

## **G-RELIN**<sup>™</sup> INJECTION

ACTIVE CONSTITUENT: 100 µg/mL GONADORELIN AS ACETATE

# Optimise and control cattle reproduction programs

For use in oestrus synchronisation programs in combination with PGF2 $\alpha$ . For the treatment of cystic ovaries, prevention of delayed ovulation and improvement of postpartum fertility in cattle.

Recommend with confidence in conjunction with C-PROST<sup>TM</sup> (PGF2 $\alpha$ ) for your clients to achieve:

- # Increased pregnancy rate
- Shorter calving to conception interval
- Tighter calving pattern
- # Fixed time insemination
- No loss of income with NIL milk WHP







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	G-RELIN™	OVURELIN®
Active Constituent	100 μg/mL Gonadorelin as Acetate	100 μg/mL Gonadorelin as Acetate
Species	Cattle	Cattle
Route of Administration	IM Injection	IM Injection
Dose rate		
Cystic Ovaries	5mL	5mL
Prevention of delayed ovulation	2.5mL	2.5mL
Improvement of post partum fertility	2.5mL	2.5mL
Oestrus synchronisation	Day 0: 1mL G-RELIN™ Day 7: 2mL C-PROST™ (PGF2α) Day 9: 1mL G-RELIN™	Day 0: 1mL (100 μg/mL Gonadorelin) Day 7: 2mL PGF2α Day 9: 1mL (100 μg/mL Gonadorelin)
Withholding periods		
Meat	Zero Days	Zero Days
Milk	Zero Days	Zero Days
ESI	Not established	Not established
	C-PROST™ and G-RELIN™ are trademarks of	OVURELIN® is a registered trademark of

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## For use in oestrus synchronisation programs in combination with PGF2 $\alpha$ . For the treatment of cystic ovaries, prevention of delayed ovulation and improvement of postpartum fertility in cattle.

#### **INDICATIONS**

#### 1. OESTRUS SYNCHRONISATION

Oestrus synchronisation protocols involving the use of Prostaglandin F2 (PGF2 $\alpha$ ) and Gonadotropin Releasing Hormone (GnRH) have been subjected to extensive study in dairy herds around the world. Comparisons have been made between GnRH/PGF2 $\alpha$  synchronisation programs and a variety of existing reproductive management programs of varying levels of intervention. GnRH/PGF2 $\alpha$  protocols have measured favourably against standard prostaglandin programs in terms of reproductive parameters such as pregnancy rate and calving to conception interval.

Unlike previously implemented synchronisation protocols utilising PGF2 $\alpha$  only, application of the GnRH/PGF2 $\alpha$  protocol described below results in synchronisation of ovulation to degree of precision that allows fixed-time insemination.

A reproductive program using fixed-time insemination provides numerous benefits both in terms of reduced management input and economic advantages.

Fixed-time insemination reduces management input through the insemination of large groups of cows together, and by elimination of the need for oestrus detection activities in the first round. The benefits are magnified in situations where the level of oestrus detection is low. Economic benefits of a fixed-time insemination program result from a reduction in calving to conception interval and a tighter calving pattern, parameters of particular significance under seasonal calving conditions.

GnRH/PGF2 $\alpha$  protocols have the added advantage of demonstrated success for simultaneous treatment and synchronisation of cows suffering from cystic ovarian disease, and the ability to stimulate and synchronise the oestrous cycle of previously anovulatory cows.

The GnRH/PGF2 $\alpha$  protocol that has received the most interest and study for its applicability to dairy cattle reproductive management may be summarised as follows:

Day 0 - GnRH administration

Day 7 - PGF2 $\alpha$  administration

Day 9 - GnRH administration (48 hours after  $PGF2\alpha$ )

Insemination 8-24 hours after 2nd GnRH.

Insemination is performed at a fixed time 8 to 24 hours after the 2nd GnRH dose, regardless of the presence or absence of visible oestrus.

