References on the Administration of Metalloproteinase Inhibitors
Using ALZET® Osmotic Pumps


ALZET Comments: 2-

[4-biphenylsulfonyl]amino\)-3-phenyl-propionic acid; IV (inferior mesenteric vein); IP; Rat (transgenic); 2ML1; 2001; 7 days; Dose (100 μg/h); animal info (Male Lew-Tg(CAG-EGFP)ys rats); enzyme inhibitor (Matrix metalloproteinases 2/9);.


ALZET Comments: Angiotensin II; SC; Mice; 2004; 30 days; Dose (2.2 mg/kg/day or 4.4 mg/kg/day); animal info (male apolipoprotein E and tissue inhibitor of metalloproteinases-1 knockout mice); cardiovascular;.


ALZET Comments: RXP 470.1; Saline; SC; Mice; 1007D; 1 day; 3 days; 5 days; 7 days; Controls received mp w/ vehicle; animal info (male, C57BL6J, 3-6 months old, myocardial infarction); cardiovascular; immunology; enzyme inhibitor (matrix metalloproteinase-12);.


ALZET Comments: MMP-13 inhibitor; PEG 200; DMSO; Mice (nude); 2004; Control animals received mp w/ vehicle; animal info (C57BL/6N, ovariectomized); MMP-13 inhibitor also known as compound 1, was synthesized from 2,4 pyridine dicarboxylic acid and 4-Fluoro3-Methylbenzylamine; "Delivery of the inhibitor was achieved by an osmotic minipump, as constant blood levels of inhibitor are more effective than bolus injections to fully block MMP-13 activity during long term treatments." pg 2759; dose-response; cancer; enzyme inhibitor (matrix metalloproteinases).


ALZET Comments: Antipla

samin, alpha-2; MMP2-9I, type 1; Saline; sodium acetate; DMSO; CSF/CNS (medial prefrontal cortex); Rat; 2002; 2 weeks; Controls received mp w/ vehicle; animal info (Wistar, male, 350 g); Plastics One bilateral cannula used; 1% DMSO used; enzyme inhibitor (matrix metalloproteinase); behavioral testing (water maze test); neurodegenerative (Alzheimer's disease); bilateral infusion;.


ALZET Comments: FN-439; CSF/CNS; Rat; 2006; Controls received mp w/ artificial CSF; animal info (Wistar, adult, male); enzyme inhibitor (matrix metalloproteinase); cannula placement verified via histology with 0.6% cresyl violet, 2 ul over 60 s.


ALZET Comments: Marimastat; DMSO; water; SC; Rat; 2ML2; 15-17 days; Controls received mp w/ vehicle; animal info (Sprague Dawley, male, 180-370); wound clips used; enzyme inhibitor (matrix metalloproteinase, MMP-13).


ALZET Comments: Nerve growth factor, beta, recomb.; GM6001; CSF, artificial; albumin, rat serum; CSF/CNS (intrathecal, subarachnoid space); Rat; 2001; 7 days; Controls received mp w/ vehicle; animal info (Sprague-Dawley, male, 250-300 g); enzyme inhibitor (metalloproteinase); PE10 connected to PE60 tubing.

ALZET Comments: GM6001; AG3340; DMSO; SC; Rat; 2ML1; Controls received mp w/ vehicle; animal info (male Sprague-Dawley, 205-360 g); enzyme inhibitor (matrix metalloproteinase, MMP); 50% DMSO used.


ALZET Comments: Insulin-like growth factor-1, human, recomb.; HCl; saline, isotonic, sterile; SC; Mice (transgenic); 1004; 56 days; Animal info (transgenic, Zmpste24 metalloproteinase deficient); pumps replaced after 28 days.


ALZET Comments: Peptide, loop 6; IP; Mice (SCID); Controls received mp w/ PBS; peptides; enzyme inhibitor (metalloproteinase); cancer; Loop 6, anti-angiogenic peptide, is a smaller domain C-terminal portion of TIMP-2.


ALZET Comments: MMP-3i; CSF/CNS; Rat; 2001; 6 days; Controls received mp aCSF; functionality of mp verified by residual volume; animal info (male, Sprague Dawley, 300-350g); behavioral testing (head-shake response habituation); cannula placement verified w/icv injection of fast green dye; enzyme inhibitor (metalloproteinase-3).


ALZET Comments: MMI270; DMSO; PEG 300; SC; Mice; 2004; 14; 21 days; Comparison of SC injections vs. mp; enzyme inhibitor (matrix metalloproteinase); cancer (melanoma); animal info (7 wks old, BDF1, male, lymphadrectomy; 50% DMSO used; 50% PEG 300 used.


ALZET Comments: GM6001; DMSO; CSF/CNS; Mice; 1007D; 4 days; Controls received mp w/ vehicle; enzyme inhibitor (metalloproteinase); ALZET brain infusion kit 3 used; dental cement and stay screws used; animal info (male, C57BL/6, wt, Ptprz -/-, adult); 50% DMSO used.


