

ECNS Turan Itil Award- 2023

It is a great pleasure to receive the 2023 Turan Itil Contribution award of the ECNS. I knew Turan when he began his reports on the changes in the EEG associated with a wide range of psychotropic drugs.

In 1952 I accepted a residency appointment at Hillside Hospital in Queens, New York. We did not have an EEG laboratory so I introduced an EEG device and was trained in EEG at Mt. Sinai Hospital in New York City. I began studies of patients treated by ECT. When chlorpromazine and then imipramine was introduced in 1954 and 1957, we studied the EEG effects of these compounds, finding them differing from each other.

Turan and I first met at the 1958 CINP meeting in Florence. We presented the results of our EEG analyses of chlorpromazine and imipramine. We presented the different EEG patterns of these compounds in psychiatric patients. Our observations were the same, and indeed, we could each use our different EEG slides for our presentations.

In 1962 I moved to St. Louis to develop the Missouri Institute of Psychiatry and invited Turan to join me from Germany for EEG studies. We developed a quantitative EEG laboratory using an IBM 1800 computer analysis system. Over the next few years we compared the findings of different chemical compounds and developed a pharmaco-EEG model analytic system that became the basis for his next 30 years of analysis of novel compounds and treatments of the mentally ill.

We soon were in conflict with industry pharmacologists led by Abraham Wikler whose animal studies failed to relate their EEG patterns with the clinical effects of the compounds. We developed an EEG-Association theory and presented the evidence at the Washington DC CINP meetings in 1966, thereby laying the foundation for the science of pharmaco-EEG.

Turan returned to New York Medical College and developed the experimental laboratories that occupied him for the remainder of his life.

By 1985 NIMH discontinued the support of my and other pharmaco-EEG studies and I went on to explore clinical trials of catatonia and melancholia based mainly on the importance of inducing seizures, the beneficent effects of ECT, flurothyl, and insulin coma.

What had we learned? Psychoactive substances recommended in clinical trials for the relief of psychiatric illnesses differed in their effects on brain functions that can be measured by quantitative EEG studies. The EEG varied and it was these central brain activity differences that determined their potency when prescribed clinically. The science of pharmaco-EEG can be used to identify novel psychoactive compounds, but the differences had to be measured in human subjects. Animal models do not relate well to the clinical applications in human psychopharmacology.

I am pleased to have contributed to the development of the quantitative pharmaco-EEG science.

Reference:

Fink, Max Remembering the Lost Science of Pharmaco-EEG. *Acta Psychiatrica Scand* 2010;121;161-173.