References on the Administration of Corticotropin Releasing Factor Using ALZET® Osmotic Pumps

Agents: Corticotropin-releasing factor receptor type 1 antagonist; Vehicle: Not stated; Route: SC; Species: Rat; Pump: 2001; Duration: 7 days;
ALZET Comments: Dose (4 mg/kg/day); Controls received mp w/ vehicle; animal info (Sprague Dawley, 2 months old); behavioral testing (Object Recognition Test, Object Location Test); CRFR1 antagonist aka Corticotropin-releasing factor receptor type 1 antagonist; enzyme inhibitor (CRFR1 inhibitor); Brain coordinates (AP-1.3, L 2.0, V 3.5 mm); dependence;

Agents: Corticotropin-releasing factor Vehicle: CSF, artificial; Route: CSF/CNS (posterodorsal medial amygdala); Species: Rat; Pump: 1002; Duration: 14 Days;
ALZET Comments: Dose (0.2 nmol/day); Controls received mp w/ vehicle; animal info (Sprague-Dawley prepubertal rats); Brain coordinates (2.5 mm posterior to bregma (AP), 3.2 mm lateral (ML) and 7.8 mm below the surface of the dura (DV)); Cannula placement verified via histological verification;

Agents: Corticotropin releasing hormone Vehicle: Saline; Route: CSF/CNS; Species: Mice; Pump: Not Stated; Duration: 28 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (female, C57BL/6, 8-10 weeks old); behavioral testing (Step down test, tail suspension test, open field); peptides; cyanoacrylate adhesive; Corticotropin-rel. factor aka Corticotropin releasing hormone; Plastics 1 cannula, DURECT PE 60 tubing.

Agents: Corticotropin-releasing factor; astressin-B Vehicle: CSF, artificial; Route: CSF/CNS; Species: Rat; Pump: 2002; Duration: 14, 14 days;
ALZET Comments: Controls received no treatment/surgery; peptides; no stress (see pg. 105); animal info (female, Sprague-Dawley, 28 days old); dose-response (fig. 1); neuroendocrinology

Agents: Corticotropin-releasing factor, d-phe; CP-154526; astressin-2b; Route: CSF/CNS; Species: Prairie vole; Pump: 1007D;
ALZET Comments: ALZET brain infusion kit 3 used; cyanoacrylate adhesive; animal info (naive, adult, male, female, 70-100 g); catheter contained ringers solution for delayed delivery of 44 hours

Agents: Corticotropin-releasing factor; Stressin1; sauvagine, anti-; urocortin III Vehicle: Saline; Route: SC; Species: Rat; Pump: 2002; Duration: 12 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; multiple pumps per animal (2); animal info (mast cell-deficient, +/-, 10 wks old, 200-250 g.); “The use of the minipump avoids daily interactions with the animals, possibly causing less variability in the results.” pg G458; stressin1 is a selective CFR-R1 agonist; urocortin III is a CFR-R2 agonist; antisauvagine is a CRF-R2 antagonist
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Bibliography


**Agents:** Urocortin II, Corticotropin releasing factor, ovine  
**Vehicle:** CSF, artificial  
**Route:** CSF/CNS  
**Species:** Rat  
**Pump:** 1007D  
**Duration:** 6 days;

**ALZET Comments:** Dose: ovine CRF (100ng/hr), urocortin II (2ng/μL); Controls received mp w/ vehicle; animal info (male Sprague-Dawley rats (250 g)); post op. care (surgical methylacrylate glue (VetBond) used to close incision, 25 ug of buprenorphine once after surgery for pain control); functionality of mp verified by determining residual volume in the pump at the termination of the experiment; stability verified by HPLC HPLC analysis of samples taken at filing and after 6 days; peptides; Brain coordinates (AP −7.5, lateral −0.2, and depth −6.4);


**Agents:** Endorphin, B; corticotropin releasing hormone  
**Vehicle:** CSF, artificial  
**Route:** CSF/CNS (paraventricular nucleus of hypothalamus)  
**Species:** Rat  
**Pump:** 2002  
**Duration:** 16 hours;

**ALZET Comments:** Controls received mp w/ vehicle; peptides; animal info (male, Fischer, 160-175g.)


**Agents:** Corticotropin-releasing factor, a helical (9-41)  
**Vehicle:** Saline, physiological; NaOH  
**Route:** CSF/CNS  
**Species:** Fish (rainbow trout)  
**Pump:** 1003D  
**Duration:** 8 days;

