

Curriculum Vitae

Elzbieta Janda

Personal data:

[REDACTED]
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Languages: Polish, Italian, English, German basic, Russian basic

Education:

1988-1990; High School in Cracow; Poland
1990-1995; University Studies, Biology, Specialization: Molecular Biology
Jagellonian University, Cracow, Poland

1994; External studies - 2 semesters
Tempus Scholarship
School of Biological Sciences, Manchester University, UK

1995; Degree in Biology
Diploma Thesis in Cell biology, Institute of Molecular Biology
Prof. Dr. W. Korohoda, Jagellonian University, Cracow, Poland.

1996-1997 Training Stage (Tirocinio) in Molecular Biology
University of Messina, Italy
Dipartimento di Chimica Organica e Biologica,
Prof. Giovanni Musci

1997 - 2001; PhD studies, International PhD Program
Institute of Molecular Pathology, Vienna Biocenter, Austria
Group of Dr. Hartmut Beug

December 2001 – Ph.D. thesis “Functional Dissection of Ras Downstream Pathways in a Mammary Tumorigenesis Model”
Institute of Molecular Pathology, Vienna Biocenter, University of Vienna

Fellowships:

1994 January-July; EU Tempus Scholarship, University of Manchester, UK
1997 – 2001; International PhD Program fellowship sponsored by Boeringer-Ingelheim

2013-2014 December – February; Short-term European Molecular Biology Organization fellowship, Department of Cell Physiology and Metabolism, University of Geneva, Switzerland

Positions:

1997-2001; PhD student and employee at the Institute of Molecular Pathology, Vienna Biocenter, Austria
2002 January, February, March; technical assistant in the Institute of Molecular Pathology, Vienna Biocenter
2002, April- December; research collaboration contract with Prof. Michele Grieco, Department of Experimental Medicine, University *Magna Graecia*, Catanzaro (UMG)
2003, maternal leave

2004-2008, research collaboration contract with Department of Experimental Medicine (prof. Giuseppe Scala), UMG, Catanzaro
Since 2008, December until now; Assistant Professor BIO/14, Department of Health Sciences, UMG, Catanzaro.
Since 2009, February until now; project coordinator and lab manager at Molecular and Cellular Toxicology Laboratory, UMG, Catanzaro

Career-related activities:

1996, Recognition of Polish University Degree by University of Messina
1999 June-July, visiting scientist, Laboratory of Signal Transduction, Prof. Julian Downward, ICRF London, UK,
2010, May; active member of scientific and organizing committee of **First International Conference: Early Cancer Detection: Environment, Biomarkers and Mechanisms**
2017, October; proponent and president of organizing committee of the Symposium "Autophagy and phagocytosis in brain pathophysiology" within **National Congress of Italian Neuroscience Society**, October 1-4, Ischia, Naples, 2017

Conference attendance (only as speaker):

2010, October, invited speaker at the **International meeting: Kinases, phosphatases and lipases in health and disease**, title of the talk: "Role of quinone oxidoreductase 2 in pesticide toxicity, autophagy and cancer", UMG, Catanzaro, October 20-21, 2010

2011, August; Short-talk and poster presentation "*Antidote effect of quinone oxidoreductase 2 (QR2) inhibitor on paraquat-induced toxicity in vitro and in vivo*" at **Gordon Research Conference: Molecular and Cellular Mechanism of Toxicity**, Proctor Academy, Andover, New Hampshire, USA, August 07-10, 2011

2011, September; invited speaker at the **Workshop on Metabolic requirements and changes in cell proliferation and death**, Torre di Ruggero, Catanzaro, Italy, September 6-9, 2011

2011, September; invited speaker at the **International conference: Antioxidant and herbal derivatives in health and disease: Focus on bergamot**, talk: *Molecular mechanisms of hypolipemic and hypoglycemic effects of flavonoids*, Bergamot museum, Reggio Calabria, Italy, September 25, 2011

2013, August; invited speaker at **Gordon Research Conference: Molecular and Cellular Mechanism of Toxicity**, Proctor Academy, Andover, New Hampshire, USA, August 11-16, 2013. Title of the talk: *Prolonged oxidative stress inhibits basal autophagy in astrocytes: Role of quinone oxidoreductase 2 (QR2)*.

