fluenz test; color naming, word reading, and inhibition subtests of D-KEFS color-word interference test; trail making test A (TMT-A) and B (TMT-B); Hopkins verbal learning test-revised (HTLVR); and brief visuo-spatial memory test-revised (BVMMR). Results: A repeated measures MANOVA with two factors (the neurocognitive battery with ten tests and the change, measured by a pre- and post-test) showed an overall significant improvement in the whole battery of neurocognitive function in patients after completing the program (P<0.05, Figure 1). Twenty patients (59%) had robust improvement in the letter fluency with an average of 12% improvement. Nineteen (56%), 14 (41%), and 17 (50%) patients had significant improvement in D-KEFS color naming, word reading, and inhibition subtests, respectively. HVLT-immediate and delayed recalling were significantly improved in 16 (47%) and 11 (32%) patients, respectively. BVMTR-immediate and delayed recalling were improved significantly in 23 (68%) and 15 (44%) patients. TMT-A and TMT-B were also improved in 18 (52%) and 16 (47%) patients with a mean improvement of 10 and 14%, respectively. Conclusions: Our preliminary results indicate that the multifactorial “brain fitness program” has produced significant improvement in elderly with cognitive impairment.

Figure 1. Percentage of improvement in those patients with significant improvement in cognitive tests

**P3-389 PHYSIOLOGICAL EFFECTS AND SAFETY ASSESSMENT OF TESTOSTERONE REPLACEMENT THERAPY IN OLDER MALE SUBJECTIVE MEMORY COMPLAINERS**

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**Background:** Testosterone replacement therapy (TRT) has been investigated in older men as a preventative treatment against Alzheimer’s disease (AD) and dementia. However, previous studies have produced inconsistent results. The inconsistencies may have arisen from differences in study design, dosage, treatment duration, and/or target population selection.

**Methods:** We designed a double blind, randomized, cross-over, placebo-controlled study to assess the physiological and clinical consequences of TRT in 44 older men (aged 61 ± 7.7 years) with subjective memory complaints (SMC) in Indonesia. Participants were randomized into 2 groups, one group received 50 mg of transdermal testosterone daily for 24 weeks, followed by a 4 week washout period, then 24 weeks of placebo treatment; the other group received the reverse treatment (i.e. placebo, washout, then testosterone). Blood biomarkers were evaluated every 4 weeks in the first treatment period and every 8 weeks in the cross-over period.

**Results:** Significant increases in total testosterone, free (calculated) testosterone, dihydrotestosterone, and a decrease in luteinising hormone (LH) levels were observed (p<0.001) following TRT. Although there were significant increases in red blood cell counts, hemoglobin and prostate specific antigen (PSA) levels following TRT, they remained within normal ranges; an increased risk of prostate cancer or atherosclerosis would only have been indicated by much higher changes. No significant differences in estradiol, sex hormone binding globulin (SHBG), insulin levels, body fat percentage, or BMI were detected. Conclusions: This first hospital-based study on elderly Indonesian men with SMC provides valuable insight into the role of TRT in terms of safety and its potential to prevent AD.

**P3-390 EFFECT OF GENDER AND FOOD ON THE SINGLE-DOSE PHARMACOKINETICS OF SUVN-502, A POTENT AND SELECTIVE 5-HT6 RECEPTOR ANTAGONIST**

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**Background:** Efficacy studies conducted in animal models of cognition and early clinical studies suggests that 5-hydroxytryptamine receptor (5-HT6) antagonist improve cognition by releasing neurotransmitters acetylcholine and glutamate. SUVN-502 is a potent and selective 5-HT6 antagonist exhibiting cognitive enhancement in rodent models. SUVN-502 is being developed for the treatment of Alzheimer’s disease (AD). **Methods:** SUVN-502 was studied in a single-center, multiple-faceted, phase 1 clinical study (US IND) to evaluate its safety and the effects of gender and food on the pharmacokinetics following 100 mg oral tablet dose administration in healthy subjects. To evaluate the gender effect 12 healthy male and female subjects between 18 to 45 years of age were given a single dose under fasted conditions. Similarly food effect was evaluated in 12 healthy male subjects between 18 to 45 years of age. Subjects were given a single dose of 100 mg tablet on Day 1 and 8 with and without food in a crossover manner. SUVN-502 and its active metabolite M1 of SUVN-502 were quantified using a validated LC-MS/MS method.

**Results:** There were no clinically relevant or serious adverse events reported by any subject during the Phase I study. No subject was withdrawn from the study for safety reasons. Pharmacokinetic parameters were comparable between the male and female groups. Mean AUC (0-inf) and C max in the fed group were approximately 20% higher and 15% lower than that in the fasted group, respectively. Median t max was slightly delayed in the fed group (3.5 h in fed vs 2.5 h in fasted) while mean t 1/2 was similar between the fasted and fed groups respectively. Median t max was slightly delayed in the fed group (3.5 h in fed vs 2.5 h in fasted) while mean t 1/2 was similar between the fasted and fed groups at approximately 10 hours. Mean AUC (0-inf) and C max of M1 of SUVN-502 in the fed group were approximately 13% higher and 27% lower than that in the fasted group respectively. Conclusions: SUVN-502 has shown a favorable safety and pharmacokinetic profile after single dose administration. Gender and food did not have any affect on pharmacokinetic parameters of SUVN-502.

**P3-391 PHARMACOKINETICS OF MEMANTINE AND DONEPEZIL AFTER A SINGLE DOSE OF A ONCE-DAILY FIXED-DOSE COMBINATION CAPSULE OF MEMANTINE EXTENDED RELEASE AND DONEPEZIL IN TWO PHASE I TRIALS**

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**Background:** Combining two standard-of-care therapeutics into a single dosage unit may increase compliance and adherence to treatment, leading to an improved therapeutic outcome. A fixed-dose combination (FDC)