



UNIwersytet Kardynała Stefana Wyszyńskiego
w Warszawie
Wydział Biologii i Nauk o Środowisku

ul. Wóycickiego 1/3, 01-938 Warszawa, tel. (48 22) 569 68 37

www.wbns.uksw.edu.pl

***“Natura incipit, scientia dirigit, usus
perficit”***

*Nature gave birth, science directs,
practice finishes.*

Research conducted in terms of:

- ✓ Implementation of research and scientific interests of employees corresponding to current thematic trends in global research and creation of innovative solutions.
- ✓ External cooperation in carrying out R&D projects, pilot projects, implementation and development works.

Water and sewage management

- Research works on wastewater treatment, including industrial wastewater and water treatment using biotechnological methods;
- Elimination of hazardous components from wastewater / sewage sludge and water (e.g. antibiotics, pesticides, hormones, heavy metals).
- Monitoring of micro-pollutants (e.g. pharmaceuticals, cosmetics, micro-plastics)

Renewable energy sources (RES)

- Research on the effectiveness of renewable energy technologies;
- Production of electricity and heat from RES for own needs and its distribution to the network;

Energy efficiency

- Heat emission from large volume buildings;
- Relations between object dimensioning and heat emission;
- Thermo-modernization of existing facilities;
- The relationship between heat emission and the heat balance of objects where many people stay at the same time.

Thermal analysis of materials

Changes in the properties of selected substances and materials in terms of temperature in a defined way:

- determination of selected parameters of test substances;
- testing the quality and purity of compounds and their additives;
- examination of compound degradation processes, e.g. in the process of their storage;
- problems of thermal stabilization of materials used in the pharmaceutical, food, metallurgy, plastics, recycling and waste incineration industries.

Technologies for the disposal and recovery of hazardous waste

- Stabilization of industrial hazardous waste with the possibility of its reuse, e.g. in construction;
- Immobilization of hazardous ingredients and active materials on carriers;
- Recovery of raw materials and compounds from waste and sewage sludge using biotechnological methods;
- Reclamation of degraded areas (bioremediation);
- Biodegradation studies on new and waste products;

Environmental biology

- The richness of ecosystems, their biological diversity and its changes under the influence of human activity (research: floristic, fauna, phytosociological, paleobotanic);
- Experimental studies performed in laboratory conditions (invertebrate animal populations).

Molecular Biology

- Genotyping;
- Gene expression study;
- DNA damage and repair;
- Apoptosis examination;
- Cell cycle regulation study;
- Cell phenotype analysis;
- Drug / other substance effects on cell traits and functions.

Human biology

- Assessment of biological development of children and youth;
- Assessment of human motor fitness and performance at various stages of ontogenesis;
- Analyzes using neuro and HEG biofeedback apparatus;
- Assessment of the incidence of genes related to human build, physiological functions and motor skills;
- Prehistoric population study based on bone materials using osteometric, osteoscopic and molecular methods;

Biochemistry and Cell Biology

- Polarization mechanisms of normal and transformed migrating cells.

Plant biology and ecology

- Biodiversity research;
- Nature expertise;
- Biologicals.

Analytics

Physico-chemical, microbiological, biological and ecotoxicological analyzes:

- Water;
- Sewage and sewage sludge;
- Soil;
- Waste and biomass;
- Air;
- Plant material;

Documentations and expertise

- Environmental impact reports for investments;
- Integrated permits;
- Sectoral permits;
- Energy expertise of buildings and premises;
- Technical and economic expertise of industrial installations and investments;
- Estimation of environmental risk based on ecotoxicological studies.

Thesis

We also offer 'ordered' diploma theses by the Faculty's students directly in companies and institutions (market research, physicochemical analyzes, participation in research projects).

"Soft" projects

Sociological research on a selected group of student populations with the image of the brand and products supporting the processes of strategic brand building.

We invite you to cooperation !!!