2013, October; invited speaker at **36^o Congress of Italian Society of Pharmacology**, Turin, Italy, 23 - 26 October 2013. Title of the talk: *PQ-induced oxidative stress inhibits basal autophagy in astrocytes via Quinone Oxidoreductase 2 (QR2)*.

2014, September; invited speaker at the International meeting on **Food Processing Innovation and Green Extraction Technologies: Recent Advances in Human Health**, UMG Catanzaro, Italy, 25-26 September 2014. Title of the talk: *Bergamot polyphenol fraction prevents nonalcoholic fatty liver disease via stimulation of lipophagy in cafeteria diet-induced rat model of metabolic syndrome*.

2015, June; invited speaker at **Targeting Liver World Congress 2015**, St. Julian's, Malta, 24-27 June 2015. Title of the talk: *Bergamot Polyphenol Fraction Prevents Non-Alcoholic Fatty Liver Disease via stimulation of lipophagy of cafeteria diet-induced metabolic syndrome*.

2016, May; invited speaker at Congresso del Lions Club Catanzaro "**Parkinson: conquiste del passato e sfide del futuro**", Catanzaro, Italy, 11 May 2016. Title of the talk: *Fattori ambientali che favoriscono l'insorgenza del Morbo di Parkinson*

2016, December; invited speaker at **More than Neurons: toward a less neuronocentric view of brain disorders**, Torino, Italy, 1-3 December 2016. Title of the talk: *Parkinsonian toxin-induced oxidative stress inhibits basal autophagy in astrocytes via NQO2/quinone oxidoreductase 2: Implications for neuroprotection.*

2017, October; invited speaker at the Symposium "Autophagy and phagocytosis in brain pathophysiology", within **National Congress of Italian Neuroscience Society**, October 1-4, Ischia, Naples, 2017. Title of the talk: *Defective autophagy in Parkinson's disease: role of dopaminergic toxins*

Teaching experience:

2013-2015, main lecturer in *Guidelines for preparation and writing of scientific papers*, PhD Program School in Life Sciences, University Magna Graecia, Catanzaro.

Since 2014, lecturer in Pharmacology (SSD BIO14), School of Medicine and Surgery, Pharmacology of Anesthesia, Sedation and Pain Therapy course for dentistry, University Magna Graecia, Catanzaro.

Prizes and Awards:

1995; prize and special notification on the University Diploma for outstanding results, Jagellonian University, Cracow

2008 Young Investigator Award, 1st place, UMG, Catanzaro

2012 European Molecular Biology Organization (EMBO) short-term fellowship

2016 Best Scientific Communication Award at "Gala della Ricerca", 1st place, UMG, Catanzaro

2019 Special recognition from *Accademia del Bergamotto* for scientific achievements in elucidating pharmacological properties of Bergamot. Bergafest event, Reggio Calabria, 7th July 2019.

Research profile:

Elzbieta Janda gained an international experience during her PhD fellowship in one of the most prominent research institutes in Europe – Institute of Molecular Pathology (IMP) in Vienna (1998-2002). At the IMP, she worked with the group of Hartmut Beug in the field of epithelial cell biology and oncogene signal transduction. Her work crucially contributed to three important publications on epithelial-mesenchymal transition (EMT), defined as an epigenetic process of conversion of a differentiated epithelial cell into an undifferentiated cell with mesenchymal and stem cell markers. During the PhD studies E. Janda collaborated also with J. Downward group, ICRF London working on the project regarding Oncogenic Ras signaling cascades in epithelial cells.

