References on the Administration of Gastrin Using ALZET® Osmotic Pumps

ALZET Comments: RNA, small interfering (Gastrin-specific); TransIT in vivo transfection reagent; Kidney (subscapular space); Mice; 1007D; 7 days; Controls received mp with mock (nonsilencing) siRNA; ALZET polyethylene tubing used; Therapeutic indication (Nephrology, Hypertension, L-Dopa); Dose (3 ug/day).

Q4918: M. Zhang, et al. Growth factors and medium hyperglycemia induce Sox9+ ductal cell differentiation into β cells in mice with reversal of diabetes. pnas 2016;113(3):650-655
ALZET Comments: Gastrin; epidermal growth factor, human recombinant; Acetic acid; PBS; IP; Mice; 1007D; 7 days; Controls received mp w/ vehicle; animal info (male, WT or Ins1 CreERT); diabetes; Dose (gastrin 3 ug/kg/hr; EGF 10 ug/kg/hr);.

ALZET Comments: Gastrin-17; PBS; IP; Mice; 7 days; Controls received mp w/ vehicle; animal info (PC -ShH KO/GKO, 3 months old); immunology;.

ALZET Comments: Gastrin, amidated; Gastrin, non-amidated, glycine-extended; C-terminal flanking peptide; PBS; BSA; Mice (knockout); 1002; 11 days; Dose (2.5 nmol/kg/h (Gamide and Ggly); 10 nmol/kg/h (CTFP)); 0.1% BSA used; animal info (Gastrin knockout (GASKO) mice, male and female, 10-12 weeks old); peptides;.

ALZET Comments: Gastrin, glycine-extended; PBS; BSA; IP; Rat; 2ML4; 28 days; Controls received mp w/ vehicle; animal info (male, Sprague Dawley, 250-300 g); functionality of mp verified by serum ggly levels; peptides.

ALZET Comments: Gastrin-17; IP; Mice (transgenic); 1007D; 7 days; Controls received mp w/PBS; peptides; animal info (hGasBAC, wt).

ALZET Comments: Gastrin-17, rat; gastrin-17 gly; IP; Mice; 1002; 14 days; Functionality of mp verified by plasma gastrin levels; peptides; animal info (C57BL/6 x 129/SV, G -/-, wt, 8 weeks old).

ALZET Comments: Gastrin-17, rat; Saline; BSA; Mice; 2001; 7 days; Controls received mp w/ vehicle; peptides; animal info (male, C57BL/6, GAS-KO, 8-10 wks old).

ALZET Comments: Gastrin-17, synthetic rat; Saline; BSA; SC; Rat; 2 months; Controls received no treatment; functionality of mp verified by serum gastrin concentrations; long-term study; pumps replaced every 2 weeks; peptides; animal info (male, Sprague Dawley, 2 months old, 230 g., gastric bypass).

ALZET Comments: Gastrin, rat; Saline; BSA; SC; Mice; 2001; 7 days; Controls received mp w/ vehicle; replacement therapy (gastrin knockout); animal info (GAS-KO, male, 8-10 wk old); mp primed overnight in saline.

ALZET Comments: Gastrin-releasing peptide, amidated; gastrin-releasing peptide, glycine extended; PBS; IP; Rat; 2ML4; 4 weeks; Controls received mp w/ vehicle; no stress (see pg. 11-12); cancer (colorectal); peptides; animal info (male, Sprague-Dawley, 250-350g); "All animals remained healthy during the 4 week experimental period and rats in the different experimental groups gained weight at the same rate." (p. 11-12).

ALZET Comments: Gastrin-17; SC; Mice; 8 weeks; Controls received mp w/ PBS; functionality of mp verified by serum gastrin levels; pumps replaced; cancer (gastric); animal info (male, GAS-KO, 2 months old).

ALZET Comments: Thymidine; gastrin-17, synthetic rat; Saline; BSA; SC; Rat; 2ML1; 2ML2; 1, 2, 6, 13 days; Controls received mp w/ agent and no induced ulcer; functionality of mp verified by serum gastrin levels; multiple pumps per animal (2); mp primed overnight in 37C s.

ALZET Comments: Gastrin I, rat; epidermal growth factor, recomb. human; DMSO; saline, physiological; acetic acid; BSA; IP; Mice; 1007D; 1 week; Controls received no treatment; peptides; 8% DMSO.

ALZET Comments: Gastrin-17; Saline; CSF/CNS (intratumoral); Rat (nude); 1002; 7 days; Controls received mp w/ vehicle; stability verified; cancer (glioma).

ALZET Comments: Thymidine, (methyl-3H)-; gastrin-17, synthetic rat; Saline; BSA; SC; Rat; 2ML1; 2ML2; 1,2,6,13 days; Functionality of mp verified by gastrin plasma concentrations; multiple pumps per animal (2); mp primed overnight in saline @ 37 degrees Celsius.

ALZET Comments: Cholecystokinin-8S; cholecystokinin-8; gastrin-17; SC; Mice; 2,6 days; Comparison of single SC gastrin-17 injection vs. mp; peptides; mp incubated overnight in 0.9% NaCl at room temperature prior to implantation.

ALZET Comments: Gastrin; Mice; 6 days; Replacement therapy (gastrin deficient mice).
**ALZET Comments:** Gastrin-17; thymidine; Saline; BSA; radio-isotopes; 3H tracer; SC; Rat; 2ML1; 2ML2; 24 hrs; 6, 9, 15, 17 days; Comparison of acute injections vs. mp; pumps replaced after 13 days in some groups; multiple pumps per animal (2) in one group (one with each agent); gastrin dissolved in saline w/ BSA.

