

Michal W. Luczak, PhD

Date of birth: January 29, 1978

Birth Place: Kalisz, Poland

Citizenship: Poland

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EDUCATION:

Degree	Field	Year	Institution
M.Sc.	Molecular Biology	2002	Adam Mickiewicz University, Poland
Ph.D.	Medical Biology	2012	Poznan University of Medical Sciences, Poland

FACULTY APPOINTMENTS:

Dates	Position	Institution
2017-present	Assistant Professor (Research)	Department of Pathology and Laboratory Medicine Brown University

POSTDOCTORAL TRAINING:

Dates	Position	Institution
2012-2017	Research Associate	Department of Pathology and Laboratory Medicine Brown University

OTHER PROFESSIONAL POSITIONS:

Dates	Position	Institution
2005-2012	Graduate Research Assistant	Department of Biochemistry and Molecular Biology Poznan University of Medical Sciences, Poland
2002-2004	Research Assistant	Laboratory of Cytogenetics, Institute of Plant Genetics Polish Academy of Sciences

AWARDS/HONORS:

- 2013: Scientific Award of the President of Poznan City
- 2013: Special Scientific Award of the President of Poznan University of Medical Sciences
- 2011: Scientific Award of the Minister of Health of the Republic of Poland
- 2009: Scientific Award of the Minister of Health of the Republic of Poland
- 2007: Excellence in Teaching Award of the President of Poznan University of Medical Sciences

PROFESSIONAL SOCIETIES:

- ACCR (*American Association for Cancer Research*)
- SOT (*Society of Toxicology*)

PUBLICATIONS (peer-reviewed):

1. Krawic C, **Luczak MW** and Zhitkovich A. Variation in Extracellular Detoxification Is a Link to Different Carcinogenicity among Chromates in Rodent and Human Lungs. *Chem Res Toxicol.* 2017; 30(9):1720-1729. PMID: 28759204
2. **Luczak MW**, Zhitkovich A. Nickel-induced HIF-1 α promotes growth arrest and senescence in normal human cells but lacks toxic effects in transformed cells. *Toxicol Appl Pharmacol.* 2017; 331:94-100. PMID: 28552779
3. Zielińska-Przyjemska M, Kaczmarek M, Krajka-Kuźniak V, **Luczak M**, Baer-Dubowska W. The effect of resveratrol, its naturally occurring derivatives and tannic acid on the induction of cell cycle arrest and apoptosis in rat C6 and human T98G glioma cell lines. *Toxicol In Vitro.* 2017; 43:69-75. PMID:28595835.
4. Ortega-Atienza S, Krawic C, Watts L, McCarthy C, **Luczak MW**, Zhitkovich A. 20S immunoproteasomes remove formaldehyde-damaged cytoplasmic proteins suppressing caspase-independent cell death. *Sci Rep.* 2017; 7(1):654. PMID: 28381880.
5. Ortega-Atienza S, Wong VC, DeLoughery Z, **Luczak MW**, Zhitkovich A. ATM and KAT5 safeguard replicating chromatin against formaldehyde damage. *Nucleic Acids Res.* 2016; 44(1):198-209. PMID: 26420831.
6. Zielińska-Przyjemska M, Olejnik A, Dobrowolska-Zachwieja A, **Luczak M**, Baer-Dubowska W. DNA damage and apoptosis in blood neutrophils of inflammatory bowel disease patients and in Caco-2 cells in vitro exposed to betanin. *Postepy Hig Med Dosw (Online).* 2016; 70:265-271. PMID: 27117102.
7. **Luczak MW**, Green SE, Zhitkovich A. Different ATM Signaling in Response to Chromium(VI) Metabolism via Ascorbate and Nonascorbate Reduction: Implications for in Vitro Models and Toxicogenomics. *Environ Health Perspect.* 2015; 124(1):61-66. PMID: 25977998.
8. Szczepanski MJ, **Luczak M**, Olszewska E, Molinska-Glura M, Zagor M, Krzeski A, Skarzynski H, Misiak J, Dzaman K, Bilusiak M, Kopec T, Leszczynska M, Witmanowski H, Whiteside TL. Molecular signaling of the HMGB1/RAGE axis contributes to cholesteatoma pathogenesis. *J Mol Med (Berl).* 2015; 93(3):305-314. PMID: 25385222.
9. *DeLoughery Z, ***Luczak MW**, Ortega-Atienza S, Zhitkovich A. DNA double-strand breaks by Cr(VI) are targeted to euchromatin and cause ATR-dependent phosphorylation of histone H2AX and its ubiquitination. *Toxicol Sci.* 2015; 143(1):54-63. PMID: 25288669.
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***co-first authors**
10. *DeLoughery Z, ***Luczak MW**, Zhitkovich A. Monitoring Cr intermediates and reactive oxygen species with fluorescent probes during chromate reduction. *Chem Res Toxicol.* 2014; 27(5):843-851. PMID: 24646070.
***co-first authors**