In 2002 she moved to Catanzaro, Italy, to join her family, and accepted a research collaboration contract with the Department of Experimental Medicine, University of Catanzaro, where she continued to work on EMT in collaboration with H. Beug. In 2004 she started the postdoctoral collaboration with the group of prof. G. Scala, where she devoted herself to molecular and functional characterization of Inhibitor of Bruton Tyrosine Kinase (IBtk), a novel protein, with an unique and evolutionary conserved. Her work led, beside others, to identification of crucial serine phosphorylation, regulating IBtk inhibitory activity. This project led to important publications in *Nucleic Acids Research* and *Blood*. This postdoctoral experience helped her to gain further expertise in molecular biology and biochemistry.

In 2008 she was assigned an Assistant Professor position in Pharmacology, at University Magna Graecia, Catanzaro. Since then she has been actively collaborating with the prof. Mollace, as a coordinator of research projects and supervisor of PhD students. During this time, she developed a strong interest in molecular pharmacology of bergamot flavonoids. While, collaborating with E. Mollace team, E. Janda was the first to show a potent therapeutic effect of Bergamot Polyphenol Fraction (BPF) on non-alcoholic fatty liver disease (NAFLD) and anti-inflammatory effects of BPF on non-alcoholic steatohepatitis (NASH). Her work demonstrated the ability of BPF to promote energy expenditure by stimulating AMP-dependent kinase and autophagy in livers. The protective effect against NAFLD could be correlated with BPF-induced autophagy of lipids and proteins in the liver. Next, E.Janda and co-workers were able to identify the active components of BPF that modulate autophagy and show that it is more effective and safer to use BPF than individual active flavones, due to possible toxic effects of pure compounds, in contrast to hepatoprotective effects of the phyto-complex. E. Janda is the leading author of seven scientific papers and co-author of more than five articles on pharmacological and molecular effects of bergamot polyphenols, besides other publications addressing the role of autophagy and phagocytosis and their pharmacological modulation in Parkinson's disease.

Publications:

1. W. Korohoda, M. Mycielska, E. Janda, Z. Madeja (2000): *Immediate and long-term galvanotactic responses of Amoeba proteus to dc electric fields*, **Cell Motil Cytoskeleton** 45:10-26.

Impact factor 3,1

2. K. Lehmann, E. Janda, C. E. Pierreux, M. Rytömaa, A. Schulze, M. McMahon, C. S. Hill, H. Beug and J. Downward (2000). *Raf induces TGF β production while blocking its apoptotic but not invasive responses: a mechanism leading to increased malignancy in epithelial cells*. **Genes Dev.** 14: 2610-2622.

Impact factor 15,05

3. Janda, E., K. Lehmann, I. Killisch, M. Jechlinger, M. Herzig, J. Downward, H. Beug, and Grunert, S. (2002a). *Ras and TGF β cooperatively regulate epithelial cell plasticity and metastasis: dissection of Ras signaling pathways*. **J Cell Biol** 156, 299-313.

Impact factor 10,2

4. Janda, E., Litos, G., Grunert, S., Downward, J., and Beug, H. (2002b). *Oncogenic Ras/Her-2 mediate hyperproliferation of polarized epithelial cells in 3D cultures and rapid tumor growth via the PI3K pathway*. **Oncogene** 21, 5148-59.

Impact factor 7,4

5. Jechlinger, M., S. Grunert, I. Tamir, E. Janda, S. Ludemann, T. Waerner, A. Weith, H. Beug and N. Kraut (2003). *Expression profiling in epithelial plasticity in tumor progression*. **Oncogene** 22 (46), 7155-69.

Impact factor 7,4

6. Janda, E., M. Nevolo, K. Lehmann, J. Downward, H. Beug and M. Grieco. (2006). *Raf and TGF β - dependent EMT is initiated by endocytosis and lysosomal degradation of E-cadherin*. **Oncogene** 25(54):7117-30, **Epub. Jun 5; 2006**.

