



## KLINIČKA BOLNICA "SESTRE MILOSRDNICE"

### KLNIKA ZA NEUROLOGIJU

REFERENTNI CENTAR ZA NEUROVASKULARNE POREMEĆAJE  
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## Treatment of Alzheimer's Disease with Stabilized Oral NADH A randomized, double blind study\*

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### STUDY ABSTRACT

**Objective:** To evaluate the effect of stabilized oral NADH (reduced nicotinamide adenine dinucleotide; ENADA®) on cognitive functioning in patients with AD.

**Background:** NADH is a co-enzyme which plays a key role in cellular energy production and stimulates dopamine production. In previous trials, NADH has been shown to improve cognitive functioning in patients with Parkinson's disease, depression and AD.

**Methods:** This was randomized, placebo-controlled, matched-pairs, double-blind, 6-month clinical study. Patients with probable AD (n=26) were randomized to receive either ENADA® (10mg/day) or placebo. Twelve (12) pairs of subjects were matched for age and baseline total score on the Mattis Dementia Rating Scale (MDRS) and Mini Mental State Examination (MMSE). There were no baseline differences between groups with respect to age, months since diagnosis, or in their performance on outcome measures.

**Results:** After 6 months of treatment, subjects treated with NADH showed no evidence of progressive cognitive deterioration and had significantly higher total scores on the MDRS compared to subjects treated with placebo ( $p<.05$ ). Analysis of MDRS subscales reveals significantly better performance by NADH subjects on measures of verbal fluency ( $p=.019$ ), visual constructional ability ( $p=.038$ ) and a trend ( $p=.08$ ) for better performance on a measure of abstract verbal reasoning. There were no differences between groups on measures of attention, memory, or on clinician ratings of dementia severity (Clinical Dementia Rating). No side or adverse effects have been observed in any patients.

**Conclusion:** Consistent with earlier studies, present findings support using NADH as a treatment for Alzheimer's disease.

\*V.Demarin, MD, PhD, S. Podobnik Sarkanji, MD, PhD, D. Storga-Tomic, PhD, G. Kay, PhD, Treatment of Alzheimer's disease with stabilized oral NADH a randomized, double blind study. Abstract presented and published in the proceedings of The Second International Conference on Mechanisms of Action of Nutraceuticals, October 2002.