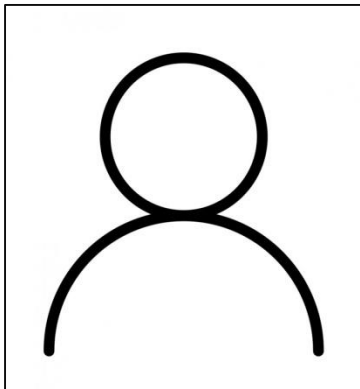


Name,surname, title : UA Professor Katarzyna Wolny – Kołodka, PhD Eng.



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Consultation hours: determined for each semester based on the class schedule

Research interest:

My research interests focus on environmental microbiology: drug-resistance, microbiological air monitoring, water, soil, biodiversity of microorganisms inhabiting household and organic waste, evaluation of bactericidal and anti-fungal properties of nanoparticles.

Research experience:

Visiting Scholar (uczelnia, okres trwania)

1. **01-04 – 23-05-2009** Internship at the Władysław Szafer Polish Academy of Sciences Institute of Botany in Krakow; training involved performance of PCR and electrophoretic separation of its products, as well as operation of automatic sequencers.
2. **1 – 31-07-2017** Scientific internship at the Department of Applied and Landscape Ecology, Mendel University in Brno, Czech Republic; training involved evaluation of microbiocenotic composition of microorganisms inhabiting organic waste and analyses of influence of biochar addition on the composting process and the quality of compost produced.
3. **1 – 30-11-2017** Scientific internship at the Institute of Chemistry and Inorganic Technologies, Faculty of Engineering and Chemical Technologies, Krakow University of Technology, Department of Inorganic Technology and Environmental Biotechnology; training involved e.g. material engineering, chemical technologies, biotechnology, and nanotechnology.

DSc, (Habilitation) (rok, temat)

Monothematic collection of papers entitled: '*Microbiological threats present in the environment of horse riding centers, in particular in terms of spread of drug-resistant strains of Escherichia coli and Staphylococcus spp., along with determination of the bactericide potential of silver nanoparticles towards those bacteria*'.

The aim of the presented scientific accomplishment was a profound analysis of potential microbiological threats connected to horse riding and the evaluation of possibility of application of nanosilver as an ingredient in disinfectants used to clean compartments where horses are kept.

Date of title conferment: 24 April 2019

PhD (rok, temat)

PhD thesis title: '*Biodiversity and reaction of Fusarium fungi to selected factors in in vitro testing*'.

The aim of the thesis was to isolate, identify and evaluate the biodiversity of *Fusarium* genus strains and assess their sensitivity to selected xenobiotics, along with a genetic analysis of their ability to produce selected mycotoxins.

Date of title conferment: 27 June 2013

Professional profiles:

ORCID: <https://orcid.org/0000-0003-2994-8842>

Research Gate: https://www.researchgate.net/profile/Katarzyna_Wolny-Koladka

List of publications: 10 najważniejszych z 5 ostatnich lat:

1. **Wolny-Kołodka K.***, Lenart-Boroń A. 2016. Phenotypic and molecular assessment of drug resistance profile and genetic diversity of waterborne *Escherichia coli*. *Water, Air Soil Pollution*, 227:146. DOI: 10.1007/s11270-016-2833-z. **(IF 1.702; 25 MNiSW pts.)**
2. Lenart-Boroń A., **Wolny-Kołodka K.**, Juraszek K., Kasprowicz A. 2017. Phenotypic and molecular assessment of antimicrobial resistance profile of airborne *Staphylococcus* spp. isolated from flats in Kraków. *Aerobiologia*, DOI: 10.1007/s10453-017-9481-7. **(IF 2.202; 25 MNiSW pts.)**
3. **Wolny-Kołodka K.***, Malina D. 2017. Silver nanoparticles toxicity against airborne strains of *Staphylococcus* spp. *Journal of Environmental Science and Health, Part A. Toxic/Hazardous*

Substances and Environmental Engineering, 52(13):1247-1256. DOI: 10.1080/10934529.2017.1356186. **(IF 1.561; 20 MNiSW pts.)**

4. **Wolny-Kołodka K.*** 2018. Microbiological quality of air in free-range and box-stall stable horse keeping systems. *Environmental Monitoring and Assessment*, 190:269. DOI: 10.1007/s10661-018-6644-0. **(IF 1.804; 25 MNiSW pts.)**

5. **Wolny-Kołodka K.***, Malina D. 2018. Eco-friendly approach to the synthesis of silver nanoparticles and their antibacterial activity against *Staphylococcus* spp. and *Escherichia coli*. *Journal of Environmental Science and Health, Part A. Toxic/Hazardous Substances and Environmental Engineering*, DOI: 10.1080/10934529.2018.1474568. **(IF 1.561; 20 MNiSW pts.)**

6. **Wolny-Kołodka K.***, Lenart-Boroń A. 2018. Antimicrobial resistance and the presence of extended-spectrum-beta-lactamase genes in *Escherichia coli* isolated from the environment of horse riding centers. *Environmental Science and Pollution Research*, 25:21789-21800. DOI: 10.1007/s11356-018-2274-x. **(IF 2.800; 30 MNiSW pts.)**

7. **Wolny-Kołodka K.*** 2018. Resistance to antibiotics and the occurrence of genes responsible for the development of methicillin resistance in *Staphylococcus* bacteria isolated from the environment of horse riding centers. *Journal of Equine Veterinary Science*, 61:65-71. DOI: 10.1016/j.jevs.2017.11.010. **(IF 0.882; 20 MNiSW pts.)**

8. **Wolny-Kołodka K.***, Żukowski W. 2019. Mixed municipal solid waste hygienisation for refuse-derived fuel production by ozonation in the novel configuration using fluidized bed and horizontal reactor. *Waste and Biomass Valorization*, 10(3): 575-583. DOI: 10.1007/s12649-017-0087-7. **(IF 1.874; 20 MNiSW pts.)**

9. Malinowski M., **Wolny-Kołodka K.**, Vaverková MD. 2019. Effect of biochar addition on the OFMSW composting process under real conditions. *Waste Management*, 84:364-372. DOI: 10.1016/j.wasman.2018.12.011. **(IF 4.723; 40 MNiSW pts.)**

10. Mierzwa-Hersztek, **Wolny-Kołodka K.**, Gondek K., Gałązka A., Gawryjolek K. 2019. Effect of coapplication of biochar and nutrients on microbiocenotic composition, dehydrogenase activity index and chemical properties of sandy soil. *Waste and Biomass Valorization*, DOI: 10.1007/s12649-019-00757-z **(IF 2.358; 20 MNiSW pts.)**