Impact factor 6,58

7. Spatuzza, C., M. Schiavone, E. Di Salle, E. Janda, M. Sardiello, O. Fiero, M. Simonetta, N. Argiriou, I. Quinto and G. Scala. (2008). *Physical and functional characterization of the genetic locus of IBtk, an inhibitor of Bruton Tyrosine Kinase: evidence for three protein isoforms of IBtk*. **Nucleic Acids Res.** 2008 Aug;36(13):4402-16. **Epub 2008 Jul 2**.

Impact factor 6,88

8. Argellati, F.; Domenicotti, C.; Passalacqua, M.; Janda, E.; Melloni, E.; Marinari, U. M.; Pronzato, M. A.; Ricciarelli, R. *Protein kinase C-dependent alpha-secretory processing of the amyloid precursor protein is mediated by phosphorylation of myosin II-B*. **Faseb J** 23:1246-1251; 2009.

Impact factor 6,4

9. Mollace, V.; Sacco, I.; Janda, E.; Malara, C.; Ventrice, D.; Colica, C.; Visalli, V.; Muscoli, S.; Ragusa, S.; Muscoli, C.; Rotiroti, D.; Romeo, F. *Hypolipemic and hypoglycaemic activity of bergamot polyphenols: from animal models to human studies*. **Fitoterapia** 82:309-316; 2011.

Impact factor 1,9

10. Janda, E.; Palmieri, C.; Pisano, A.; Pontoriero, M.; Iaccino, E.; Falcone, C.; Fiume, G.; Gaspari, M.; Nevolo, M.; Di Salle, E.; Rossi, A.; De Laurentiis, A.; Greco, A.; Di Napoli, D.; Verheij, E.; Britti, D.; Lavecchia, L.; Quinto, I.; Scala, G. *Btk regulation in human and mouse B cells via protein kinase C phosphorylation of IBtkgamma*. **Blood** 117:6520-6531; 2011.

Impact factor 10,56

11. Janda, E.; Visalli, V.; Colica, C.; Aprigliano, S.; Musolino, V.; Vadala, N.; Muscoli, C.; Sacco, I.; Iannone, M.; Rotiroti, D.; Spedding, M.; Mollace, V. *The protective effect of tianeptine on Gp120-induced apoptosis in astroglial cells: role of GS and NOS, and NF-kappaB suppression*. **Br J Pharmacol** 164:1590-1599; 2011.

Impact factor 4,41 (2011 JCR Science Edition)

12. Janda, E.; Isidoro, C.; Carresi, C.; Mollace, V. *Defective autophagy in Parkinson's disease: role of oxidative stress*. **Molecular Neurobiology** 46: 639-661, 2012

Impact factor 5,47 (2012 JCR Science Edition)

13. Janda, E.; Parafati, M.; Aprigliano, S.; Carresi, C.; Visalli, V.; Sacco, I.; Ventrice, D.; Mega, T.; Vadala, N.; Rinaldi, S.; Musolino, V.; Palma, E.; Gratteri, S.; Rotiroti, D.; Mollace, V. *The antidote effect of Quinone Oxidoreductase 2 (QR2) inhibitor on paraquat-induced toxicity in vitro and in vivo*. **Br J Pharmacol** 168: 46-59, 2013.

Impact factor 4,99 (2013 JCR Science Edition)

