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# Prof. MUDr. Jiří Zeman, DrSc. from 1st Faculty of Medicine receives Education Minister's Award

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On November 10, Prof. MUDr. Jiří Zeman, DrSc., from the 1<sup>st</sup> Faculty of Medicine received the Award of the Minister of Education, Youth and Sport for outstanding results in research, experimental development and innovations for 2011. The ceremony was held in the Great Mirror Hall of the ministry building and the laudatory speech was given by the Protector for Doctoral Programmes and Academic Qualifications Prof. PhDr. Ivan Jakubec, CSc. This year, the evaluation committee received 16 nominations and finally decided to award four honours.

Besides Prof. J. Zeman, the other award-winners included Prof. RNDr. Julius Lukeš, CSc., from the Biology Centre of the Czech Academy of Science; Prof. RNDr. Emil Paleček, DrSc., from the Institute of Biophysics of the Czech Academy of Sciences; and Prof. RNDr. Radek Zbořil, PhD., from Palacký University Olomouc.

**Prof. MUDr. Jiří Zeman, DrSc.** from the Department of Paediatrics and Adolescent Medicine of the 1<sup>st</sup> Faculty of Medicine and General Teaching Hospital in Prague.

Professor Zeman graduated from the Charles University Pediatric Faculty in Prague and since 1979 has worked at the Department of Paediatrics and Adolescent Medicine of the 1<sup>st</sup> Faculty of Medicine, in the last 5 years as its head.



In his research Prof. Zeman focuses on hereditary metabolic disorders. He authored and co-authored some 150 publications including a number of monographs; his number of citations (excluding self-citations) has reached 1152, his Hirsch index is 20. Along with his colleagues he participated in the discovery of three new diseases and a gene for mucopolysaccharidosis type IIIC. He has received a number of prestigious awards for his scientific work, among them the Health Minister's Award. He is a member of a number of scientific societies and editorial boards of both Czech and foreign scientific journals.

Mitochondrial disorders of energy metabolism represent a heterogeneous group of serious diseases which affect tissues with high energy consumption, mainly the brain, the heart and muscles. Mitochondria, as the only exception in human biology, are controlled by two genomes – the nuclear DNA and mitochondrial DNA.

Prof. Zeman and his students in the “mitochondrial team” have significantly helped to increase knowledge of the biological basis of several mitochondrial diseases and their impact on the affected children. In 2010, Prof. Zeman and his team published five works in various journals with the overall impact factor of 18.3. The research had been carried out with support from the Ministry of Education, Youth and Sport, the Charles University Grant Agency and the Internal Grant Agency of the Health Ministry.

The team was the first to define a detailed clinical and laboratory phenotype in 25 children with mitochondrial encephalocardiomyopathy caused by a mutation in the TMEM70 gene. Laboratory findings defined by them serve as markers for the diagnosis of mitochondrial disorders in children.

Prof. Zeman has for a long time systematically focused on research into mitochondrial disorders and along with his colleagues he has prepared a number of cell lines and tissue specific models for the study of mitochondrial biogenesis and mitochondrial functions in the prenatal and postnatal periods, significantly helping to improve understanding of the etiopathogenesis of mitochondrial diseases. One of his most significant scientific achievements is his contribution to the discoveries of several new genes and diseases.