References on the Administration of Somatostatin
Using ALZET® Osmotic Pumps

Agents: Mesilate, Gabexate; Imipenem; Somatostatin Vehicle: Saline; Route: SC; Species: Rat; Pump: 2ML1; Duration: 3 days;
ALZET Comments: Dose (10 mg/kg/day Gabexate Mesilate; 16 mg/kg/day Imipenem; 5 μg/kg/day Somatostatin); Controls received mp w/ vehicle; animal info (Eight-week-old male Sprague-Dawley rats, 260-280 g); dependence;

R0355: J. Morisset. Somatostatin: One of the Rare Multifunctional Inhibitors of Mammalian Species. Pancreas 2017;46(1):8-18
Agents: Somatostatin Vehicle: Not Stated; Route: SC; Species: Not Stated; Pump: Not Stated; Duration: 2 weeks;
ALZET Comments: When given to rats implanted subcutaneously (sc) with an Alzet mini-pump, somatostatin delivered at 1.5 μg∙h−1 for 14 days had no effect on their weight gain. However, the infusion of a somatostatin antagonist led to a significant increase in weight gain over control; Dose (1.5 ug/hour);

Agents: Somatostatin analogue; Gabexate mesilate; Imipenem Vehicle: Saline; Route: SC; Species: Rat; Pump: 2ML1; Duration: 1 week;
ALZET Comments: Dose (5 mg/kg/day of somatostatin analogue, 10 mg/kg/day of gabexate mesilate, and 16.6 mg/kg/day imipenem); animal info (Eight-week-old male Fisher 344 rats weighing 250e300 g); Therapeutic indication (pancreatic fistula);

Agents: Somatostatin, bovine Vehicle: Saline; Route: IP; Species: Fish (trout); Pump: Not Stated; Duration: 29 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (rainbow trout, juvenile, 120g); 0.75% saline used; no stress (see pg. 128); post op. care (Neosporin); behavioral testing (food intake); diabetes;

Agents: Somatostatin-14-I Vehicle: Saline; Route: IP; Species: Fish (trout); Pump: Not Stated; Duration: 15 days;
ALZET Comments: Controls received mp w/ vehicle; functionality of mp verified by plasma levels; peptides; animal info (male, female, juvenile, rainbow trout, 58 grams)

Agents: somatostatin-14 Vehicle: Saline; Route: IP; Species: Fish (Rainbow trout); Pump: pump model not stated; Duration: 20 days;
ALZET Comments: Dose (5•8*10^-11 mol/h); 0.75% (w/v) NaCl used; Controls received mp w/ vehicle; animal info (juvenile, male and female, 58.3+/-1.3 g); post op. care (return to 100L tank containing 250 mg erythromycin, fasting for 5 days); Resultant plasma level (3h and 6h post-injection); enzyme inhibitor (GH release from teleost pituitary); good methods (pre- and post-surgery information, location of implantation site, p.158-159); trout received i.p. injection of SS-14 on day 20 of experiment to measure plasma concentration at 3h and 6h post-injection.

Agents: Transforming growth factor-a; Brain-derived neurotrophic factor; Vasoactive intestinal polypeptide; Peptide, histidine-isoleucine; Gastrin releasing peptide; Substance P; Neurenomedin-C; Neurokinin A; Neuropeptide K; Neuropeptide Y; Somatostatin; Antrin; Cholecystokinin; Thyrotropin-releasing hormone; Neurotensin; Neurenomedin N; Vehicle: CSF, artificial;
Route: CSF/CNS (third ventricle); Species: Hamster; Pump: 2002; Duration: 18,22 days;
ALZET Comments: Peptides

**Agents:** Somatostatin antagonist **Vehicle:** Saline; **Route:** IP; **Species:** Rat; **Pump:** 2ML1; **Duration:** 7 days;

**ALZET Comments:** controls received mp w/ vehicle; functionality of mp verified by plasma drug levels; comparison of sc injections vs. mp; peptides; The somatostatin antagonist is cyclo-7-aminoheptanoyl-phe-d-trp-lys-thr (also known as BZL); SC injections examined pulsatile administration of the agent; pump model 2ML1 used (2001 incorrectly listed);


**Agents:** Somatostatin antagonist **Vehicle:** Saline; **Route:** IP; **Species:** Rat; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** Dose ((3, 30, 300 nmol/kg/min), (161 mg/kg/day)); Controls received sham surgery and mp w/ vehicle; animal info (adult, Wistar, 250-300g); somatostatin antagonist aka cyclo-7-aminoheptanoyl-Phe-D-Trp-Lys-Thr [BZL]; enzyme inhibitor (somatostatin receptor);


**Agents:** Antibody, anti-somatostatin; **Vehicle:** PBS; **Route:** CSF/CNS (dorsal hippocampus); **Species:** Rat; **Pump:** 2002; **Duration:** 30 days;

**ALZET Comments:** pumps replaced at day 14


**Agents:** Somatostatin analog **Vehicle:** Saline; **Route:** Not Stated; **Species:** Rat; **Pump:** Not Stated; **Duration:** 7 days;

**ALZET Comments:** peptides


**Agents:** Octreotide; Somatostatin; Testosterone propionate **Vehicle:** Propylene glycol; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 10 days;

**ALZET Comments:** Concomitant infusion of T and SMS from 2 pumps implanted simultaneously; functionality of mp verified after delivery; peptides; somatostatin analog


**Agents:** Somatostatin; Substance P; Vasoactive intestinal peptide **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 7 days;

**ALZET Comments:** Immunology; peptides


**Agents:** Antibody, somatostatin **Vehicle:** Saline; Serum, goat; **Route:** SC; **Species:** Bird (chicken); **Pump:** 2002; **Duration:** 2 weeks;

**ALZET Comments:** Controls received mp w/ saline or goat serum; comparison of bolus inject. vs. IV inject. vs. mp infusion; immunology; peptides

P0967: Y. Takahashi, et al. Effects of continuous infusions of TRH and GIF on circadian rhythm parameters of sleep, ambulation, eating, and drinking in rats. In 'Endogenous Sleep Substances and Sleep Regulation,' S. Inoue and A. A. Borbely (eds. ), Taniguchi Symposia on Brain Sciences 1984:8(Ch. 9):101-112

**Agents:** Somatostatin; Thyrotropin-rel. factor **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Rat; **Pump:** 2001; **Duration:** Not Stated;

**ALZET Comments:** mp connected to cannula in ventricle; half-life; rats infused sc and icv simultaneously; stability of agents discussed; peptides
Agents: L-362823; Somatostatin Vehicle: Saline; Route: SC; Species: Rat; Pump: Not Stated; Duration: 1 week;
ALZET Comments: comparison of agents effects; simultaneous admin. of pergolide mesylate; cancer hormone therapy; peptides

Agents: Glucagon; Somatostatin; Thyroxine Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2001; Duration: 2, 3 days;
ALZET Comments: Separate pumps delivering glucagon and somatostatin were implanted simultaneously in same rat; peptides

Agents: Somatostatin Vehicle: Not Stated; Route: SC; Species: Rat; Pump: Not Stated; Duration: Not Stated;
ALZET Comments: no comment posted

Agents: Bombesin; Somatostatin Vehicle: Not Stated; Route: SC; Species: Rat; Pump: Not Stated; Duration: Not Stated;
ALZET Comments: Comparison of agents effects; see p416-417 for mp experiment; peptides