14. Gliozzi M., Walker, R., Muscoli, S., Vitale, C., Gratteri, S., Carresi, C., Musolino, V., Russo, V., Janda, E., Ragusa, S., Aloe, A., Palma, E., Muscoli, C., Romeo, F., D.; Mollace, V. Bergamot polyphenolic fraction enhances rosuvastatin-induced effect on LDL-cholesterol, LOX-1 expression and protein kinase B phosphorylation in patients with hyperlipidemia. *International Journal of Cardiology* 170 (2): 140-145, 2013
Impact factor 6,18 (2013 JCR Science Edition)
15. Dagda, R., Banerjee T.D., Janda E. How Parkinsonian Toxins Dysregulate the Autophagy Machinery. *International Journal of Molecular Sciences* 14(11): 22163-22189; 2013
Impact factor 2,34 (2013 JCR Science Edition)
16. Walker R., Janda E., Mollace V. The use of Bergamot Polyphenol Fraction in Cardiometabolic Risk Prevention and its Possible Mechanisms of Action. Chapter 84 in *Polyphenols in Health and Disease*, Elsevier, DOI:<http://dx.doi.org/10.1016/B978-0-12-398456-2.00084-0>, 2014
17. Gliozzi, M., Carresi, C., Musolino, V., Palma, E., Muscoli, C., Vitale, C., Gratteri, S., Muscianisi, G., Janda, E., Muscoli, S., Romeo, F., Ragusa, S., Mollace, R., Walker, R., Ehrlich, J., Mollace, V. The Effect of Bergamot-Derived Polyphenolic Fraction on LDL Small Dense Particles and Non Alcoholic Fatty Liver Disease in Patients with Metabolic Syndrome. *Advances in Biological Chemistry* 4: 129-137, 2014
18. Ehrlich, J., Gliozzi, M., Janda, E., Walker, R., Romeo, F., & Mollace, V. (2014). Effect of Citrus Bergamot Polyphenol Extract on Patients With Nonalcoholic Fatty Liver Disease. *American Journal of Gastroenterology*, 109, S152-S153.
Impact factor 10,76 (2014 JCR Science Edition)
19. Janda E, Lascala A, Carresi C, Parafati M, Aprigliano S, Russo V, et al. Parkinsonian toxin-induced oxidative stress inhibits basal autophagy in astrocytes via NQO2/quinone oxidoreductase 2: Implications for neuroprotection. *Autophagy*. 2015; 11(7): 1063-80.
Impact factor 10,96 (2015 JCR Science Edition)
20. Parafati M, Lascala A, Morittu VM, Trimboli F, Rizzuto A, Brunelli E, ..., Janda E. Bergamot polyphenol fraction prevents nonalcoholic fatty liver disease via stimulation of lipophagy in cafeteria diet-induced rat model of metabolic syndrome. *The Journal of nutritional biochemistry*. 2015; 26(9): 938-48.
Impact factor 4,70 (2013 JCR Science Edition)
21. JANDA, E., Lascala, A., Martino, C., Ragusa, S., Nucera, S., Walker, R., . . . Mollace, V. (2016). Molecular mechanisms of lipid- and glucose-lowering activities of bergamot flavonoids. *PharmaNutrition*. doi: <http://dx.doi.org/10.1016/j.phanu.2016.05.001>
Cite Score 2,75 (published on <https://www.journals.elsevier.com/pharmanutrition>)
22. Son, C. G., Wei, Z., Raghavendran, H. B., Wang, J. H., & JANDA, E. (2017). Medicinal Herbs and Their Active Compounds for Fatty Liver Diseases. [Editorial]. *Evid Based Complement Alternat Med*, 2017, 3612478. doi: 10.1155/2017/3612478
Impact factor 2,06
23. Lecca, D., JANDA, E., Mulas, G., Diana, A., Martino, C., Angius, F., . . . Carta, A. R. (2018). Boosting phagocytosis and anti-inflammatory phenotype in microglia mediates neuroprotection by PPARgamma agonist MDG548 in Parkinson's disease. *Br J Pharmacol*. doi: 10.1111/bph.14214
Impact factor 6,81
24. JANDA, E., Boi, L., & Carta, A. R. (2018). Microglial phagocytosis and its regulation: a therapeutic target in Parkinson's disease? . *Front. Mol. Neurosci*, in press. doi: 10.3389/fnmol.2018.00144
Impact factor 3,9
25. Janda, E., Salerno, R., Martino, C., Lascala, A., La Russa, D., & Oliverio, M. (2018). Qualitative and quantitative analysis of the proautophagic activity of Citrus flavonoids from Bergamot Polyphenol Fraction. *Data Brief*, 19, 1327-1334. doi: 10.1016/j.dib.2018.05.139
Impact factor N/A (2017 JCR Science Edition)
26. Lascala, A., Martino, C., Parafati, M., Salerno, R., Oliverio, M., Pellegrino, D., . . . Janda, E. (2018). Analysis of proautophagic activities of Citrus flavonoids in liver cells reveals the superiority of a natural polyphenol mixture over pure flavones. *J Nutr Biochem*, 58, 119-130. doi: 10.1016/j.jnutbio.2018.04.005
Impact factor 4,41 (2017 JCR Science Edition)

