LONGRANGE™ (eprinomectin) is a ready-to-use, sterile injectable preparation containing eprinomectin, a member of the macrocyclic lactone class of antiparasitics. Each mL of LONGRANGE contains 50 mg of eprinomectin in a co-solvent system of N-methyl-2-pyrrolidone (30% v/v) and triacetin (qs), along with 50 mg of poly-lactico-co-glycolic acid (PLGA), a polymer that allows a slow release of eprinomectin from the formulation, thereby maintaining a prolonged duration of product effectiveness. Butylated hydroxytoluene (0.2 mg/mL) acts as an antioxidant in the formulation.

The chemical name of eprinomectin is 4”-deoxy-4”-epiacetylamino-6”-methylene group at C26. Of the two homologous components, B1a and B1b, which differ by a single functionalization, eprinomectin is 4”-deoxy-4”-epiacetylamino-6”-methylene group at C26.

INDICATIONS FOR USE
LONGRANGE, when administered at the recommended dose volume of 1 mL per 110 lb (50 kg) body weight, is effective in the treatment and control of the following internal and external parasites of cattle:

**Gastrointestinal Roundworms**
- **Coopera onchophora** – Adults and L3
- **Coopera punctata** – Adults and L3
- **Haemonchus placei** – Adults
- **Oesophagostomum radiatum** – Adults
- **Ostertagia lyrata** – Adults
- **Ostertagia ostertagi** – Adults, L4, and inhibited L3
- **Trichostrongylus axei** and Adults and L3

**Lungworms**
- **Dictyocaulus viviparus** – Adults

**Cooperia oncophora** – Adults and L4,

**Dictyocaulus viviparus** – Adults

**Hypoderma bovis**

**Ostertagia ostertagi** – Adults

**Sarcoptes scabiei bovis**

**Trichostrongylus colubriformis** – Adults

 Persistent Activity
LONGRANGE has been proven to effectively protect cattle from reinfection with the following parasites for the indicated amounts of time following treatment:

<table>
<thead>
<tr>
<th>Parasites</th>
<th>Durations of Persistent Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal Roundworms</td>
<td></td>
</tr>
<tr>
<td><strong>Coopera onchophora</strong></td>
<td>100 days</td>
</tr>
<tr>
<td><strong>Coopera punctata</strong></td>
<td>100 days</td>
</tr>
<tr>
<td><strong>Haemonchus placei</strong></td>
<td>120 days</td>
</tr>
<tr>
<td><strong>Oesophagostomum radiatum</strong></td>
<td>120 days</td>
</tr>
<tr>
<td><strong>Ostertagia lyrata</strong></td>
<td>120 days</td>
</tr>
<tr>
<td><strong>Ostertagia ostertagi</strong></td>
<td>120 days</td>
</tr>
<tr>
<td><strong>Trichostrongylus axei</strong></td>
<td>100 days</td>
</tr>
<tr>
<td><strong>Dictyocaulus viviparus</strong></td>
<td>130 days</td>
</tr>
</tbody>
</table>

**DOSAGE AND ADMINISTRATION**
LONGRANGE™ (eprinomectin) should be given only by subcutaneous injection in front of the shoulder at the recommended dosage level of 1 mg eprinomectin per kg body weight (1 mL per 110 lb body weight).

Each mL of LONGRANGE contains 50 mg of eprinomectin, sufficient to treat 110 lb (50 kg) body weight.

Divide doses greater than 10 mL between two injection sites to reduce occasional discomfort or site reaction.

**LONGRANGE is to be given subcutaneously only.** Animals should be appropriately restrained to achieve the proper route of administration. Inject under the loose skin in front of the shoulder (see illustration) using a 16 or 18 gauge, 1/2 to 3/4 inch needle. Sanitize the injection site by applying a suitable disinfectant. Clean, properly disinfected needles should be used to reduce the potential for injection site infections.

**50 mL bottle size:** Use only polypropylene syringes. Not for use with polycarbonate syringe material. If syringe material is not known, contact the syringe manufacturer prior to use for identification. Do not use beyond 3 months after stopper has been punctured. Discard bottle after 15 stopper punctures. 250 mL and 500 mL bottle sizes: Use only automatic syringe equipment provided by Merial. To obtain compatible equipment, contact Merial at 1-888-617-4251 or your veterinarian. LONGRANGE should not be stored in automatic syringe equipment. Automatic syringe equipment should be thoroughly cleaned after each use. Discard bottle after one stopper puncture with draw-off spike. No special handling or protective clothing is necessary.

**WANTERS AND PRECAUTIONS**
Withdrawal Periods and Residue Warnings
Animals intended for human consumption must not be slaughtered within 48 days of the last treatment.

This drug product is not approved for use in female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for pre-ruminating calves. Do not use in calves to be processed for veal.

**Mode of Action**
The macrocyclic lactones have a unique mode of action. Compounds of this class bind selectively with high affinity to glutamate-gated chloride ion channels that are present in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. Compounds of this class may also interact in other ligand-gated chloride ion channels, such as those gated by the neurotransmitter gamma-aminobutyric acid (GABA). The margin of safety for compounds of this class is at least partially attributable to the fact that mammals do not have glutamate-gated chloride ion channels, and that the macrocyclic lactones have low affinity for other mammalian ligand-gated channels and do not readily cross the blood-brain barrier.

**TARGET ANIMAL SAFETY**
Clinical studies have demonstrated the wide margin of safety of LONGRANGE™ (eprinomectin). Overdosing at 3 to 5 times the recommended dose resulted in a statistically significant reduction in average weight gain when compared to the group tested at label dose. Treatment-related lesions observed in most cattle administered the product included swelling, hyperemia, or necrosis in the subcutaneous tissue of the skin. The administration of LONGRANGE at 3 times the recommended therapeutic dose had no adverse reproductive effects on beef cows at all stages of breeding or pregnancy or on their calves. Not for use in bulls, as reproductive safety testing has not been conducted in males intended for breeding or actively breeding. Not for use in calves less than 3 months of age because safety testing has not been conducted in calves less than 3 months of age.

**HOW SUPPLIED**
LONGRANGE is available in three ready-to-use glass bottle sizes. The 50, 250, and 500 mL bottles contain sufficient solution to treat 10, 50, and 100 head of 550 lb (250 kg) cattle, respectively. The 250 and 500 mL bottles are supplied in a removable plastic protector.