The rationale behind the GPG protocol is as follows:

- The initial GnRH dose induces either ovulation or luteinisation of the dominant follicle present at the time of treatment, and the smaller follicles undergo atresia. A new follicular wave is subsequently recruited, and a new dominant follicle gradually emerges.
- 2. 7 days after treatment with GnRH, administration of PGF2 $\alpha$  causes luteolysis of the GnRH- induced corpus luteum. The new dominant follicle is ready to ovulate 2-3 days later
- The 2nd GnRH dose induces an LH surge which further synchronises the dominant follicle, resulting in ovulation of predictable timing, allowing fixed-time insemination 8-24 hours later.

GnRH/PGF2 $\alpha$  oestrus synchronisation protocols are intended for lactating dairy cattle. Variable results are reported in the literature of the application of GnRH/ PGF2 $\alpha$  in heifers.

#### 2. PREVENTION OF DELAYED OVULATION

Delayed ovulation can result in the reduction of the rate of conception due to asynchrony between ova and sperm at the time of artificial insemination (AI). Delayed ovulation can be prevented by the administration of G-RELIN™ INJECTION, which stimulates the release of LH and hence induces ovulation.

#### 3. IMPROVEMENT OF POSTPARTUM FERTILITY

It is important that normal ovarian cyclical activity resume in the early post-partum period to minimise the calving to conception interval or "days open".

G-RELIN™ INJECTION given in the first 40 days of the postpartum period may initiate the ovarian cyclical activity to resume and reduce the incidence of postpartum infertility in cows.

#### 4. TREATMENT OF CYSTIC OVARIES

Cystic ovaries are an infertility problem in dairy cattle, which may be of single or multiple and of follicular or luteal origin. Clinical signs of ovarian cysts include irregular oestrous cycles, anoestrus and nymphomania. Ovarian cysts can be diagnosed by rectal palpation of the structure on one or both ovaries. Treatment of cystic ovaries with G-RELIN™ INJECTION may result in the recommencement of normal cyclical activity, through the response of ovarian cysts to the released LH induced by G-RELIN™ INJECTION.

#### **DIRECTIONS FOR USE**

#### DOSAGE AND ADMINISTRATION

Discard all open vials 28 days after broaching.

**Cattle:** Injection to be given into the anterior half of the neck.

Cystic ovaries: 5mL ( $500\mu g$  gonadorelin) by intramuscular injection.

Prevention of delayed ovulation: 2.5 mL ( $250 \mu g$  gonadorelin) by intramuscular injection.

**Improvement of post-partum fertility:** 2.5mL (250µg gonadorelin) by intramuscular injection.

**Oestrus synchronisation:** 1mL ( $100\mu g$  gonadorelin) by intramuscular injection, for example:

Day 0 - 1mL (100µg gonadorelin)

Day 7 - 2mL PGF2α

Day 9 - 1mL (100µg gonadorelin)

Insemination 8-24 hours after 2nd G-RELIN™ INJECTION.

### General Directions DESCRIPTION

G-RELIN™ INJECTION is a clear, colourless, sterile solution containing 100 µg/mL of gonadorelin (as acetate). Gonadorelin is a synthetic decapeptide, identical to the endogenous Gonadotropin Releasing Hormone (GnRH), which controls the production and secretion of Luteinising Hormone (LH) and Follicle Stimulating Hormone (FSH) by the pituitary gland. Both LH and FSH have a direct effect on the ovary:

FSH stimulates follicle development, while LH induces ovulation and luteinisation. Injection of gonadorelin acetate induces the simultaneous release of FSH and LH thereby stimulating the maturation of ovarian follicles, ovulation and development of the corpus luteum.

WITHHOLDING PERIODS

MEAT: Zero (0) days.

MILK: Zero (0) days.

TRADE ADVICE

EXPORT SLAUGHTER INTERVAL (ESI): An ESI has not been established for this product.

Note – observing the meat withholding period may not be sufficient to mitigate potential risks to export trade. Trade advice should be sought from Abbey Animal Health Pty Ltd on (02) 8088 0720 before using this product.

#### FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre, Phone Australia 131 126.

#### DISPOSAL

Dispose of container by wrapping with paper and putting in garbage.

#### STORAGE

Store below 25 °C (air conditioning). Protect from light.

APVMA Approval Number: 92159/134698

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