11. Kucinska M, Piotrowska H, **Luczak MW**, Mikula-Pietrasik J, Ksiazek K, Wozniak M, Wierzchowski M, Dudka J, Jäger W, Murias M. Effects of hydroxylated resveratrol analogs on oxidative stress and cancer cells death in human acute T cell leukemia cell line: prooxidative potential of hydroxylated resveratrol analogs. *Chem Biol Interact.* 2014; 209:96-110. PMID: 24398169.
12. Green SE, **Luczak MW**, Morse JL, DeLoughery Z, Zhitkovich A. Uptake, p53 pathway activation, and cytotoxic responses for Co(II) and Ni(II) in human lung cells: implications for carcinogenicity. *Toxicol Sci.* 2013; 136(2):467-477. PMID: 24068677.
13. Morse JL, **Luczak MW**, Zhitkovich A. Chromium(VI) causes interstrand DNA cross-linking in vitro but shows no hypersensitivity in cross-link repair-deficient human cells. *Chem Res Toxicol.* 2013; 26(10):1591-1598. PMID: 24059640.
14. **Luczak MW**, Zhitkovich A. Role of direct reactivity with metals in chemoprotection by N-acetylcysteine against chromium(VI), cadmium(II), and cobalt(II). *Free Radic Biol Med.* 2013; 65:262-269. PMID: 23792775.
15. Szczepanski MJ, Deleo AB, **Luczak M**, Molinska-Glura M, Misiak J, Szarzynska B, Dworacki G, Zagor M, Rozwadowska N, Kurpisz M, Krzeski A, Kruk-Zagajewska A, Kopec T, Banaszewski J, Whiteside TL. PRAME expression in head and neck cancer correlates with markers of poor prognosis and might help in selecting candidates for retinoid chemoprevention in pre-malignant lesions. *Oral Oncol.* 2013; 49(2):144-151. PMID: 22944049.
16. Zielińska-Przyjemska M, Olejnik A, Kostrzewa A, **Luczak M**, Jagodziński PP, Baer-Dubowska W. The beetroot component betanin modulates ROS production, DNA damage and apoptosis in human polymorphonuclear neutrophils. *Phytother Res.* 2012; 26(6):845-852. PMID: 22076941.
17. **Luczak MW**, Roszak A, Pawlik P, Kędzia H, Kędzia W, Malkowska-Walczak B, Lianeri M, Jagodziński PP. Transcriptional analysis of CXCR4, DNMT3A, DNMT3B and DNMT1 gene expression in primary advanced uterine cervical carcinoma. *Int J Oncol.* 2012; 40(3):860-866. PMID: 21887463.
18. **Luczak MW**, Roszak A, Pawlik P, Kędzia H, Lianeri M, Jagodziński PP. Increased expression of HIF-1A and its implication in the hypoxia pathway in primary advanced uterine cervical carcinoma. *Oncol Rep.* 2011; 26(5):1259-1264. PMID: 21887475.
19. Szczepańska M, Wirstlein P, **Luczak M**, Jagodzinski P, Skrzypczak J. Expression of HOXA-10 and HOXA-11 in the endometria of women with idiopathic infertility. *Folia Histochem Cytobiol.* 2011; 49(1):111-118. PMID: 21526497.
20. Roszak A, Kędzia W, Malkowska-Walczak B, Pawlik P, Kędzia H, **Luczak M**, Lianeri M, Jagodzinski PP. Reduced expression of PHD2 prolyl hydroxylase gene in primary advanced uterine cervical carcinoma. *Biomed Pharmacother.* 2011; 65(4):298-302. PMID: 21705185.
21. Szczepańska M, Wirstlein P, **Luczak M**, Jagodziński PP, Skrzypczak J. Reduced expression of HOXA10 in the midluteal endometrium from infertile women with minimal endometriosis. *Biomed Pharmacother.* 2010; 64(10):697-705. PMID: 20971605.
22. Broniarczyk J, Olejnik-Schmidt AK, **Luczak MW**, Schmidt MT, Dabrowski M, Józefiak A, Kedzia W, Kwasniewska A, Gozdicka-Józefiak A. Analysis of expression and structure of the TSG101 gene in cervical cancer cells. *Int J Mol Med.* 2010; 25(5):777-783. PMID: 20372822.
23. Karaźniewicz-Łada M, **Luczak M**, Główna F. Pharmacokinetic studies of enantiomers of ibuprofen and its chiral metabolites in humans with different variants of genes coding CYP2C8 and CYP2C9 isoenzymes. *Xenobiotica.* 2009; 39(6):476-485. PMID: 19480553.

