#### **UPDATED SUMMARY OF PRODUCT CHARACTERISTICS**

(As per Annexure C to Module - 1 of Guidance for Industry by CDSCO)

#### 1. NAME OF THE MEDICINAL PRODUCT:

# RABIES VACCINE, HUMAN I.P. (Purified Chick Embryo Cell Culture Rabies Vaccine, PCECV<sup>PM</sup>)

Each 1.0 ml dose contains: Inactivated Rabies Virus (Pitman Moore Strain) Potency ≥ 2.5 IU Vaccine for intramuscular or intra dermal injection

#### 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 vial of lyophilized powder contains:

Inactivated rabies virus (Pitman Moore Strain) Potency  $\geq$  2.5 IU Virus is propagated in chick embryo fibroblast cell culture and inactivated by  $\beta$ -propiolactone Excipient::Gelatin, Human Albumin, Sucrose

Supplied with 1ml Sterile Water for Injections I.P. as diluent along with 25 G x 1" needle & 2 ml disposable syringe (Combipack).

# 3. PHARMACEUTICAL FORM:

Vaccine for intramuscular / intradermal injection

# 4. CLINICAL PARTICULARS

## 4.1 Therapeutic indications

Vaccine for Active immunization against Rabies in humans.

# 4.2 Posology and method of administration:

The freeze dried vaccine is reconstituted using diluent (1 ml Sterile Water for Injections I.P.) to give a clear or slightly opalescent liquid. It may be colored owing to the presence of a pH indicator.

#### Pre-exposure vaccination:

Pre-exposure vaccination is indicated for persons at high risk of exposure (laboratory personnel, veterinarians, abattoir workers, police engaged in tasks in infected area, animal dealers, animal handlers, workers in quarantine stations, zoologists and, in endemic areas, gamekeepers, hunters, forest rangers, forestry workers etc.). Pre-exposure vaccination is also recommended for persons (including children) who stay for an extended period (several months) in endemic areas and thus come into frequent contact with potentially rabid animals (dogs, cats, foxes, bats or other animal species at risk of rabies).

#### Intramuscular Route

Pre-exposure basic immunization consists of a series of three intramuscular injections of full one dose on days 0, 7 and 21 (or 28), given into the deltoid muscle, or in small children, in the anterolateral thigh but never in the gluteal region.

# Post-exposure vaccination:

#### Intramuscular Route

A series of 5 Intramuscular injections of one ready for use vaccine on days 0, 3, 7, 14 and 28 into the deltoid muscle, or in small children, in the anterolateral thigh, but never in the gluteal region. (WHO technical Report series 2005, No 931)

The success of vaccination (≥ 0.5 IU/ ml) in immuno compromised persons at high risk should be checked by measuring the titre on day 14. Patients with a titre that is less than 0.5 IU/ml should be given another two doses of vaccine simultaneously and as soon as possible. Further checks on the antibody titre should be made and further doses of vaccine should be administered as necessary.

#### Intradermal Route

This vaccine is of sufficient potency to allow its safe use in one of the WHO recommended intradermal post-exposure regimens in countries where relevant national authorities have approved the intradermal route for rabies Post-exposure treatment.

One intradermal dose comprises 0.1 ml of reconstituted vaccine.

For VaxiRab N, the administration schedule recommended in India in both non-immunized and fully immunized individuals is; the 2-site Intradermal regimen (known as Updated Thai Red Cross intradermal regimen, "2-2-2-0-2" regimen) that prescribes 1 injection of 0.1 ml at 2 sites on day 0, 3, 7 and 28. Two different lymphatic drainage sites, usually the left and right upper arms are selected. Updated Thai Red Cross intradermal regimen is endorsed by WHO.

It is essential that intradermal administration of VaxiRab N be carried out only by medical staff trained in this technique in order to ensure that the vaccine is delivered intradermally and not subcutaneously. For the intradermal route a sterile syringe with fixed needle (insulin type) is preferred. Correct intradermal injection should result in a raised papule with an "orange peel" appearance.

If the vaccine is injected too deeply into the skin, and a papule is not seen, the needle should be withdrawn and reinserted nearby. In the event that a dose of vaccine is inadvertently given subcutaneously or intramuscularly, a new dose should be administered intradermally.

# The intradermal route must not be used in the following instances:

- Individuals receiving long term corticosteroid or other immunosuppressive therapy or chloroquine,
- · Immunocompromised individuals,
- Individuals, particularly children, with severe wounds, especially to the head and neck or presenting late for consultation.

