



Fundusze Europejskie  
dla Nowoczesnej Gospodarki



Rzeczpospolita  
Polska

Dofinansowane przez  
Unię Europejską



Fundacja na rzecz  
Nauki Polskiej

# EPR IN ZEBRAFISH RESEARCH

THEORY, TECHNIQUES, AND APPLICATIONS

**WEBINARS 29.08, 3.09**

**FROM 9:00 TILL 11:30**

**WORKSHOP 17.09**

**FROM 11:00 TILL 15:30**

Join our interactive online & on-site workshop designed for researchers eager to explore cutting-edge applications in cellular and in vivo studies. From melanin radicals to spin probes and spin traps, dive into both theory and hands-on insights.

## Who Should Attend:

Zebrafish researchers studying melanin, melanoma, membrane fluidity, or oxidative stress in cells and tissues, Scientists and EPR users interested in expanding their expertise into zebrafish as a model organism, and Biomedical researchers exploring innovative tools for in vivo and cellular studies

## Locations:

- **Webinars** - online via Microsoft Teams;
- **Workshops** at the Department of Organic and Physical Chemistry, Medical University of Warsaw, Banacha 1, Warsaw

## Instructors:

We have more than 17 years experience with various EPR techniques applied to biological, chemical and *in vivo* studies

**dr Katarzyna Zawada (ORCID 0000-0002-4065-9841**

**dr Katerina Makarova (ORCID 0000-0001-8660-9631)**

**dr Małgorzata Korzeniowska (ORCID 0000-0002-9537-9257)**



## Workshop Highlights:

- Theory and Foundations of EPR in simple words
- Exploring Melanin Radical with EPR for melanoma studies in zebrafish (theory and practice)
- Exploring Membrane Fluidity with EPR spin probes (theory and practice)
- Spin Trapping Applications for the identification and investigation of reactive oxygen species and other radical species

## Networking and Collaborative Opportunities:

Engage with us (dr Katerina Makarova and dr Katarzyna Zawada) and fellow zebrafish researchers, fostering connections and potential collaborations.

**REGISTRATION** → **[KMAKAROVA@WUM.EDU.PL](mailto:KMAKAROVA@WUM.EDU.PL)**

**Join for free – register by  
1.09. 2025!**

**Project co-financed by the European Union under  
the European Funds for 2021-2027.**

**Project number: FENG.02.07-IP.05-0059/23.**



Fundusze Europejskie  
dla Nowoczesnej Gospodarki



Rzeczpospolita  
Polska

Dofinansowane przez  
Unię Europejską



Fundacja na rzecz  
Nauki Polskiej

## PLAN FOR WEBINARS

**9:00 - 9.30** Welcome + introduction

**9:30 - 10:15** Electron Paramagnetic Resonance for biologists:  
EPR for melanin radical studies  
EPR for membrane fluidity studies

**10:15 - 10:30** Break + Q&A

**10:30 - 11:00** Practical aspects of EPR: you will learn the how to  
operate the EPR spectrometer and prepare samples (solid  
samples, solutions and zebrafish embryos)

**12:30 - 13:30** Application of EPR for studies of tissues and cells

## PLAN FOR WORKSHOPS

**10:00 - 10.30** Welcome coffee

**10:30 - 11:15** Electron Paramagnetic Resonance for biologists:  
EPR for melanin radical studies  
EPR for membrane fluidity studies

**11:15 - 12:30** Break + Q&A

**12:30 - 14:30** Practical workshop in the lab, everyone will learn  
how to operate EPR spectrometer, including sample preparation,  
and zebrafish embryo handling

**14:30 - 14:30** Application of EPR for studies of tissues and cells