

Assoc. Prof. Miroslav PETERKA, M.D., Ph.D., D.Sc.



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Degrees

1967 – 1972 - Faculty of General Medicine, Charles University, Prague - M.D.
1979 – 1981 - Philosophical Faculty, Charles University, Prague - statistics
1980 - Faculty of General Medicine, Charles University, Prague - Ph.D.
2006 - Academy of Sciences of the Czech Republic, Prague - DSc.
2009 - Faculty of Science, Charles University, Prague - Associated Professor

Professional history

1972 – 1974 - Laboratory of Developmental Defects, Czechoslovak Academy of Sciences,
Clinic of Plastic Surgery, Prague
1975 – 2018 - Department of Teratology, Institute of Experimental Medicine, Czech
Academy of Sciences, Prague

1983 – present - Genetic-teratology Lab, Clinic of Plastic Surgery, Teaching hospital
Královské Vinohrady, Prague

1991 – 1996 - Department of Histology and Embryology, Charles University, Third Faculty
of Medicine, Prague

2008 – 2012 - Department of Anthropology, Faculty of Science, Charles University, Prague

2010 – present - Institute of Anatomy, First Medical Faculty, Charles University, Prague.

Main topics and interest

Clinical and experimental teratology focused on orofacial development and its disturbances
(e.g. orofacial clefts, tooth anomalies).

Embryotoxicity testing of harmful chemical and physical factors suspected from inducing
developmental defects in human (drugs, environmental pollutants, elevated temperature,
and interactions of multiple factors).

Clinical epidemiology of birth defects and their prevention.

Selected publications:

Jelínek R, **Peterka M**. The role of mandible in mouse palatal development revisited. *Cleft Palate J* 14:211-221, 1977

Peterka M, Jelínek R. Differences in the size of palatal processes in mouse embryos with cleft
palate induced in two critical periods. *Cleft Palate J* 15:13-19, 1978

Jelínek R, **Peterka M**, Rychter Z. Chick Embryotoxicity Screening Test - 130 substances tested.
Indian J Exper Biol 23:588-595, 1985

Peterka M, Jelínek R, Pavlík A. Embryotoxicity of 25 psychotropic drugs: A study using CHEST.
Reprod Toxicol 6:367-374, 1992.

Peterka M, Tvrdek M, Likovský Z, Peterková R, Fára M. Maternal hyperthermia and infection
as one of possible causes of orofacial clefts. *Acta Chir Plast* 36: 114-118, 1994

Peterka M, Peterková R, Likovský Z. Timing of exchange of the upper deciduous and
permanent teeth in boys with three types of orofacial clefts. *Cleft Palate-Craniofac J* 33,
4:318-323, 1996

Peterka M, Peterková R, Likovský Z. Teratogenic and lethal effects of long-term hyperthermia
and hypothermia in the chick embryo. *Reprod Toxicol* 10:327-332, 1996

Peterka M, Peterková R, Halašková M, Tvrdek M, Fára M, Likovský Z. Sex differences in the
incidence of orofacial clefts and the question of primary prevention in families with genetic
risk. *Acta Chir Plast* 38:57-60, 1996

Peterka M, Peterková R, Likovský Z. Cleft beak induced by hydrocortisone in the chick is
prevented by increased cell division after experimental reduction of amniotic fluid. *Anat
Embryol* 195:387-391, 1997

Peterka M, Peterková R, Tvrdek M, Kuderová J, Likovský Z. Significant differences in the
incidence of orofacial clefts in fifty-two Czech districts between 1983 and 1997 *Acta Chir
Plast* 4:124-129, 2000.

- Peterka M**, Klepáček I. Light irradiation increases embryotoxicity of photodynamic sensitizers (5-aminolevulinic acid and Protoporphyrin IX) in chick embryos. *Reprod Toxicol* 15:111-116, 2001
- Peterka M**, Lesot H, Peterková R. Body weight in mouse embryos specifies staging of tooth development. *Connect Tissue Res* 43:186-190, 2002
- Peterka M**, Peterková R, Likovský Z. Chernobyl: prenatal loss of four hundred male fetuses in the Czech Republic. *Reprod Toxicol* 18:75-79, 2004
- Hovorakova M, Lesot H, Peterkova R, **Peterka M**. Origin of the deciduous upper lateral incisor and its clinical aspects. *J Dent Res.* 85:167-71, 2006
- Peterka M**, Peterková R, Likovský Z. Chernobyl: Relationship between Number of Missing Newborn Boys and the Level of Radiation in the Czech Regions. *Environ Health Perspect* 115, 12:1801-1806, 2007
- Hovorakova M, Lesot H, **Peterka M**, Peterkova R. Early development of the human dentition revisited. *J Anat.* 233(2):135-145, 2018 Review.
- Peterka M**, Likovsky Z, Panczak A, Peterkova R. Long-term significant seasonal differences in the numbers of new-borns with an orofacial cleft in the Czech Republic - a retrospective study. *BMC Pregnancy Childbirth*18:348-359, 2018
- Kotova M, Urbanova W, Sukop A, Peterkova R, **Peterka M**, Petrova T. Dentoalveolar Arch Dimensions in UCLP Boys After Neonatal Cheiloplasty or After Lip Surgery at the Age of 3 or 6 Months. *Cleft Palate Craniofac J.* 2019 Jan 29 [Epub ahead of print]