24. **Łuczak MW**, Jagodziński PP. Trichostatin A down-regulates CYP19 transcript and protein levels in MCF-7 breast cancer cells. *Biomed Pharmacother.* 2009; 63(4):262-266. PMID: 18602794.
25. **Luczak MW**, Jagodzinski PP. Apicidin down-regulates human papillomavirus type 16 E6 and E7 transcripts and proteins in SiHa cervical cancer cells. *Cancer Lett.* 2008; 272(1):53-60. PMID: 18687520.
26. Murias M, **Luczak MW**, Niepsuj A, Krajka-Kuzniak V, Zielinska-Przyjemska M, Jagodzinski PP, Jäger W, Szekeres T, Jodynis-Liebert J. Cytotoxic activity of 3,3',4,4',5,5'-hexahydroxystilbene against breast cancer cells is mediated by induction of p53 and downregulation of mitochondrial superoxide dismutase. *Toxicol In Vitro.* 2008; 22(5):1361-1370. PMID: 18434081.
27. Perła-Kaján J, Stanger O, **Luczak M**, Ziółkowska A, Malendowicz LK, Twardowski T, Lhotak S, Austin RC, Jakubowski H. Immunohistochemical detection of N-homocysteinylation of proteins in humans and mice. *Biomed Pharmacother.* 2008; 62(7):473-479. PMID: 18501553.
28. Jozefiak A, Pacholska-Bogalska J, Myga-Nowak M, Kedzia W, Kwasniewska A, **Luczak M**, Kedzia H, Gozdzicka-Jozefiak A. Serum and tissue levels of insulin-like growth factor-I in women with dysplasia and HPV-positive cervical cancer. *Mol Med Report.* 2008; 1(2):231-237. PMID: 21479402.
29. Kosmala A, Zwierzykowski Z, Zwierzykowska E, **Luczak M**, Rapacz M, Gasior D, Humphreys M. Introgression mapping of genes for winter hardiness and frost tolerance transferred from *Festuca arundinacea* into *Lolium multiflorum*. *J Hered.* 2007; 98(4):311-316. PMID: 17621586.
30. **Luczak MW**, Jagodziński PP. The role of DNA methylation in cancer development. *Folia Histochem Cytobiol.* 2006; 44(3):143-54. PMID: 16977793.
31. Plewa R, **Łuczak M**, Burchardt P, Bolewski A, Wierzchowicki J, Siminiak T. Monogenic hypercholesterolaemias - an evaluation of apolipoprotein B100 and LDL receptor gene polymorphisms. *Kardiologia Pol.* 2006; 64(2):127-133. PMID: 16502360.

TEACHING:

Dates	Topic	Annual Enrolment	Hours per year
2005-2012	Biochemistry	approx. 30 students	~180

MAIN RESEARCH INTERESTS:

- Molecular biology and biochemistry of carcinogenesis
- Cancer genetics and epigenetics
- Genes expression regulation by hypoxia
- Metal toxicology