27. Parafati, M., Lascala, A., La Russa, D., Mignogna, C., Trimboli, F., Morittu, V. M., . . . Janda, E. (2018). Bergamot Polyphenols Boost Therapeutic Effects of the Diet on Non-Alcoholic Steatohepatitis (NASH) Induced by "Junk Food": Evidence for Anti-Inflammatory Activity. *Nutrients*, 10(11). doi: 10.3390/nu10111604
Impact factor 4,2 (2018 JCR Science Edition)
28. Boutin, J. A., Bouillaud, F., Janda, E., Gacsalyi, I., Guillaumet, G., Hirsch, E. C., . . . Ferry, G. (2019). S29434, a Quinone Reductase 2 Inhibitor: Main Biochemical and Cellular Characterization. *Mol Pharmacol*, 95(3), 269-285. doi: 10.1124/mol.118.114231
Impact factor 4,0 (2019 JCR Science Edition)
29. La Russa, D., Giordano, F., Marrone, A., Parafati, M., Janda, E., & Pellegrino, D. (2019). Oxidative Imbalance and Kidney Damage in Cafeteria Diet-Induced Rat Model of Metabolic Syndrome: Effect of Bergamot Polyphenolic Fraction. *Antioxidants* (Basel), 8(3). doi: 10.3390/antiox8030066
Impact factor 5,0 (2020 JCR Science Edition)
30. Capomolla, A. S., Janda, E., Paone, S., Parafati, M., Sawicki, T., Mollace, R., . . . Mollace, V. (2019). Atherogenic Index Reduction and Weight Loss in Metabolic Syndrome Patients Treated with A Novel Pectin-Enriched Formulation of Bergamot Polyphenols. *Nutrients*, 11(6). doi: 10.3390/nu11061271
Impact factor 4,5 (2020 JCR Science Edition)
31. Boi, L., A. Pisanu, M. F. Palmas, G. Fusco, E. Carboni, M. A. Casu, V. Satta, M. Scherma, E. Janda, I. Mocci, G. Mulas, A. Ena, S. Spiga, P. Fadda, A. De Simone and A. R. Carta (2020). "Modeling Parkinson's Disease Neuropathology and Symptoms by Intranigral Inoculation of Preformed Human alpha-Synuclein Oligomers." *Int J Mol Sci* 21(22)
Impact factor 4,5 (2020 JCR Science Edition)
32. Janda, E., F. Nepveu, B. Calamini, G. Ferry and J. A. Boutin (2020). "Molecular pharmacology of NRH:quinone oxidoreductase 2: A detoxifying enzyme acting as an undercover toxifying enzyme." *Mol Pharmacol*.
Impact factor 4,0 (2020 JCR Science Edition)
33. Baron, G., A. Altomare, M. Mol, J. L. Garcia, C. Correa, A. Raucci, L. Mancinelli, S. Mazzotta, L. Fumagalli, G. Trunfio, L. Tucci, E. Lombardo, D. Malara, E. Janda, V. Mollace, M. Carini, E. Bombardelli and G. Aldini (2021). "Analytical Profile and Antioxidant and Anti-Inflammatory Activities of the Enriched Polyphenol Fractions Isolated from Bergamot Fruit and Leave." *Antioxidants* (Basel) 10(2):141. doi: 10.3390/antiox10020141.
Impact factor 5,0 (2020 JCR Science Edition)

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