ALZET Comments: RNA, small interfering; Mice (nude); 3-4 weeks; Controls received no treatment; cancer (meningoma); animal info (athymic, nude); siRNA plasmid vectors targeting cathepsin B and matrix metalloproteinase MMP9.


ALZET Comments: Neuroserpin; GM6001; CSF, artificial, PBS; CSF/CNS (parietal cortex); Rat; 2001; 72 hours; Controls received mp w/ vehicle into contralateral side; enzyme inhibitor (tpa, metalloproteinase); multiple pumps per animal (2); animal info (Fischer 344, 6 month old); Lynch coil with air-oil spacer at mp end of tubing; bilateral infusion cannulae; tissue perfusion (parietal cortex).

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Bibliography

ALZET Comments: MMI270; DMSO; PEG 300; IP; Mice; 2004; 15 days; Controls received mp w/ vehicle; no stress (see pg.27); enzyme inhibitor (matrix metalloproteinase); cancer (lung); MMI270 was formerly termed CGS27023A; 50% DMSO used; 50% PEG 300 used; "The continuous administration of MMI270 for 15 days using an osmotic pump led to a significant decrease in the weight of tumor-metastasized lymph nodes" (p. 29).

ALZET Comments: BB-3644; PBS; SC; Mice (SCID); 2001; 8 days; Controls received mp w/ vehicle; comparison of IV injections vs. mp; enzyme inhibitor (metalloproteinases); cancer (lymphoma); "when BB-3644 was continuously applied via a small osmotic pump, the antitumor activity of a single dose of Ki-3(scFv)-E(α) was further enhanced with a tumor-free survival of all animals treated for more than 200 days." (p. 572).

ALZET Comments: MMI270; DMSO; PEG 300; SC; Mice; 6 days; Controls received mp w/ vehicle; functionality of mp verified by serum MMI270 levels; enzyme inhibitor (metalloproteinase).

ALZET Comments: CIMP; IP; Mice; 1002; 4 weeks; Controls received no treatment/sham AVF surgery; enzyme inhibitor (metalloproteinase); cardiovascular; peptides; agent also known as (metalloproteinase, cardiac inhibitor).

ALZET Comments: Marimastat; DMSO; water; SC; Mice (SCID); 2002; 2 weeks; controls received mp w/ vehicle; enzyme inhibitor (matrix metalloproteinase); marimastat, the broad-spectrum matrix metalloproteinase inhibitor was dissolved in 50% DMSO; angiogenesis inhibitor.

ALZET Comments: BE16627B; DMSO; ethylene glycol; SC; Rat; 1003D; 3 days; Controls received mp w/ vehicle; ratio of BE16627B is a matrix metalloproteinase inhibitor.

ALZET Comments: BE16627B; DMSO; ethylene glycol; SC; Rat; 1003D; 3 days; Controls received mp w/ vehicle; enzyme inhibitor; vehicle mix was 50:50 ratio; BE16627B is a matrix metalloproteinase inhibitor.

ALZET Comments: CGS 27023A; DMSO; SC; Rat; 2ML2; 2ML4; 9-47 days; cardiovascular; enzyme Inhibitor; CGS 27023A is an orally active hydroxamic acid matrix metalloproteinase inhibitor.


ALZET Comments: E-64; GI168; GI173; GI179; GI184;; DMSO; Saline; Ethanol; Buffer, sodium citrate; Tappsol HPB-20;; SC;; mice;; 2001; 2002;; 2, 7, 14 days;; controls received mp w/ vehicle; cancer; matrix metalloproteinase inhibitors; mice received 2 pumps each; enzyme inhibitors.


ALZET Comments: MI-1; MI-2; Propylene glycol; cartilage, femoral head; Rat; 2ML2; 14 days; tissue perfusion (femoral head cartilage); good methods (p. 663); MI-1 and MI-2 are matrix metalloproteinase inhibitors; enzyme inhibitors.


ALZET Comments: GI168; DMSO; Sodium citrate buffer; SC; Rat; 2ML2; 2 weeks; controls received mp w/vehicle; dose-response (see p. 451); immunology; multiple pumps per animal (2); "GI168 had poor oral bioavailability and a short plasma t 1/2 after subcutaneous injection... so minipump delivery was evaluated." p. 451; enzyme inhibitor (matrix metalloproteinase).


ALZET Comments: BE16627B; Doxorubicin HCl; DMSO; Ethylene glycol; SC; Mice (nude); 2001; 2002; 3 weeks, 18 days; controls received vehicle or no treatment; pumps replaced; stress/ adverse reaction: skin inflammation and necrosis around delivery site in mice treated with Adriamycin (pg. 733); BE16627B animals were fine; stability verified for 18 days by assay; cancer; enzyme inhibitor; BE16627B is a metalloproteinase inhibitor; 2002 replaced w/ 2001 after 20 days; adriamycin is doxorubicin HCl.