References on the Administration of Gastrin Using ALZET® Osmotic Pumps

Agents: Gastrin-releasing peptide Vehicle: BSA; Route: SC; Species: Mice; Pump: 2004; Duration: 4 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (C57BL/6 N J Mice, male); p59-79; peptides; dependence;

Agents: Gastrin; U0126 Vehicle: Not Stated; Route: SC; IP; Species: Mice; Pump: 2006; 1002; 1007D; Duration: 1 week;
ALZET Comments: Dose (240 nmol/kg/day Gastrin; 25 mmol/kg U0126); Controls received mp w/ vehicle; dependence;

Agents: RNA, small interfering (Gastrin-specific) Vehicle: TransIT in vivo transfection reagent; Route: Kidney (subscapular space); Species: Mice; Pump: 1007D; Duration: 7 days;
ALZET Comments: Controls received mp with mock (nonsilencing) siRNA; ALZET polyethylene tubing used; 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
Agents: Gastrin; epidermal growth factor, human recombinant Vehicle: Acetic acid; PBS; Route: IP; Species: Mice; Pump: 1007D; Duration: 7 days;
ALZET Comments: Controls received mp w/ vehicle; (male, WT or Ins1 CreERT); Dose (gastrix 3 ug/kg/hr; EGF 10 ug/kg/hr);

Q3878: R. Feng, et al. Indian Hedgehog Mediates Gastrin-Induced Proliferation in Stomach of Adult Mice. Gastroenterology 2014;147(655-+
Agents: Gastrin-17 Vehicle: PBS; Route: IP; Species: Mice; Pump: Not Stated; Duration: 7 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (PC-ShH KO/GKO, 3 months old); immunology;

Agents: Gastrin, amidated; Gastrin, non-amidated, glycine-extended; C-terminal flanking peptide Vehicle: PBS; BSA; Route: Not Stated; Species: Mice (knockout); Pump: 1002; Duration: 11 days;
ALZET Comments: 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;

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

Agents: Gastrin-17 Vehicle: Not Stated; Route: IP; Species: Mice (transgenic); Pump: 1007D; Duration: 7 days;
ALZET Comments: Controls received mp w/PBS; peptides; animal info (hGasBAC, wt)

Agents: Gastrin-17, rat; gastrin-17 gly Vehicle: Not Stated; Route: IP; Species: Mice; Pump: 1002; Duration: 14 days;
ALZET Comments: Functionality of mp verified by plasma gastrin levels; peptides; animal info (C57BL/6 x 129/SV, G -/-, wt, 8 weeks old)
Agents: Gastrin-17, rat Vehicle: Saline; BSA; Route: Not Stated; Species: Mice; Pump: 2001; Duration: 7 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; animal info (male, C57BL/6, GAS-KO, 8-10 wks old)

Agents: Gastrin-17, synthetic rat Vehicle: Saline; BSA; Route: SC; Species: Rat; Pump: Not Stated; Duration: 2 months;
ALZET Comments: 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)

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

Agents: Gastrin-releasing peptide, amidated; gastrin-releasing peptide, glycine extended Vehicle: PBS; Route: IP; Species: Rat; Pump: 2ML4; Duration: 4 weeks;
ALZET Comments: Controls received mp w/ vehicle; 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."

Agents: Gastrin-17 Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: 8 weeks;
ALZET Comments: Controls received mp w/ PBS; functionality of mp verified by serum gastrin levels; pumps replaced; cancer (gastric); peptides; animal info (male, GAS-KO, 2 months old)

Agents: Thymidine; gastrin-17, synthetic rat Vehicle: Saline; BSA; Route: SC; Species: Rat; Pump: 2ML1; 2ML2; Duration: 1, 2, 6, 13 days;
ALZET Comments: Controls received mp w/ agent and no induced ulcer; functionality of mp verified by plasma gastrin levels; multiple pumps per animal (2); animal info (female, Sprague-Dawley, 200-250 g); mp primed overnight in 37C s

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

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

Agents: Thymidine, (methyl-3H)-; gastrin-17, synthetic rat Vehicle: Saline; BSA; Route: SC; Species: Rat; Pump: 2ML1; 2ML2; Duration: 1,2,6,13 days;
ALZET Comments: Functionality verified by plasma concentrations; pumps per animal (2); primed overnight saline
**Agents:** Cholecystokinin-8S; cholecystokinin-8; gastrin-17 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Duration:** 2,6 days;
**ALZET Comments:** Comparison of single SC gastrin-17 injection vs. mp; peptides; mp incubated overnight in 0.9% NaCl at room temperature prior to implantation

**Agents:** Gastrin **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **Duration:** 6 days;
**ALZET Comments:** Replacement therapy (gastrin deficient mice)

**Agents:** Gastrin-17; thymidine **Vehicle:** Saline; BSA; radio-isotopes; 3H tracer; **Route:** SC; **Species:** Rat; **Pump:** 2ML1; 2ML2; 
**Duration:** 24 hrs; 6,9,15,17 days;
**ALZET Comments:** pumps replaced after 13 days in some groups; pumps per animal (2); gastrin dissolved in saline w/ BSA