**ALZET Comments:** Controls received mp w/ vehicle; no stress (see pg. R984); peptides; animal info (male, female, hypoxia); CRF receptor antagonist; x-ray radiography; mp encased in a layer of dialysis tubing; cannula placement confirm; mp at 14C


**Agents:** Corticotropin-releasing factor; astressin  
**Vehicle:** Saline; BSA; Ascorbic acid;  
**Route:** CSF/CNS  
**Species:** Rat  
**Pump:** 2002  
**Duration:** 7 days;

**ALZET Comments:** Controls received mp w/ vehicle; ALZET brain infusion kit 1 used; 2 week recovery period by filling tubing and cannula with sterile saline; pump connected to catheter after recovery periord; astressin is a novel CRF antagonist; BSA and ascorbic acid was 0.1%; ischemia (cerebral)


**Agents:** Corticotropin-releasing hormone, human/rat  
**Vehicle:** BSA; acetic acid; Ascorbic acid  
**Route:** SC  
**Species:** Mice  
**Pump:** 1002  
**Duration:** 9 days;

**ALZET Comments:** Controls received mp w/ vehicle; peptides


**Agents:** Urocortin; Corticotropin-releasing factor  
**Vehicle:** Not Stated  
**Route:** CSF/CNS (lateral ventricle)  
**Species:** Rat  
**Pump:** 2001  
**Duration:** 13 days;

**ALZET Comments:** Dose (0.01-1.0 nmol/day); Controls received mp w/ vehicle; animal info (Male Long-Evans rats: 300–347 g); pumps replaced every 7 days; Urocortin, Corticotropin are CRF-related peptide; peptides; Silicone catheter used to connect pump to cannula; Brain coordinates (AP=-0.8 mm, ML=+1.2mm, and DV=-4.5mm); Cannula placement verified via cresyl violet dye injection post mortem;


**Agents:** Corticotropin-rel. factor; Corticotropin-rel. factor, 9-41  
**Vehicle:** Saline, normal  
**Route:** SC  
**Species:** Rat (pregnant);  
**Pump:** 2ML1  
**Duration:** no duration posted;

**ALZET Comments:** controls received mp w/vehicle; peptides; cardiovascular
Agents: Corticotropin-rel. hormone antagonist Vehicle: Not Stated; Route: Not Stated; Species: Rat; Pump: Not Stated; Duration: no duration posted; ALZET Comments: no comment posted

Agents: Corticotropin-rel. hormone Vehicle: Acetic Acid; Ascorbate; Albumin, bovine serum; Route: SC; Species: Mice (knockout); Pump: Not Stated; Duration: 2-6 days; ALZET Comments: Controls received mp w/ vehicle; replacement therapy (adrenalectomy); dose-response (p.2926); peptides

Agents: Corticotropin-rel. hormone Vehicle: Saline, pyrogen-free; Ascorbic acid; Route: SC; CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days; ALZET Comments: controls received mp w/ vehicle; no stress (see pg. 4452); ALZET brain infusion kit used

Agents: Dexamethasone; Corticotropin-rel. factor, ovine Vehicle: Not Stated; Route: SC; CSF/CNS; Species: Rat; Pump: 1003D; 2001; Duration: 14 days; ALZET Comments: controls received mp w/ vehicle; functionality of mp verified by plasma levels; peptides; ALZET brain infusion kit used; recomb. human corticotropin releasing factor used; dummy cannula maintained cannula patency during one week recovery period; after 14 day SC nicotine infusion, r/h CRF (6-33) was infused ICV

Agents: Corticotropin-rel. factor Vehicle: Saline, sterile; Ascorbic acid; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 1 week; ALZET Comments: controls received mp w/ vehicle; replacement therapy (adrenalectomy); peptides

P2287: S. Rivest, et al. CRF alters the infundibular LHRH secretory system from the medial preoptic area of female rats: possible involvement of opioid receptors. Neuroendocrinology 1993;57(236-246
Agents: Corticotropin-rel. factor Vehicle: Ascorbic acid; Albumin, bovine serum; Saline; Route: CSF/CNS (hypothalamic medial preoptic area); Species: Rat; Pump: 2001; Duration: 7 days; ALZET Comments: two pumps connected to double internal cannula; animals were ovariectomized

**Agents:** Corticotropin-rel. factor; Vasopressin; Vasopressin antagonist  
**Vehicle:** Not Stated;  
**Route:** SC;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 48 hours;  