**ALZET Comments:** Gastrin; Saline; albumin; SC; Rat; 8 days; Controls received mp w/ vehicle; peptides.

**ALZET Comments:** Gastrin-17; Saline; SC; Rat; 1002; 14 days; controls received mp with saline; tissue perfusion (tumor resection cavity); cancer.

**ALZET Comments:** Gastrin, glycine-extended; saline; SC; Rat; 2001; 14 days; gastrointestinal mitogen.

**ALZET Comments:** Transforming growth factor-a; Brain-derived neurotrophic factor; Vasoactive intestinal polypeptide; Peptide, histidine-isoleucine; Gastrin releasing peptide; Substance P; Neuromedin-C; Neurokinin A; Neuropeptide K; Neuropeptide Y; Somatostatin; Antrin; Cholecystokinin; Thyrotropin-releasing hormone; Neurtensin; Neuromedin N;; CSF, artificial; CSF/CNS (third ventricle); hamster; 2002; 18-22 days; peptides.

**ALZET Comments:** Gastrin-17, glycine-extended; PBS; albumin, bovine serum; IP; Rat; 2ML4; 2ML1; 1 week; 4 weeks; Dose (10 nmol/kg/hr; 2/5 nmol/kg/hr); 0.1% BSA used; Controls received mp w/ vehicle; animal info (Young adult male Sprague–Dawley rats, 250–350 g in weight);

**ALZET Comments:** Cerulein; Gastrin-releasing peptide; Pentagastrin; Gastrin-releasing peptide antagonist; Hydrocortisone; L-365,260; Saline; DMSO; Water; SC; Rat (pregnant); 2ML4; no duration posted; peptides; L-365,260 is a CCKB receptor antagonist.

**ALZET Comments:** Gastrin-17; Saline; BSA; SC; Mice; 2001; 6 days; Controls received mp w/vehicle; functionality of mp verified by plasma levels; peptides.

**ALZET Comments:** Epidermal growth factor; Gastrin I, human synthetic; IV (jugular); Rat; 2002; 14 days; controls received mp w/ saline; peptides; multiple pumps per animal (2) to infuse both agents simultaneously; recomb. human EGF used.

ALZET Comments: Octreotide; Gastrin; SC; Rat; 2ML2; 9 days; controls received mp w/saline; peptides.

ALZET Comments: MK-329; Immunoglobulin, antigastrin/CCK; DMSO; Tween 80; NaCl; Serum, rat; SC; Rat; 2ML4; no duration posted; controls received mp with vehicles; immunoglobulin is monoclonal IgG.

ALZET Comments: Bombesin; Gastrin-releasing peptide; RC-3095; Propylene glycol; Water; SC; mice; 2002; 10, 14, 17, 18, 33 days; controls received mp with vehicle; pumps replaced at day 16; cancer; peptides; RC-3095 is a bombesin antagonist.

ALZET Comments: Gastrin; Pentagastrin; Cholecystokinin-8S; Tiotidine; Saline; SC; Guinea pig; 2001; 7 days; peptides.

ALZET Comments: Gastrin-releasing peptide; Saline; Rat; 2002; 15 days; controls received mp w/saline; cancer; peptides.

ALZET Comments: Octreotide; Gastrin; Saline; SC; mice; 2002; 14-35 days; controls received mp w/ saline; pumps replaced; stress/adverse reaction (ulceration, p. 918); 2 pumps implanted; cancer.

ALZET Comments: Gastrin-17; Albumin; SC; Rat; 2ML1; 28 days; functionality of mp verified by plasma levels; dose-response (table); pumps replaced every 7 days; peptides.

ALZET Comments: Gastrin-17; Rat; 14 days; no comment posted.

ALZET Comments: Gastrin-17; Ranitidine; Albumin, bovine serum; SC; Rat; 2ML1; 12 days; functionality of mp verified by plasma levels; dose-response (table); pumps replaced on day 6; peptides.

ALZET Comments: Gastrin-17; Ranitidine; Albumin, bovine serum; Rat; 2ML1; 12 days; pumps replaced after 6 days; peptides.

ALZET Comments: Gastrin-17; Albumin; Saline; SC; Rat; 2ML1; 28 days; functionality of mp verified by blood levels; dose-response; pump replaced every 7 days; peptides.

ALZET Comments: Gastrin-17; Ranitidine; Albumin; SC; Rat; 2ML1; 2ML2; 4 weeks; pumps replaced weekly (2ML1) or every two weeks (2ML2); peptides.
ALZET Comments: Gastrin; Saline; SC; Rat; 14 days; dose-response (graph); functionality of mp verified by tissue levels; peptides.

ALZET Comments: Gastrin-17; Saline; intestine; SC; Rat; 2002; 14 days; controls received mp w/saline; mp connected to catheter in lumen; peptides; multiple pumps (2) per animal; intest. absorption study; tissue perfusion.

ALZET Comments: Gastrin-17; Saline; intestine (small intestine); Rat; 2002; 14 days; controls received mp w/saline; mp connected to 2 catheters in the proximal stroma; peptides; tissue perfusion.

ALZET Comments: Gastrin-17; Saline; SC; Rat; 2002; 14 days; controls received mp w/saline; rat fetal small intestine segment implanted sc in Fisher strain recipient; peptides.

ALZET Comments: Caerulein; Pentagastrin; Saline; SC; mice; 2001; 6 days; compared acute injec. w/mp infusion; peptides.

ALZET Comments: Gastrin I, human synthetic; Tetragastrin; Histamine dihydrochloride; Pentagastrin; Sodium bicarbonate; Water; SC; Rat; 1701; no duration posted; 7 days histamine (no vehicle listed), 2 days peptides; comparison of agents inducement of ulcers; 1-2 pumps/animal.