Report of CBD Determination in Serum

PATH OF PURITY (POP)

Re: CBD Bio-availability Report

Review of the laboratory data and the Excel CBD Graph of 4 subjects and find the following average parameters:

A single 50mg tablet was administered sublingually to four healthy, 2 male and 2 female volunteers, and blood samples were taken at 0, 4 8 1nd 12 hours post oral administration.

Average		ng/ml
0	4	0.06475
30	4	18
4hrs	4	28.55
8hrs	4	32.875
12hrs	4	6.3425

Below pharmacokinetic data is Mean of 4 subjects tested for Cannabidiol (CBD) in serum or plasma.

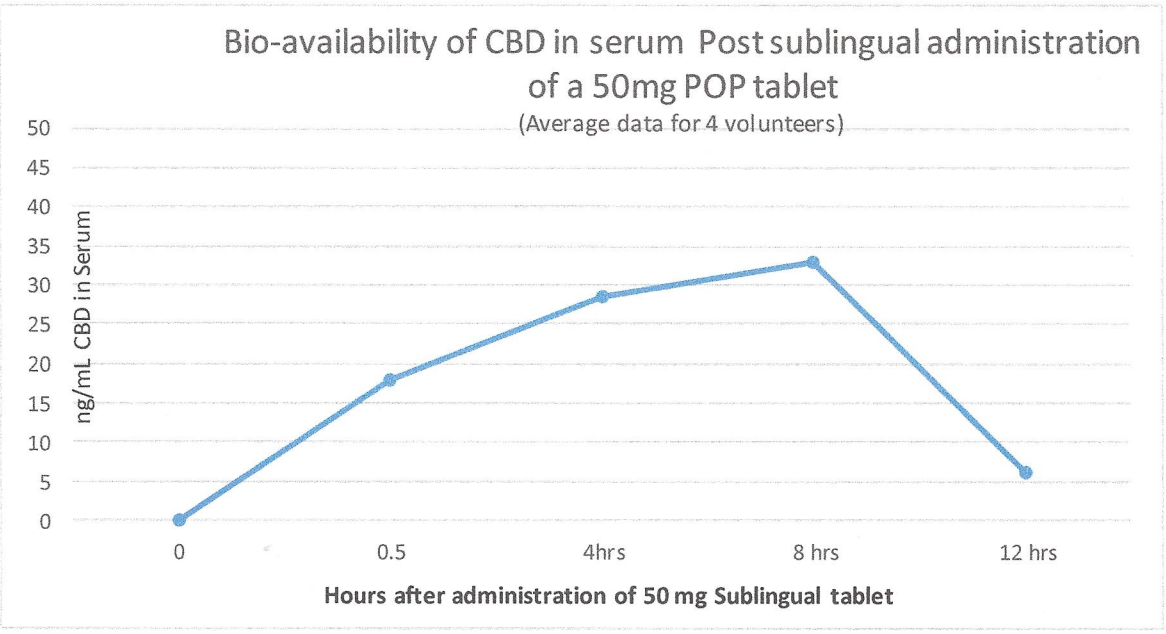
Absorption rate 0 to 32.874 ng/ml in 4 hours = 8.22 ng/ml per hour

Peak in 8 hours to 32.874 ng/ml (Dose not given)

Elimination rate 32.874 to 6.3425 ng/ml in 4 hours = 6.63 ng/ml per hour

Elimination half-life about 1 day

FIGURE 1



Results and Conclusions:

Administration of a 50mg CBD(POP)tablet resulted in a significant level of CBD in serum of all samples tested. Detectable concentrations of CBD were observed as early as at 30 min after the tablet administration and the concentrations levels continually increased peaking at 8 hours. Although CBD in serum decreased at 12 hours it was still detectable.

Results include data from 4 volunteers, which are insubstantial for good statistical evaluation. Need data from 10 – 20 volunteers for a good evaluation.

However, results are consistent with the general pharmacokinetics and bio-availability of CBD found in the literature involving other CBD investigations.

Related references:

Repeated oral administration of daily doses of 700 mg of CBD to 14 Huntington's disease patients in a 6-week trial, plasma levels of the drug remained in a relatively constant but low range of 5.9–11.2 ng/mL throughout the trial, averaged 1.5 ng/mL 1 week after CBD administration was discontinued and virtually undetectable by gas chromatography coupled with mass spectrometry (GC-MS) thereafter; the elimination half-life of CBD ranged from 2 to 5 days [1,2].

1 Consroe P, Kennedy K, Schram K. Assay of plasma cannabidiol (CBD) by capillary gas chromatography/ion trap mass spectroscopy following high-dose repeated daily oral administration in humans. Pharmacol Biochem Behav. 1991; 40:517–522 [PubMed]

2 Consroe P, Laguna J, Allender J, et al. Controlled clinical trial of cannabidiol (CBD) in Huntington's disease. Pharmacol Biochem Behav. 1991;40:701–708 [PubMed]

Respectfully submitted,

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