**ALZET Comments:** controls received inactive mp or silastic tubing; peptides; the vasopressin antagonist was (mercapto cycloenta-methylene propionic acid)-[methyl-tyrosine]arginine VP; agents given singly or together


**Agents:** Corticotropin-rel. factor; Vasopressin

**Vehicle:** Not Stated;  
**Route:** SC;  
**Species:** Rat;  
**Duration:** 48-50 hours;  

**ALZET Comments:** controls received silastic tubing; peptides; animals given CRF or CRF + vasopressin


**Agents:** Corticotropin-rel. factor

**Vehicle:** Albumin, bovine serum; Saline;  
**Route:** SC;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 24 hours;  

**ALZET Comments:** no comment posted


**Agents:** Corticotropin-rel. factor, ovine

**Vehicle:** Ascorbic acid; Albumin, bovine serum; Saline;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 1 week;  

**ALZET Comments:** peptides


**Agents:** Corticotropin-rel. factor, human; Corticotropin-rel. factor, rat  
**Vehicle:** Ascorbic acid; Albumin, bovine serum; Saline;  
**Route:** CSF/CNS;  
**Species:** Rat;  

**Pump:** 2001;  
**Duration:** 14 days;  

**ALZET Comments:** infusion delayed about 4 days by 10.6 cm saline-filled catheter; delayed delivery;


**Agents:** Corticotropin-rel. factor  
**Vehicle:** Sodium chloride;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 6 days;  

**ALZET Comments:** ICV cannula capped to prevent scratching; peptides


**Agents:** Corticotropin-rel. factor  
**Vehicle:** Acetic acid; Ascorbate; Albumin, bovine serum;  
**Route:** SC;  
**Species:** Rat;  
**Duration:** 5 days;  

**ALZET Comments:** controls received sham-op; mp primed overnight in saline; pump inserted sc adjacent to wax or cort pellet; varying doses of agent infused; replacement therapy (hypothalmic lesions); peptides


**Agents:** Corticotropin-rel. factor  
**Vehicle:** Saline;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 7 days;  

**ALZET Comments:** mp connected to cannula; dose-response (text); functionality of mp verified by serum levels; peptides


**Agents:** Corticotropin-rel. factor, ovine  
**Vehicle:** Saline;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** Not Stated;  
**Duration:** 7 days;  

**ALZET Comments:** mp model not stated; controls received mp with vehicle; peptides

**Agents:** Dye, Trypan blue; Corticotropin-rel. factor; Vasopressin  **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 48 hours;

**ALZET Comments:** Pump model not stated; concomitant and simultaneous infusion of agents; functionality of mp verified; replacement therapy (vasopressin deficiency); peptides


**Agents:** Corticotropin-rel. factor, rat  **Vehicle:** Ascorbic acid; Albumin, bovine serum; Saline; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 52 days;

**ALZET Comments:** controls received mp w/vehicle; pumps replaced at 10-14 day intervals; long-term study; peptides


**Agents:** Corticotropin-rel. factor  **Vehicle:** Not Stated; **Route:** IP; **Species:** Rat; **Pump:** 2001; **Duration:** 2 days;

**ALZET Comments:** comparison of adrenal excision vs. mp infusion; sham pump used in controls to determine stress of abdominal surgery p. 440; dose-response data, 2 doses of CRF


**Agents:** Corticotropin-rel. factor, rat  **Vehicle:** Acetic acid; Ascorbate; Albumin, bovine serum; **Route:** SC; **Species:** Rat; **Pump:** 2001; **Duration:** 5 days;

**ALZET Comments:** replacement therapy (adrenalectomy); mp primed in saline 4-12 h prior to implant


**Agents:** Corticotropin-rel. factor, 7-14; Corticotropin-rel. factor; Corticotropin-rel. factor, ovine  **Vehicle:** Ascorbic acid; Albumin, bovine serum; PBS; **Route:** IV (jugular); **Species:** Rat; **Pump:** Not Stated; **Duration:** 1 week;

**ALZET Comments:** comparison of acute iv injec vs. multiple icv injec vs. iv mp infusion; comparison of agents effects


**Agents:** Corticotropin-rel. factor  **Vehicle:** Water; **Route:** SC; **Species:** Rat; **Pump:** 2001; **Duration:** 8 days;

**ALZET Comments:** controls received mp w/ water; peptides


**Agents:** Corticotropin-rel. factor  **Vehicle:** Ascorbic acid; Saline; **Route:** IV (jugular); **Species:** Rat; **Pump:** 2001; **Duration:** 3-15 days;

**ALZET Comments:** peptides