**Agents:** Gastrin **Vehicle:** Saline; albumin; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 8 days;
**ALZET Comments:** Controls received mp w/ vehicle; peptides

**Agents:** Gastrin-17 **Vehicle:** Saline; albumin; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** Not Stated;
**ALZET Comments:** Controls received mp w/ vehicle; cancer; peptides; colorectal cancer

**Agents:** Gastrin **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 1002; 
**Duration:** 14 days;
**ALZET Comments:** controls received mp with saline; tissue perfusion (tumor resection cavity); cancer

**Agents:** Gastrin, glycine-extended **Vehicle:** saline; **Route:** SC; **Species:** Rat; **Pump:** 2001; 
**Duration:** 7 days;
**ALZET Comments:** gastrointestinal mitogen

**Agents:** 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; Thyrotrpin-releasing hormone; Neutrotoxin; Neuromedin N; **Vehicle:** CSF, artificial; 
**Route:** CSF/CNS (third ventricle); **Species:** hamster; **Pump:** 2002; 
**Duration:** 18-22 days;
**ALZET Comments:** peptides

**Agents:** Gastrin-17, glycine-extended **Vehicle:** PBS; albumin, bovine serum; **Route:** IP; **Species:** Rat; **Pump:** 2ML4; 2ML1; 
**Duration:** 1 week; 4 weeks;
**ALZET Comments:** 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); Resultant plasma level Study 1a (control 57+/-.6.1 pM, treated 730+/-.139 pM); Study 1b (control 37+/-.2 pM,1-week 682+/-.202 pM, 4-week 655+/-.79 pM); Study 2 (control 43+/-.4 pM, treated 349+/-.36 pM); cancer (Colorectal);
Agents: Cerulein; Gastrin-releasing peptide; Pentagastrin; Gastrin-releasing peptide antagonist; Hydrocortisone; L-365,260
Vehicle: Saline; DMSO; Water; Route: SC; Species: Rat (pregnant); Pump: 2ML4; Duration: no duration posted;
ALZET Comments: peptides; L-365,260 is a CCKB receptor antagonist

Agents: Gastrin-17 Vehicle: Saline; BSA; Route: SC; Species: Mice; Pump: 2001; Duration: 6 days;
ALZET Comments: Controls received mp w/vehicle; functionality of mp verified by plasma levels; peptides

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

Agents: Octreotide; Gastrin Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2ML2; Duration: 9 days;
ALZET Comments: controls received mp w/saline; peptides

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

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

Agents: Gastrin; Pentagastrin; Cholecystokinin-8S; Tiotidine Vehicle: Saline; Route: SC; Species: Guinea pig; Pump: 2001; Duration: 7 days;
ALZET Comments: peptides

Agents: Gastrin-releasing peptide Vehicle: Saline; Route: Not Stated; Species: Rat; Pump: 2002; Duration: 15 days;
ALZET Comments: controls received mp w/saline; cancer; peptides

Agents: Octreotide; Gastrin Vehicle: Saline; Route: SC; Species: mice; Pump: 2002; Duration: 14-35 days;
ALZET Comments: controls received mp w/ saline; pumps replaced; stress/adverse reaction (ulceration); 2 pumps implanted;

Agents: Gastrin-17 Vehicle: Albumin; Route: SC; Species: Rat; Pump: 2ML1; Duration: 28 days;
ALZET Comments: functionality of mp verified by plasma levels; dose-response (table); pumps replaced every 7 days; peptides
Agents: Gastrin-17 Vehicle: Not Stated; Route: Not Stated; Species: Rat; Pump: Not Stated; Duration: 14 days;
ALZET Comments: no comment posted

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

Agents: Gastrin-17; Ranitidine Vehicle: Albumin, bovine serum; Species: Rat; Pump: 2ML1; Duration: 12 days;
ALZET Comments: pumps replaced after 6 days; peptides

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

Agents: Gastrin-17; Ranitidine Vehicle: Albumin; Route: SC; Species: Rat; Pump: 2ML1; 2ML2; Duration: 4 weeks;
ALZET Comments: pumps replaced weekly (2ML1) or every two weeks (2ML2); peptides

Agents: Gastrin Vehicle: Saline; Route: SC; Species: Rat; Pump: Not Stated; Duration: 14 days;
ALZET Comments: dose-response (graph); functionality of mp verified by tissue levels; peptides

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

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

Agents: Gastrin-17 Vehicle: Saline; Route: SC; Species: Rat; Pump: 2002; Duration: 14 days;
ALZET Comments: controls received mp w/ saline; rat fetal small intestine segment implanted sc in Fisher strain recipient;

Agents: Caerulein; Pentagastrin Vehicle: Saline; Route: SC; Species: mice; Pump: 2001; Duration: 6 days;
ALZET Comments: compared acute injec. w/mp infusion; peptides

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