Decreased blood level of zinc

Cmax and AUC increased in almost dose-dependent fashion. In the elderly, the Tmax and $t^{1}/_{2}$ were 2.3±0.8 and 20. 4±5.2 hours, respectively. The Cmax and AUC in the elderly were similar to the values in the young volunteers who received 20 mg. The urinary excretion rate (0-72 hours) ranged 0.01 to 0. 12% of the administered dose in both the young and elderly groups.

Based on the results described above, satisfactory tolerance of sabeluzole was confirmed in single oral dosing in young and elderly volunteers. With regard to the pharmacokinetic parameters, no significant differences were observed between the two groups, although $t^{1}/_{2}$ in the elderly tended to be slightly longer than in the young.

121 Decreased Blood Level of Zinc: Does it Explain Age-Associated Memory Impairment?

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Circumstantial evidence exists that altered levels of zinc may play a role in the development of dementia. Constantinidis [Drug Dev Res 1992; 27:1-14] suggests treatment of Alzheimer's disease with zinc compounds. Hence, memory complaints may be the clinical expression of a disturbed balance in micronutritional elements, i.e. vitamins, minerals or hormones. Bohnen et al. reported decreasing zinc levels with increasing age in healthy subjects. Furthermore, zinc blood level and psychological performance were positively correlated, independent of age [Bohnen et al.; submitted to Neuropsychobiol.].

We compared these findings with those obtained from a sample of 36 healthy individuals, aged 50-81, fulfilling the criteria of Age-Associated-Memory-Impairment (AAMI). The AAMI group exhibited a significantly lower blood level of zinc, independent of age, when compared to the control group which consisted of 40 healthy individuals comprising the two highest age groups (57-83) from the study performed by Bohnen et al. The AAMI group also showed significantly lower levels of Ni, Pb, Al, Fe, Se, Mn, Cr and total protein as well as elevated levels of ascorbate, Ca, Ca ion, Mg and albumin.

This finding could ultimately indicate that Age-Associated-Memory-Impairment can be explained, among other possible determinants, by zinc deficiency. However, several methodological problems, e.g. the distinct times at which blood samples of the AAMI- and the control group were taken, kept us from drawing such a firm conclusion.

In a second study, Zn blood levels, along with those of Cu, Mn and Co were determined in a subsample of the AAMI group (N=15) and were compared with those obtained from a new matched control group (N=15). No significant difference between the two groups was found for Zn, Mn and Co, but Cu was significantly lower in the AAMI group. Furthermore, the test-retest correlations of Zn and Mn within the AAMI group were low and nonsignificant, whereas those of Cu and Co were sufficient.

Although a small sample size could account for the apparent contradiction between the results of both studies, it is possible that plasma levels offer little information about total body zinc nutriture because of its strong homeostatic control. Suggestions for further studies into zinc depletion and cognitive dysfunction include standardizing dietary intake and adding zinc blood level to routine screening of blood chemistry parameters in future clinical trials that involve cognitive dysfunction in elderly persons. Experimental studies into the role of zinc and other micronutritional elements promise to be a new avenue in the realm of aging and cognitive decline.

122 Impact of Public Opinion and News Media on Psychopharmacology in the 1990's

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Perhaps no discipline in modern biomedical science — even molecular genetics — has been more affected by public controversy than has pharmacology. The last several years have seen the successful intrusions of the animal rights activists into the traditional drug development process in England and elsewhere and worldwide public opinion campaigns waged by special interest groups against specific psychopharmacologic molecules and their manufacturers. The agendas of these groups are varied, but the means whereby they exert their influence are remarkably similar. Typically, a combination of biased "press" releases, staged demonstrations, letter writing campaigns, harassing lawsuits, and conventional advertising results in a shaping of the news medias' coverage, a subsequent manipulation of public opinion, and ultimately an influence governmental regulations and policies. These processes have had an impact on virtually every aspect of psychopharmacology from basic research to clinical practice. Great progress in psychopharmacology can be forecast for the remainder of this century and well into the next. In fact, the near future will al-