**DCVMN 3Rs Working Group**

**Operational Approach and Objectives**

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**Background for the creation of the 3Rs WG**

During May 2018, DCVMN organized a first workshop in Hyderabad aimed to inform all members on alternative methods for vaccine testing[[1]](#footnote-1). Further follow-up workshop was held in June 2019 in Hyderabad to discuss with interested manufacturers and their role in advancing the 3Rs agenda.

Fifteen DCVMN member companies and a total of 62 participants attended the workshop, the majoritarian representation was from companies based in India but also companies from Bangladesh, Vietnam, Thailand, Indonesia and China joined the workshop. The target audience included professionals either performing, supervising, managing, auditing, or overseeing the validation of vaccine testing methods for the quality control of vaccines and biopharmaceutical products. It included professionals from a variety of areas such as Analytical Development, Quality Control, Quality Assurance, Validation groups, Senior Management, Project Managers and Regulatory Affairs professionals responsible for the strategic alignment of local and global operations.

The main outcomes of the workshop were:

1. Unanimous agreement about the establishment of a DCVMN driven 3Rs working group.
2. The working group would help information exchange among all members and would facilitate achieving consensus and sharing of technical knowledge.
3. Proposed role of the 3Rs working group.

Participants have also mentioned the conditions they felt would be required to engage their respective companies in participation in collaborative studies aimed at implementing alternative methods, such as those proposed for pertussis and for rabies vaccine. These include:

1. Need for Cost/ benefit analysis to support building the business case for replacing the current by the proposed alternative methods;
2. Literature providing the scientific basis for the change;
3. Ensuring the provision of the necessary procedures, protocols and reagents, for participation in the collaborative studies;
4. Training in the proposed alternative methods, for the longer term, if needed;
5. Validation protocol and report showing the robustness, accuracy, sensitivity, specificity of the proposed alternative method, as well as data to show the consistency of results.

**Operational approach**

**Purpose/scope**

The purpose of the 3Rs working group is to assist DCVMN members in their decision-making process, in the development and implementation of novel methods for vaccine testing considering the 3Rs Principle. This includes the establishment and standardization of new test assays for existing vaccines and vaccines under research and development setting as a priority in the validation and implementation of methods complying with the 3Rs principles.

**Objectives and Role**

The working group objectives and role is presented in the table below.

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| **Objective** | **Role of the 3Rs working group** |
| Promotion of harmonized alternative methods. | * Interact with leading laboratories worldwide (i.e. ISS, NIBSC, PEI, other) to follow upon the development and validation of harmonized alternative methods for testing legacy vaccines (define –manufacturers’ high/mid/low priority products) * Foster participation in regional or international collaborative and/or feasibility studies * Share standard operating procedures (SOPs) for use by all manufacturers * Facilitate access to standards/ reference preparations and other critical materials |
| Enhanced expertise and implementation of novel testing methodologies. | * Seek training opportunities in novel testing methodologies and techniques * Organize workshops to inform manufacturers about new technologies for production and testing of vaccines (including equipment, reagents, testing kits, etc) * Support manufacturers seeking scientific advice from NRAs in country of origin or elsewhere |
| Implementation of 3Rs. | * Support training for manufacturers in the establishment and validation of alternative methods (e.g. serological assays) for testing D, T, P vaccine components and rabies vaccines. * Engage manufacturers to participate in the Pertussis Serological Potency Test (PSPT) project proposed by the Istituto Superiore di Sanità (ISS, Italy - contact: Christina Von Hunolstein) and by Intravacc (The Netherlands - contacts: Coenraad Hendriksen, Arjen Slooth). |
| Promote the acceptance by pharmacopoeias, NRAs of alternative testing methods aimed at reducing, replacing or refining the use of laboratory animals. | * Foster publication of results from proficiency and or collaborative studies * Foster publication in peer review journals of scientifically based advances in testing methods as a means to support acceptance of such alternatives by relevant authorities and pharmacopoeias * Facilitate discussion fora with regulatory agencies and pharmacopoeias in relation to acceptability of proposed alternative testing methods * Facilitate discussions with NRAs and pharmacopoeias as required for the acceptance of in vitro assays as replacement of the pyrogens test and for deletion of the abnormal toxicity test |

**Composition**

A group of around 10 manufacturer participants is considered optimal for effective group functioning, including to the extent possible participants from all the main geographical regions and from both state and private companies, to ensure as wide as possible representation and input of views and experience. Others may be involved in specific regional initiatives, if these arise. All DCVMN members will be regularly updated through ad-hoc communications, webinars or reports. Each participant would need to dedicate a small percentage of his/her time to work in the group. Group structure will be informal but the nominated Chair and a co-chair are responsible for providing continuity to the discussions. DCVMN will arrange for a facilitator to help run the group meetings.

**Membership and governance**

* DCVMN member companies producing and distributing domestically or internationally D, T or P containing combinations or rabies vaccines are eligible to participate in the working group,
* DCVMN member companies engaged in non-animal based manufacturing processes or new batch release tests are eligible to participate in the working group,
* Eligible companies will select a maximum of two professionals each to participate in the working group: one titular member and an alternate member,
* Professionals designated by companies should be formal employees actively engaged in testing methods and/or in routine vaccine testing (in process or final lot testing for release purposes) or should be managers of the Quality Control Units in their respective companies. A minimum of two-years’ experience in QC testing will be required,
* The WG members established a Chair and a co-chair of the group among the designated members,
* The WG will be facilitated by an expert consultant collaborating with DCVMN Secretariat staff. The Secretariat, in collaboration with the consultant, will be responsible for the meetings and teleconferences of the working group,
* The Chair and the co-chair will be renewed every year, with possibility to be re-elected for two consecutive years only. They will be responsible, in collaboration with the facilitator, for drafting the WG workplan, developing meeting’s agenda and chairing meetings or teleconferences, approving the minutes of the meetings and supporting the facilitator and the Secretariat to fundraise to ensure the sustainability of the working group activities.

**Duties and responsibilities of members**

Working Group members from DCVMN affiliated companies will act on a voluntary basis and need to declare any conflicts of interest they may have regarding any work undertaken.

Each participant will act on behalf of the respective corporate member and best contribute to the specific annual workplan. This will include reviewing specific topics being addressed and, if relevant, adding the perspective of the manufacturing company that they represent. Participants will be expected to discuss topics with colleagues to enhance the analyses undertaken. Participants whose situation changes and can no longer serve on the group will inform DCVMN secretariat to allow another participant to be identified.

**Operations**

A workplan will be agreed upon, including the specific topics to be covered with timelines and deliverables. The group will agree on key performance indicators (KPIs) to evaluate progress at regular intervals. Group meetings will largely take place through remote communication (telephone calls, WebEx, and email), but at least one face-to-face meeting should take place yearly. Meetings where at least half the WG members are coincidentally attending are good opportunities to hold a WG face to face meeting. Any group meeting (telephone, email or face-to-face) will have a set goal and agenda as well as required minimum quorum: half the participants plus one, ensuring decisions are taken in a collegial manner. Discussions will aim for consensus but also note any specific regional or manufacturer differences/preferences that may exist and will be respected.

1. <https://www.dcvmn.org/Regional-workshop-Optimization-of-vaccines-manufacturing-containers-and-testing> [↑](#footnote-ref-1)