

## **Prolonged pro-erectile facilitator effect of LIB-01 in anesthetized Wistar rats**

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**Objectives** Proof of concept study to investigate the effect of LIB-01 on erection in anesthetized rats. The active substance Lib-01 is a semi-synthetic molecule, originating from *Neobeguea mahafalensis* roots with a long tradition in Madagascar of ethnopharmacological use for the treatment of sexual disability.

**Methods** Adult Wistar rats (n=12 /group) were administered LIB-01 at 4 or 15 mg/kg by subcutaneous injection once daily for 3 consecutive days. Erection was assessed 1, 2 or 7 days after the last treatment by electrical stimulation of the cavernous nerve (ES CN) at different frequencies under isoflurane anaesthesia. LIB-01 treatment was compared to a single dose of sildenafil 0.3 mg/kg *iv* dispensed 4 minutes prior penile erection testing.

**Results** There was no safety signal post LIB-01 treatment. Ratios of intracavernous pressure (ICP) and area under the curve (AUC)/mean arterial pressure (MAP) were increased in rats treated with LIB-01 sc 15 mg/kg/day for 3 days when erection was tested 1 day post last administration vs vehicle-treated rats (at 10 Hz, ICP/MAP: + 11 %) compared to a 19 % increase in sildenafil-treated group. The proerectile facilitator effects of LIB-01 at 15 mg/kg were improved when erection was tested 2 days compared to 1 day post-treatment, and further increased when evaluated 7 days post treatment (at 10 Hz, ICP/MAP increased by 36 % and 48 % 2 and 7 days post-LIB-01 treatment respectively).

**Conclusions** LIB-01 significantly improved erection following subcutaneous administration for 3 days. This effect lasted at least 7 days post-treatment and interestingly increased overtime. The mechanism of action supporting the beneficial impact of increasing delay post-treatment remains to be investigated.