

MESSAGE FROM THE ESTHER Database

Published occasionally by the ESTHER Team

Since our Newsletter Number 8 of May 2017, it happened the following:

MEETING ANNOUNCEMENTS

- The 13th International Meeting on Cholinesterases together with the 7th Conference on Paraoxonase will be held at the university campus of Hradec Králové in the Czech Republic from 9th to 14th September 2018. It is organised by Kamil Kuca, Ondrej Soukup, Kamil Musilek, Jan Korabecny and Sona Doskova from the University of Hradec Králové and Daniel Jun from the University of Defence in Brno.
Visit the site: [13th International Meeting on Cholinesterases 7th Conference on Paraoxonase](#)
- The 16th International Symposium on Cholinergic Mechanisms (XVIth ISCM) will be held in Rehovot, Israel, during the week starting on Sunday, December 8th, 2019, at the [Weizmann Institute's Lopatie Conference Center](#). The International Advisory Board members welcomed the proposition to hold this conference by Lili Anglister (Hebrew University), who established a local organizing committee that includes Hermona Soreq (Hebrew University), Abraham Fisher, Israel Silman and Joel L. Sussman (Weizmann Institute), Dan Frenkel (Tel Aviv University), Jackie Schiller (Technion) and Ran Zichel (Israel Institute for Biological Research).

STRUCTURES

In December, the number of tridimensional structures in ESTHER reached over 1817 entries!

Since the beginning of 2017, [127](#) new crystal structures of 51 alpha/beta hydrolase proteins from 31 subfamilies were released by the RCSB PDB. For 33 of these proteins they were the first structures to be solved.

- Paper “Structural mechanism for modulation of synaptic Neuroligin-Neurexin signaling by MDGA proteins” by Elegheert et al is published. A Preview by [Thoumine and Marchot](#) summarizes the three convergent studies published in Neuron by [Gangwar, Kim](#) and [Elegheert](#) and their colleagues on the interaction of the MAM domain-containing GPI-anchored (MDGA) protein-1 and Neuroligin-2.
- Zoran Radic (SSPPS, UCSD, La Jolla, CA) communicated on the sending of purified hAChE in the Earth orbit with the purpose of initiating novel crystallization rules. The link of the experiment description is at: [Experiment](#). The [photo](#) on instagram shows astronaut Jack Fisher holding AChE samples in his hands and initiating crystal growth by allowing precipitant solution to mix with AChE protein solution
- [Special issue](#) “The Cholinesterases - Structure, Mechanism, Function and Drug Design: The 25th Anniversary of the Solution of the Crystal Structure of Acetylcholinesterase by Joel L. Sussman and Israel Silman”, with as Guest Editors: Prof. Anthony H. Futerman, Dr. Yacov Ashani, Dr. Gabriel (Gabi) Amitai, Dr. Lev Weiner is published in journal Molecules. A list of the original papers and reviews (currently 18) is found here [LIST](#).
- Paper “Planarian cholinesterase: molecular and functional characterization of an evolutionarily ancient enzyme to study organophosphorus pesticide toxicity” by [Hagstrom et al.](#) is published. The sequences of the two cholinesterases of *Dugesia japonica* are available ([dugja-CHE1](#), [dugja-CHE2](#))
- Paper “Bacterial expression of human butyrylcholinesterase as a tool for nerve agent bioscavengers development” is published by [Brazzolotto et al.](#) The mutated human BChE was designed using the PROSS algorithm of [Goldenzweig et al.](#) Some tables of the mutations are available in [table](#).
- We changed names of some families: Duf_2048 becomes [ABHD18](#), Duf_1234 becomes [Hydrolase_RBBP9_YdeN](#), Duf_2319 becomes [Abhydrolase_9](#). These families are not “Domain of unknown function: Duf” anymore

OBITUARY

- [Douglas Mark Cerasoli](#) (aka “Doug”) passed away in June 2017 at age 50. We will miss him very much. Doug was a kind and generous man, always willing to help. He was also an exemplary scientist. He pursued a career in medical research with the U.S. Army Medical Research Institute of Chemical Defense where his scientific and leadership contributions on paraoxonases and cholinesterases have been considerable. An obituary can be found at “[Cerasoli](#)”.
- [Alexander George Karczmar](#) (aka “Nicky” or “Alex”), an American neuroscientist and academician born in Warsaw, Poland, passed away in Chicago in August 2017 at the age of 100. He served from 1956 to 1986 as professor and chairman of the Department of Pharmacology and Experimental Therapeutics at Loyola University of Chicago Medical Center. He is widely recognized for his experimental research devoted to the cholinergic system, both central and peripheral, and its autonomic and mental functions, including its control of behaviors. He was a founding member of International Symposia on Cholinergic Mechanisms, an active participant for over 30 years and was elected Honorary President of the International Advisory Board. An [obituary paper](#), also in [pdf](#), by Hermona Soreq and Israel Silman retraces his achievements.

With best wishes for the holidays!

On behalf of the ESTHER Team

Arnaud