# Special Storage Conditions for Intradermal Usage

VaxiRab N dose not contain preservative; therefore, great care must be taken to avoid contamination of reconstituted vaccine. Vaccine may be used up to 8 hours after reconstitution provided it is maintained at 2 - 8 ° C. Unused vaccine must be discarded after 8 hours. Using aseptic technique, a dose of vaccine may be withdrawn from a vial and the remainder used for another patient provided that the vial is stored in a refrigerator between 2 - 8 ° C. A new sterile needle and syringe must be used to withdraw and administer each dose of vaccine for each patient to avoid cross infection.

If dogs or cats suspected of having rabies remain healthy after an observation period of 10 days, or tissue tests show that the animal was not rabid, the active immunization can be stopped.

#### 4.3 Contraindications

There are no absolute contraindications after exposure to rabies. The vaccine should not be administered to subjects with a history of a severe hypersensitivity reaction to any of the ingredients in the vaccine and should receive an alternative rabies vaccine if a suitable product is available.

# 4.4 Special warnings and precautions for use

As with all vaccines, appropriate medical treatment should be immediately available for use in the rare event of an anaphylactic reaction to the vaccine.

It is advisable to use rabies vaccines derived from non-avian sources for persons with known sensitivity to avian proteins. If such vaccines are not available, all necessary preparations should be made to treat complications which might arise in the event of an anaphylactic reaction.

Do not administer by intravascular injection. If the vaccine is inadvertently administered into a blood vessel there is a risk of severe adverse reactions, including shock.

# 4.5 Interaction with other medicinal products and other forms of interaction

VaxiRab N can be given concurrently with other vaccines (particularly tetanus toxoid). No intervals need to be observed between other vaccinations. It is essential to check the antibody titer when vaccination is undertaken during treatment with immunosuppressant, and if necessary, to continue post-exposure immunization until the appearance of a protective anti-rabies antibody titer (≥ 0.5 IU/ml).

Concomitant ingestion of chloroquine for malaria prophylaxis can reduce the antibody formation after administration of rabies vaccine. Therefore the pre-exposure vaccination with VaxiRab N should be given before any malaria prophylaxis.

# 4.6 Pregnancy and lactation

Pregnancy category C: Neither controlled studies in animals nor in pregnant women are available. In life-threatening Indications, VaxiRab N is administered because the potential benefits outweigh the possible risks.

Lactation: Administration of VaxiRab N during breast-feeding has no negative effects on the child.

# 4.7 Effects on ability to drive and use machines:

No experience available

#### 4.8 Undesirable effects

In rare cases local reactions including lymphadenopathy may be observed. Transient fever can occur following vaccination. Despite the high degree of purity of the vaccine, there is a theoretical risk of inducing anaphylactic reactions in persons sensitized to avian proteins.

#### 4.9 Overdose.

No experience is available on the consequences of over dosage.

# 5. PHARMACOLOGICAL PROPERTIES

#### 5.1 Pharmacodynamic properties

Sero conversion is checked 1-3 weeks after the last dose. True data on pharmacodynamics cannot be presented because Inactivated Rabies Vaccine is not a pharmaceutical specialty and has no pharmacodynamic properties.

# 5.2 Pharmacokinetic properties

The Inactivated virus contained in VaxiRab N vaccine undergo phagocytosis by macrophages and is then transported with them into the reticuloendothilial tissue, where they stimulate the immune system to produce virus- neutralizing anti-rabies antibodies.

# 5.3 Preclinical safety data:

Various non-clinical studies were conducted with this product in different animal models to prove the safety, potency, abnormal toxicity and local tolerance. All the reports are provided with the CTD, submitted for marketing authorization (Module IV).

# 6. PHARMACEUTICAL PARTICULARS

## 6.1 List of excipients

Sucrose Human Albumin Gelatin

#### 6.2 Incompatibilities

Concomitant ingestion of chloroquine for malaria prophylaxis can reduce the antibody formation after administration of rabies vaccine. Therefore the pre exposure vaccination with VaxiRab N should be given before any malaria prophylaxis.

#### 6.3 Shelf life

24 months

#### 6.4 Special precautions for storage

Store between 2-8 °C. Do not freeze. Protect from Light

Zydus Cadila

6.5 Nature and contents of container

3 ml USP Type I glass vials with Bromobutyl slotted Rubber stopper and blue flip off seal.

6.6 Special precautions for disposal

Any unused product or solid waste material is autoclaved at 121 °C for 30 minutes and then incinerated.

7. MARKETING AUTHORISATION PREQUALIFICATION HOLDER

CADILA HEALTHCARE LIMITED Sarkhej-Bavla N.H. No. 8, Moraiya, Tal. Sanand, Dist. Ahmedabad 382210, India Phone - +91-2717-250331/32/36/37 Fax - +91-2717-250319

8. MARKETING AUTHORISATION NUMBER(S)
MF-320/2011

9. DATE OF FIRST AUTHORISATION / RENEWAL OF THE AUTHORISATION NA