

School of Fundamental Medicine Journal

July 1996

Volume. 2,

No. 1



Surveys

Mathematical modelling

Experimentals

Clinicals



Kharkov

46 THE EXPERIMENTAL - COMPUTER TECHNOLOGY FOR PATHOLOGICAL PROCESS SIMULATION

Zaporozhan V.N., Karpovsky Ye.Ya., Bazhora Yu.I., Kresyun V.I., Servetsky K.L., Andronov D.Yu., Procuda O.F.

Odessa State Medical University, Ukraine

The technology of pathological process and its treatment simulation in conditions of sharing of results of experimental supervision and computer simulation is considered. The purpose of technology is reduction of volume of initial data for final construction of model at the expense of following peculiarities: 1. The use of property of complex systems, consisting in the fact that number of accepted decisions is less than the numbers of possible initial situations. 2. The data processing with use of apparatus of fuzzy sets. 3. The use of fuzzy analogue of Bayes procedures for dynamic process of decision making. The suggested technology is used in laser correlation spectrometry at study of experimental peritonitis model.

47 MULTI-DIMENSION CLASSIFICATOR FOR ESSENTIALLY SMALL SAMPLES IN TASKS OF DISEASES DIAGNOSTICS

Zaporozhan V.N., Karpovsky Ye.Ya., Bazhora Yu.I., Dobrokhleb O.O., Andronov D.Yu., Procuda O.F.

Odessa State Medical University, Ukraine

There are some pathologies express train - diagnostics of which does not permit to conduct the long supervision, and task should be resolved enough fast (for example, diphtheria). The known methods of decision making in these situations are based on multi-dimensional classification of set of N attributes, that stipulates the necessity of accumulation of volume of data, outcoming from formula ($M=4 \cdot N$). The method of diagnostics, based on application of (L-R) fuzzy numbers, is suggested which permits to classify pathology at $N < (6 \dots 10)$ supervision. The method verified on 153 cases of diphtheria and angina.

48 COMPUTER SEARCH OF TOCOLITICS IN A LINE OF PHTNILAMINOALCANOL AND GETEROCYCLIC AMINOALCOHOL

Zaitchenko A.V., Drogozov S.M., Ryzenko I.M.

Ukrainian pharmaceutical academy, Kharkov

During the last years the methods of computer modeling and forecasting of biological activity of chemical combinations became an integral part of the majority of programs on new medicinal preparations creation.

For theolegical synthesis of high-effective gravidoprotectors we carried out the computer analysis of dependence "structure - activity" with revealing of fragments-carriers of tokolitic activity among derivatives of phenylaminoalkanol, heterocyclic spirits and other arilamin.

For the analysis of relation "structure=activity" accounts with the help of a program complex EMMA were spent. This program complex was developed on chemical faculty of Moscow State University named after Lomonosov in group of computerizing chemistry under the guidance of the academician N.S. Zefirov.

In result of accounts some regressive equations with correlative coefficients 0,9 were received. The best characteristics had model SKA 1-6 RMD. The structural fragments revealed with the help of the given system will be used for designing of new tokolitics, and the active combinations will serve as an object of aimed pharmacological screening.

49 MORPHOMETRIC CLASSIFICATION OF NEUROCYTIES OF GANGLION NODOSUM NERVI VAGI OF WHITE RAT.

Akkuratov E.G.

Yaroslavl State Medical Academy, Russia

The aim of this research work is to study morphometric characteristics of neurocyts of ganglion nodosum. We used serial of microscopic section as thick as 1 mkm of ganglion nodosum which colored with methylene-blue. Metric characteristics and parameter of form of neurocyts was determinate with the using of videoanalysator "BIOSCAN" which is working on the base of PC AT 486/DX-2. We suggest the classification of neurocyts according to criterion of the diameters of equivalent circle: small - D-circle < 22,1 mkm; middle - D-circle = 22,1-29,3 mkm; large - D-circle > 29,3 mkm.