Summary of Product Characteristics (SPC)

OXYRELON™
(Oxytocinum analogum lipidatum)
Solution for subcutaneous injection – depot formulation

1. NAME OF THE MEDICINAL PRODUCT
OXYRELON™ 10 IU/ml depot suspension for injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION
Each 1 ml pre-filled syringe contains:

- **Oxytocinum analogum lipidatum (OXY-L12)** – equivalent to 10 International Units of oxytocin activity.
- **PLGA (poly[lactide-co-glycolide] 50:50)** – 30 mg/ml.
- **Poloxamer-407 (20% w/v)** – thermosensitive hydrogel matrix.
- **Mannitol, Glycine, Benzyl alcohol, Water for injections** – excipients.

Excipients with known effect: Benzyl alcohol (0.9%) as preservative. For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM
Depot suspension for subcutaneous injection. Milky-white, viscous suspension that forms a soft, resorbable depot at the injection site.

4. CLINICAL PARTICULARS
4.1 Therapeutic indications
OXYRELON™ is indicated for the **modulation of social, emotional, and affiliative behaviors in adult females** when pharmacological support of oxytocinergic tone is clinically warranted, including:

- Adjunctive treatment of **situational affective dysregulation** (anxiety or detachment following stress exposure),
- Support of **sexual function and intimacy disorders** of psychogenic origin,
- Controlled clinical programs requiring **empathic synchronization, compliance, or affective stability** (institutional or rehabilitative context).

4.2 Posology and method of administration
Posology

- **Recommended dose:** One pre-filled syringe (1 ml; 10 IU) injected subcutaneously every **4 days**, corresponding to a **2-day ON / 2-day OFF** cycle.
- The **duration of effect** is approximately 48 hours.
- For sensitive individuals, a **microdose formulation (OXYRELON™ M, 5 IU)** may be used.
- No dose adjustment is required for body weight within 45–85 kg.

Method of administration
Subcutaneous injection in the deltoid region or upper gluteal quadrant. Rotate injection sites to avoid local irritation. The suspension should be allowed to reach room temperature before use.

Special populations
- **Elderly (>65 years):** Limited data; start with half dose (5 IU).
- **Hepatic or renal impairment:** No adjustment required.
- **Pediatric use:** Not recommended (safety not established).
- **Pregnancy and lactation:** Contraindicated (see section 4.6).

4.3 Contraindications
- Pregnancy or suspected pregnancy.
- Lactation.
- Known hypersensitivity to oxytocin or PLGA/poloxamer components.
- History of hyponatremia, SIADH, or water retention disorders.
- Severe cardiac disease or uncontrolled hypertension.
- Psychiatric instability with loss of impulse control.

4.4 Special warnings and precautions for use
- **Uterine activity:** Although the uterotonic potency of OXY-L12 is <10% of native oxytocin, use is contraindicated in pregnancy due to the theoretical risk of uterine contractions.
- **Behavioral disinhibition:** Enhanced empathy and trust may reduce social guarding; caution is advised in emotionally unstable or suggestible individuals.
- **Fluid balance:** Monitor in individuals at risk of hyponatremia.
- **Desensitization:** Long-term continuous exposure (>5 days) may cause receptor down-regulation; adherence to the 2-day cycling scheme is essential.
- **Sedatives and alcohol:** May potentiate central calming effects.

4.5 Interaction with other medicinal products and other forms of interaction
- Concomitant use with **CNS depressants** (benzodiazepines, opioids, alcohol) may enhance sedation.
- **SSRIs** may augment empathogenic effects but do not alter the safety profile.
- **Estrogen therapy** may increase sensitivity to oxytocin analogs; consider a lower dose.
- No interactions known with hormonal contraceptives.

4.6 Fertility, pregnancy and lactation
Pregnancy: Contraindicated.
Lactation: Contraindicated; oxytocin analogs may stimulate milk ejection.
Fertility: No adverse effects observed in nonclinical studies. Temporary cycle shortening (1–2 days) may occur.

4.7 Effects on ability to drive and use machines
Mild to moderate sedation or altered perception may occur within 2 hours post-injection. Caution is advised when driving or operating machinery.

4.8 Undesirable effects

System organ class	Frequency	Adverse reaction
Nervous system	Common	Mild headache, drowsiness
Psychiatric	Common	Emotional warmth, euphoria, increased trust, transient tearfulness
Reproductive	Common	Breast tenderness, mild pelvic cramping, vaginal lubrication
Gastrointestinal	Uncommon	Nausea, abdominal fullness
General	Rare	Local injection site reaction, warmth sensation
Metabolic	Rare	Water retention, hyponatraemia (isolated cases)

Adverse effects are typically transient (duration <6 h) and dose-dependent.

4.9 Overdose

Overexposure may produce hypotension, transient uterine tightening, and hyponatremia due to the antidiuretic effect. Treatment is symptomatic: discontinuation of further doses, electrolyte monitoring, and supportive care.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Oxytocin receptor modulators – analogs. **ATC code:** G02CX08.

OXY-L12 is a lipidated oxytocin analog with prolonged receptor activation and reduced uterine contractility. The palmitoyl substitution confers high plasma protein binding (~95%) and gradual CNS penetration, resulting in sustained anxiolytic, affiliative, and prosocial effects lasting up to 48 hours.

In behavioral studies, OXY-L12 increased affiliative behavior and reduced cortisol secretion without inducing myometrial activity.

5.2 Pharmacokinetic properties

- **Absorption:** Biphasic; initial release within 2–4 h, sustained release up to 48 h.
- **Distribution:** Vd ~1.2 L/kg; high affinity for lipid membranes.
- **Metabolism:** Enzymatic cleavage of peptide bonds and oxidation of lipid chains.
- **Elimination:** 85% hepatic metabolism; 15% renal excretion.
- **Terminal half-life:** ~18 h (plasma), ~40 h at receptor level.
- **Bioavailability:** 70–80% relative to native oxytocin (s.c.).

5.3 Preclinical safety data

Repeated-dose toxicity studies in rats and primates up to 14 days showed no organ toxicity. No mutagenic or teratogenic effects were observed. Mild reversible mammary gland stimulation noted at high doses (>30 IU/kg).

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

PLGA (50:50), Poloxamer-407, Mannitol, Glycine, Benzyl alcohol, Water for injections.

6.2 Incompatibilities

Do not mix with other medicinal products.

6.3 Shelf life

18 months at 2–8 °C. Once removed from refrigeration, use within 12 hours.

6.4 Special precautions for storage

Store in refrigerator (2–8 °C). Do not freeze. Protect from light.

6.5 Nature and contents of container

Type I glass pre-filled syringe (1.2 ml) with sterile stainless-steel needle and plunger stopper. Packs of 1, 5, or 10 syringes.

6.6 Special precautions for disposal

Dispose of in accordance with local regulations for cytostatic or hormonal products.

7. MARKETING AUTHORISATION HOLDER

CarniGen Therapeutics S.A., Division of Neuroendocrine Modulation, Yeundie, Republic of Carni

8. MARKETING AUTHORISATION NUMBER

CARNI/CGT/6818/021/OXYRELON

9. DATE OF FIRST AUTHORISATION / RENEWAL

First authorization: 14 May 7018

10. DATE OF REVISION OF THE TEXT

Version 1.2 – March 7019