References on the Administration of Cannabinoids
Using ALZET® Osmotic Pumps

ALZET Comments: Cannabinol; PEG 400; SC; Mice; 2004; 4 weeks; animal info (SOD 1 transgenic); pumps replaced every 28 days; Therapeutic indication (amyotrophic lateral sclerosis); Dose (5 mg/kg);

ALZET Comments: AM1710; Taxol-WIN-55212-2; AM251; AM630; DMSO; PEG 400; SC; Rat; 2ML4; 28 days; Controls received mp w/ saline; animal info (male, Sprague Dawley, 300-400g); functionality of mp verified by residual volume; 50% PEG 400 used; 50% DMSO used; Multiple pumps per animal (2); stress/adverse reaction: (see pg.15); behavioral testing (mechanical threshold, cold withdrawal, locomotor activity); AM1710 is a cannabielactone CB2-selective agonist; pumps removed on day 22; WIN55,212-2 is a CB1/CB2 agonist;

ALZET Comments: WIN-55212-2; NaCl; tween, DMSO; CSF/CNS; Rat; 1007D; 7 days; Controls received mp w/ vehicle; animal info (female, Wistar, 9 weeks old); 10% DMSO used; dose-response (pg 34); behavioral testing (fear conditioning, maternal behavior); teratology; “The continuous infusion of WIN in the CNS using an osmotic minipump in lactating dams eliminates the possibility that WIN affects the behavior of the offspring when offered in the milk. Thus, any behavioral change in offspring could be attributed only to changes in maternal behavior from the administration of WIN in the dams.” pg 37; Cannula placement verified via Evans Blue dye postmortem; Dose (10 or 100 nmol/h);

ALZET Comments: WIN-55212-2; ACEA; AM1241; DMSO; water; SC; Mice (nude); 2002; 2 weeks; Animal info (Foxn1 nu, athymic, 4-5 wks old, 20-25 g); cancer (oral); behavioral testing (mechanical allodynia); 50% DMSO used; wound clips used; pain.

Q1709: R. E. Hampson, et al. Memory encoding in hippocampal ensembles is negatively influenced by cannabinoid CB1 receptors. Behavioural Pharmacology 2011;22(4):335-346
ALZET Comments: Rimonabant; WIN-55212-2; Ethanol; saline, pluronic; CSF/CNS (hippocampus); Rat; 2004; 4 weeks; Controls received mp w/ vehicle; animal info (male, Long Evans, 4-12 mo old); pumps replaced after 16-22 days; post op. care (antibiotic, buprenorphine); behavioral testing (delayed nonmatch to sample (DNMS) task).

ALZET Comments: WIN-55212-2; SR141716A; SR144528; iodoseresiniferatoxin, 5-; DMSO; PEG; SC; CSF/CNS (fourth ventricle); Rat; 2004; 2ML4; 4 weeks, 21 days; Controls received mp w/ vehicle; no stress pg. 303 "well tolerated"; animal info (23 months old, male, F-344); 50% DMSO used; SR144528 is a selective CB2 antagonist; 50% PEG used.

ALZET Comments: WIN-55212-2; DMSO; SC; Rat; 2ML4; 21 days; Controls received mp w/ vehicle; dose-response (fig. 1); no stress (see pg. 1897); animal info (male, F-344; 3 and 23 months old); neurodegenerative (Alzheimer’s Disease); behavioral testing (water maze); "Chronic infusion of DMSO and WIN-55212-2 were well tolerated by all rats." (p. 1897); 100% DMSO used.
**ALZET Comments:** WIN-55212-2 mesylate salt; SR141716A; SR144528; Saline; tween 20; albumin, rat serum; DMSO; CSF/CNS (sciatic nerve); Rat; 2001; 6, 7 days; Controls received mp w/ vehicle; functionality of mp verified after removal, as well as mp/catheter connection, catheter patency and position; dose-response (fig. 3); animal info (male, Wistar, 250-300 g, partial ligation injury); 4% DMSO; 14.5 % DMSO.

**ALZET Comments:** Cannabinol; PEG 400; SC; Mice; 2004; 12 weeks; Controls received mp w/ vehicle; animal info (SOD1 transgenic; 6 week old; 25 grams); Dose (5 mg/kg/day); long-term study; pumps replaced every 4 weeks up to 2 times; neurodegenerative (ALS); no stress (see pg. 183); dose and the repeated pump replacements were well tolerated; cannabinol (CBN) is a nonpsychotropic cannabinoid; Therapeutic indication (amyotrophic lateral sclerosis);

**ALZET Comments:** JWH-133; WIN-55212-2; PBS; BSA; SC; Mice (nude); 2002; 11 days; Controls received mp w/ vehicle; cancer; cannabinoid agonists.

**ALZET Comments:** WIN-55212-2; Cannabinol, delta-9-tetrahydro-; PBS; BSA; CSF/CNS (intratumoral); Rat; 2001; 7 days; Tissue perfusion (tumor); cancer; WIN-55,212-2 is a potent synthetic cannabinol agonist.

**ALZET Comments:** Cannabinol, delta-9-tetrahydro-; Nantradol, 1-; PEG 400; Eye (cornea); cat; 2001; 9 days; Controls received mp w/ vehicle; dose-response (p.262); unilateral delivery.

**ALZET Comments:** Cannabinol, delta-9-tetrahydro-; Cannabigerol; PEG 400; Eye (cornea); cat; 9 days; controls received mp w/ vehicle; comparison of agents effects; pump implanted sc and connected via sc tubing to cornea; tissue perfusion.

**ALZET Comments:** Cannabinol, tetrahydro-; Nantradol, 1-; PEG 400; Eye (cornea); cat; 2001; 9 days; topical application; tissue perfusion.

**ALZET Comments:** Cannabichromene; Cannabinol, delta-9-tetrahydro-; PEG 400; Eye (cornea); cat; 2001; 9 days; comparison of agents effects; pump implanted sc and connected via sc tubing to cornea; tissue perfusion.

**ALZET Comments:** Cannabigerol; Cannabinol; PEG 400; Eye; cat; 9 days; mp model not stated; comparison of agents effects; intermittent eye drop admin. vs. mp infusion; tissue perfusion.

**ALZET Comments:** Cannabidiol; Marihuana extract; Cannabinol, delta-9-tetrahydro-; PEG; Eye (cornea); cat; 9 days; mp model not stated; comparison of acute topical admin/ injec vs. mp infusion; comparison of agents effects; agents admin. topically to cat corneas; tissue perfusion.