



Dr. Anna Czyrak  
(1957–2003)

## OBITUARY

Dr. Anna Czyrak, a senior researcher at the Department of Pharmacology of the Institute of Pharmacology, Polish Academy of Sciences in Kraków, a member of the Institute's Scientific Council, an active member of the Editorial Board of the Polish Journal of Pharmacology, and a person full of scientific passion and an expert in the field of stress hormones, passed away on 4 March 2003.

Dr. A. Czyrak was born at Szprotawa on 28 March 1957. In 1977 she graduated from a secondary school in Gorlice. In the years 1977–1982 she studied pharmacy at the Faculty of Pharmacy of the Medical Academy in Kraków. She completed her studies with a distinction, being granted a degree of Master of Pharmacy. Immediately afterwards, she was admitted to the Doctoral Studies at the Institute of Pharmacology of the Polish Academy of Sciences in Kraków, which she completed in 1988 upon presentation of a doctoral thesis entitled "The effect of corticosterone on the action of some psychotropic drugs". Her doctoral dissertation, prepa-

red under Professor Jerzy Maj's supervision, was highly praised by the Institute's Scientific Council and was later awarded a prize of the J. & J. Supniewski Foundation.

The successive and crucial stage of Dr. A. Czyrak's scientific career was research into the potentiating effects of calcium channel antagonists on the action of antidepressant drugs. Those studies not only yielded a series of interesting original papers, but also initiated a number of clinical investigations into the potential methods of combined depression therapy, based on concurrent application of calcium channel blockers and antidepressant drugs. Those pioneer studies were then systematically pursued by numerous scientific laboratories, being targeted on not only depression therapy, but also therapy of drug dependence.

In the early part of the nineties Dr. A. Czyrak searched intensively for pharmacological and endogenous agents regulating the activity of intracellular signal transduction pathways connected with

cAMP. It deserves to be mentioned here that one of Dr. A. Czyrak's more important scientific achievements was to demonstrate that excitatory amino acids can both stimulate and inhibit cAMP production. Being of vital importance, in the successive years those discoveries greatly contributed to intensive investigations into the physiological significance and pharmacology of glutamatergic metabotropic receptors.

In the past years Dr. A. Czyrak engaged in an analysis of the influence of stress hormones on brains neurotransmitter systems such as dopaminergic, serotonergic or excitatory amino acid ones. Those studies yielded a few important observations indicating, among others, a neuroprotective action of agents blocking corticosterone synthesis on the brain neurodegeneration processes induced by enhanced glutamatergic neurotransmission, as well as adaptive changes in the synthesis and density of dopamine D<sub>1</sub> and D<sub>2</sub> receptors due to prolonged exposure to corticosterone, the latter observation showing that chronic stress may increase vulnerability to drug dependence. Also other studies conducted by Dr. A. Czyrak deserve to be mentioned here, as they showed that repeated administration of corticosterone modified the density and synthesis of 5-HT<sub>1A</sub> serotonin receptors, leading to deep functional changes significant for anxiety-controlling or cognitive processes. The latter series of research was designed to create a basis for Dr. A. Czyrak's habilitation thesis.

It should be added here that the results of her studies were the subject of more than 100 publications, including 40 original papers.

It is also worth mentioning that Dr. A. Czyrak conducted her investigations not exclusively in our Institute. At the turn of the eighties she paid several scientific visits to various leading foreign research centers; among others, she carried out research at the Department of Psychopharmacology of the Psychiatric Hospital at Roskilde, Denmark, in the Research Laboratories of the Gödecke Pharmaceutical Company in Freiburg, Germany, and for the longest time – almost one year – at the Department of Physiology and Pharmacology of the Nottingham University in the United Kingdom.

Apart from her scientific activity, Dr. A. Czyrak was also very active as an organizer of science and scientific life. For 10 years she had been a representative of assistants and senior researchers in the

Institute's Scientific Council. Since 1994 she had held a function of an editor at the oldest Polish pharmacological journal, Polish Journal of Pharmacology, edited by the Institute. Being deeply engaged in the latter activity, Dr. A. Czyrak substantially contributed to the Journal's constantly improving scientific level and its growing international reputation. She was an active member of the Polish Pharmacological Society and the Polish Pharmaceutical Society. In the former, she distinguished herself as secretary of the Organizing Committee of the 14th International Congress of this Society, which was held 2 years ago in Kraków, having contributed to its scientific and organizational success. In the Polish Pharmaceutical Society, she was an executive member of its Kraków Branch.

Apart from that, in the last years of her life, Dr. A. Czyrak actively participated in organizing the Laboratory of Pharmacology and Brain Biostructure, established at the Department of Pharmacology. Her efforts in setting up this new laboratory and launching new directions of research can hardly be overestimated. These new directions have been based on the assumption that modern neuropsychopharmacology has, to a great extent, to take account of the anatomical structures of the brain, and that the mechanisms of action of neurotropic drugs have to be precisely embedded in the defined neuronal pathways. Her last publications, appearing in scientific journals of high repute, as well as the research directions observed in the international scientific literature, testify to Dr. A. Czyrak's great scientific intuition, as well as to her wise decisions and courage in meeting the challenge of modern neurobiology.

The premature death of Dr. Anna Czyrak is a severe loss not only to her nearest and dearest but also to our Institute. We have been irrevocably bereaved of a highly praised researcher and scientist who at the same time was extremely modest, of a kind and generous soul who was always ready to help other people with all her knowledge and experience, of a person well liked and admired by all. We have bid farewell to a Colleague whose work and entire life – short as it was – served the science and people well. Her memory will always remain with us.

*Edmund Przegański*