to cash flows.

## 3. Details, analyses and explanations to the financial statements

### Number of full-time

The number of full-time employee equivalents did not exceed 10 on an annual average basis.

### Pension liabilities

On 31 December 2023 the liability to the pension scheme amounted to USD 0.- (31 December 2022: USD 4'894.63).

### Explanations of income and expenses statement

#### 3.1 *Donations carryover to the next year*

The amount of USD 104'948.88 (PATH for USD 93'642.92 and PSPT for USD 11'305.96) was unused by 31st December 2023 and therefore deferred as carryover to be disbursed in 2024, with agreement of the donor. Carryover is the process by which unobligated funds remaining at the end of a budget period may be carried forward to the next budget period to cover allowable costs in that budget period. The carryover of funds enables grantees to use unexpended prior year grant funds in the next budget period.

#### 3.2 *Loss on members contributions*

A provision on loss on members contributions for an amount of USD 20'000 has been booked for the year 2023.

## 4. General comments

1. DCVMN annual revenue from memberships and donations in 2023 increased by 56%, to USD 2'022'864.60 before carryover, and before the variation on the provision on members contributions, from USD 1'295'742.35, in 2022. This is mainly related to increase partnerships and donations, as compared to 2022.

2. Membership status as of December 2022 indicated that there were 42 members, of which 16 were full members (with WHO PQed vaccines). In 2023 one member left the network and two members didn't settled their membership contributions.

3. The Network's activities and interim financial statements (up to Q3/2023) were presented by the Treasurer, on behalf of the Board, to the General Assembly of members on 19th September 2023.

4. The Board of members proposed budget for 2024 approved by the members assembly is targeted at USD 1'415'000 for DCVMN Office and USD 1'084'200 for grants. - income and ca. USD 1'417'112 for DCVMN Office and USD 1'084'200. - on grants for expenses, which includes carryover funds from donors.

5. The income budget for 2024, was based on the assumptions below:

a) a pledge of USD 1'084'200.-, allocated for training and related activities in 2024 (grants already signed in 2023).

b) the membership contributions expected to increase to USD 965'000 (USD 880'000 in 2023).- The funds received from members are dedicated to administrative operations including secretariat, rental, IT, supplies communication and staff salaries.

c) continuous corporate sponsorship contributions estimated at ca. 300'000.- USD, for workshops and AGM.

Note that exchange rate volatility may influence the budget up/downwards.

6. All income and disbursements are handled exclusively by bank transfers, providing traceable, independent and accurate accounting records, complying with international accounting and business practices. All disbursements are subject to a two-signature system approval, prepared by the Secretariat and approved by the Treasurer, with two witnesses, an external comptroller and a DCVMN member. All disbursements correspond to bank transaction records and invoices corresponding to services. Accounts are available to corporate members, nominated by the Board of members, as well as by donors and local authorities, for financial review and assessment.

# ANNEX

## 1. DCVMN Board Structure 2023-26

The DCVMN Board [5] is composed of seven elected members with skills and experiences to provide governance oversight to the DCVMN secretariat, through the Chief Executive Officer, Mr. Rajinder Kumar Suri. All Board members act on a voluntary, non-remunerated basis. The DCVMN Board held 6 formal governance meetings, on virtual platform, on the following dates: 4th January, 10th February, 4th May, 12th June, 12th July, 1st August, 18th September, with pre-set agenda and relevant documents circulated in advance to facilitate informed decisions. Minutes to the formal virtual meetings are accessible to all members to consult at <https://dcvmn.org/board-meeting-minutes/>.

Role	Name	Affiliation	Attendance out of 6 virtual meetings in 2023
Chair	Adriansjah Azhari	PT BioFarma	6
Deputy Chair	Tiago Rocca	Instituto Butantan	6
Member	Sunil Gairola	Serum Institute of India	5
Member	Rachel Park	EuBiologics	6
Member	Andrew Wong	Walwax	6
Member	Mauricio Zuma Medeiros	Bio-Manguinhos/Fiocruz	5
Member	Venkatraman Sivaramakrishnan	Bharat Biotech	5
CEO (non-voting)	Rajinder Kumar Suri	DCVMN International	6

