References on the Administration of Endorphins
Using ALZET® Osmotic Pumps

ALZET Comments: Endorphin, beta, (1-31); Saline, sterile; CSF/CNS; Rat; 2001; 1003D; 3, 7 days; Animal info (Sprague Dawley, male, 200-250 g); pumps replaced.

ALZET Comments: Endorphin, B; corticotropin releasing hormone; CSF, artificial; CSF/CNS (paraventricular nucleus of hypothalamus); Rat; 2002; 16 hours; Controls received mp w/ vehicle; peptides; animal info (male, Fischer, 160-175g.).

ALZET Comments: Endorphin, B-; CSF/CNS (paraventricular nucleus); Rat; 2002; 18 hours; Controls received mp w/ aCSF; immunology; peptides.

ALZET Comments: Endorphin, beta; CSF, artificial; CSF/CNS (paraventricular nucleus); Rat; 2002; 6 days; Plastics One bilateral guide cannula used with a Y-connector; bilateral infusion.;

ALZET Comments: Endorphin, B-; CSF, artificial; CSF/CNS; Rat; 12 days; Cardiovascular.

ALZET Comments: Endorphin, B-; CSF, artificial; CSF/CNS (paraventricular nucleus of hypothalamus); Rat; 2002; 16 hours; Controls received mp w/ vehicle; peptides; mp connected w/ two infusion cannulae using a Y-connector.

ALZET Comments: β-endorphin; naltrexone; CSF, artificial; CSF/CNS (bilateral paraventricular nuclei); Rat; 2002; 4 hours; 16 hours; Dose (100 ng of β-EP/0.5 µl/h); Controls received mp w/ vehicle; animal info (Male Fischer-344 rats of 150–175 g body weight); naltrexone is an opiate antagonist; Brain coordinates (1.8 mm behind bregma, 1.5 mm lateral to the midline, and 7.7 mm below the skull surface); bilateral cannula used: The osmotic pump was implanted was connected with two infusion cannulae (bilateral guide cannula) using a Y-connector.

ALZET Comments: Endorphin, B-; Naltrexone; CSF, artificial; CSF/CNS; Rat; 2002; 16, 4,16 hours; Controls received mp w/ vehicle; naltrexone is an opiate antagonist; used a Y-connector to connect pump with a bilateral cannula; bilateral infusion.;

ALZET Comments: Endorphin, B-; Enkephalin, leucine-; Enkephalin, methionine-; Dynorphin A; SC; CSF/CNS; Rat; 2001; 2ML1; 6 days; controls received saline infusion; peptides; ALZET brain infusion kit used.

**ALZET Comments:** Endorphin, B-; Saline, physiological; SC; CSF/CNS; Rat; 2001; 7 days; controls received mp w/ saline; peptides.


**ALZET Comments:** Acetylcholine chloride; Cefalotin; Cholecystokinin tetrapeptide; Epinephrine HCl; Bombesin; Endorphin, B-; Enkephalin, methionine-; Norepinephrine HCl; Saline; Sodium bisulfite; CSF/CNS (hypothalamus); Rat; 2002; 5-20 weeks; Cholinergic agent; pumps replaced periodically; mp connected to perm. steel cannula in hypothalamus; cannula fitted w/removable protector; (see p.217); agents infused sep. (cefalotin infused w/each agent); long-term study; peptides.


**ALZET Comments:** Endorphin, a-; Endorphin, ovine B-; Enkephalin, methionine-; Naloxone HCl; Saline; CSF/CNS; Rat; 2001; 1-2 days; comparison of agents effects; peptides.


**ALZET Comments:** Endorphin, a-neo-; DsThr; Dynorphin; Enkephalin analog DADLE; FK-33824; MR-2034; MRZ; Normorphine; Sufentanil; Water; SC; mice; 2001; 6 days; peptides; MRZ is 5,9-dimethyl,2'S-5,9-dimethyl-2'-hydroxy-2-(2-methoxy-propyl)-6,7-benzomorphan, a kappa opioid agonist.


**ALZET Comments:** Morphine sulfate; methionine-enkephalin; endorphin, B-; Water; CSF/CNS (frontal cortex); CSF/CNS (periaqueductal gray); Rat; 70 hours; peptides; dependence; 1 ul/hr pumps used.


**ALZET Comments:** Endorphin, a-; Endorphin, B-; Enkephalin, leucine-; Enkephalin, methionine-; Morphine sulfate; no duration posted; no comment posted.