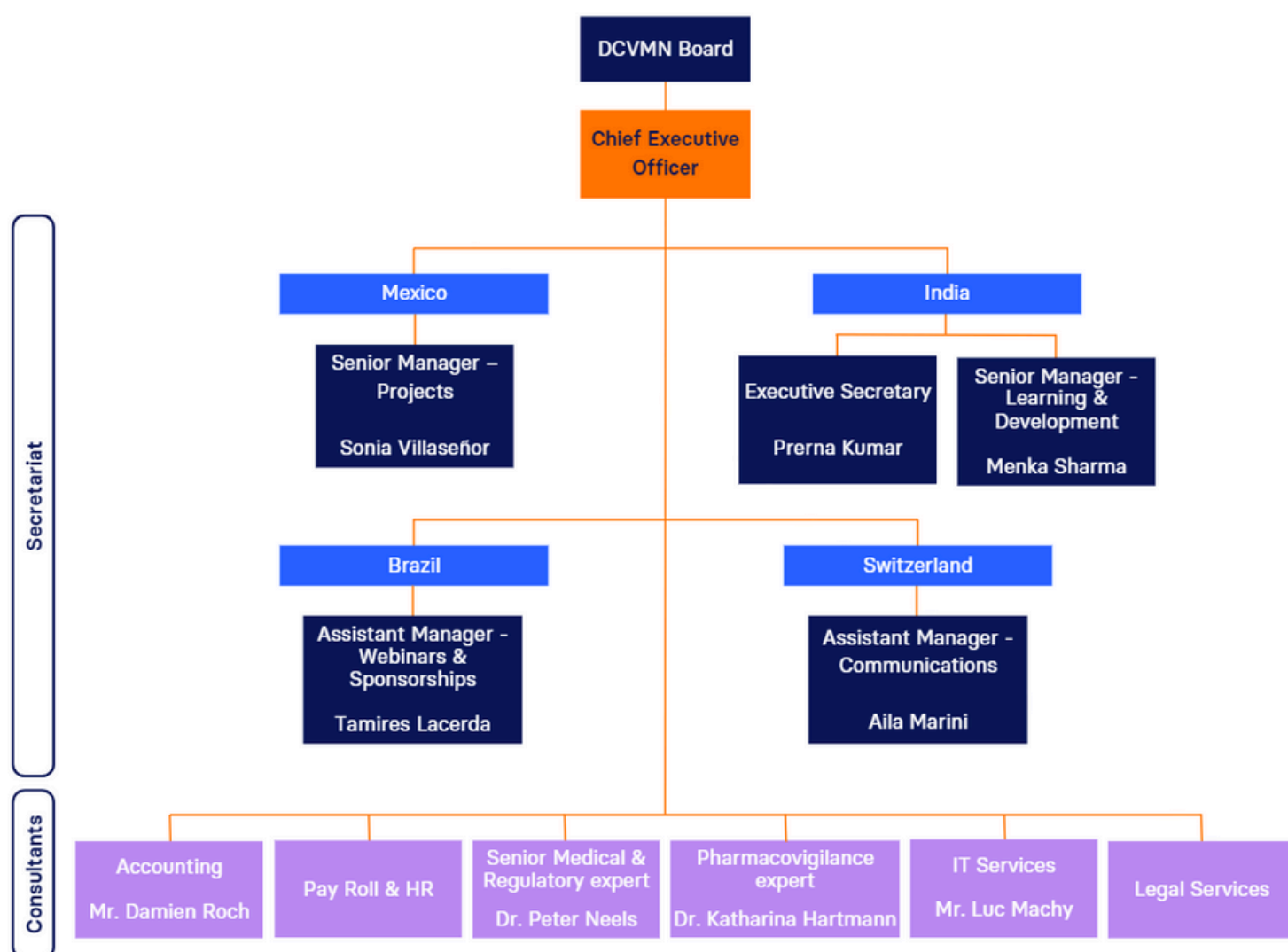
[5] <https://dcvmn.org/dcvmn-board/>



## 2. Donors Advisory Committee

The Donors Advisory Committee [6] (DAC) advises DCVMN on donor funded activities, and has no executive role. As a strictly advisory, non-governing body, the DAC does not have either decision-making authority or fiduciary responsibilities. It is composed by three DCVMN members and four external advisers from PATH, Bill & Melinda Gates Foundation, International Finance Corporation and National Institute for Innovation in Manufacturing Biopharmaceuticals, who are supporting and guiding the Network on principles, technical and scientific activities for member manufacturers, e.g. training programs. Members are appointed by the Board according to advice and support requirements. Appointment duration is dependent on the Advisory Committee needs and individual availability. The Advisory Committee held 3 virtual meetings in 2023 (April 12th, July 14th and October 25th).

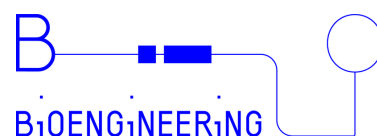
## 3. DCVMN Secretariat Structure 2023



[6] <https://dcvmn.org/donors-advisory-committee/>

# Acknowledgements

We are grateful for our corporate sponsors for helping foster manufacturing excellence for the benefit of all people, facilitating knowledge sharing and intensifying training opportunities for a skilled industry workforce in developing countries.



We thank PATH for their grant to DCVMN International, continuing to support our professional training programs. We also thank Biovac & PATH for supporting the Annual General Meeting 2023.




Important Note: The views expressed in this publication do not necessarily represent decisions or policies of any institutions mentioned or with which the Network is associated.





# DCVMN

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