

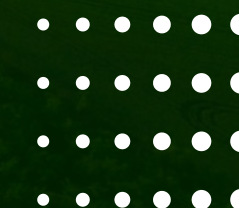
INSTITUTE OF AGRICULTURAL
AND FOOD BIOTECHNOLOGY
STATE RESEARCH INSTITUTE

HEALTHY BIOTECH?

Microbes as catalysts

Presented By

MAGDALENA KULCZYCKA

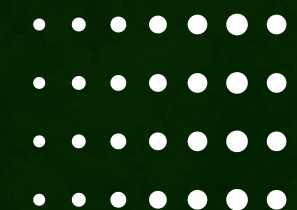


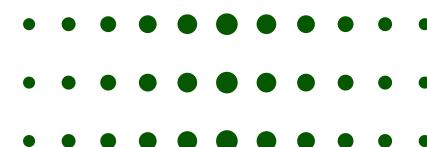


HEALTHY PLANET BIOTECHNOLOGY MICROBES, DATA & COLLABORATION



- ✓ Growing pressures: climate change, food safety, AMR (antimicrobial resistance)
- ✓ Fragmented data: clinic vs. environment vs. food – lack of a coherent picture
- ✓ Explosion of -omics data, AI, IoT – but poor integration with industrial practice





IBPRS-PIB

YOUR PARTNER IN THE WORLD OF BIOTECHNOLOGY

- conducts basic and applied research
- cooperates with industrial partners
- agri-food biotechnology, safe production and storage of food, food and feed safety and quality

✓ 12 specialized Departments

✓ certified procedures

✓ SeCuRe - microbial collection

✓ highly equipped labs





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International cooperation:



INRAE

Gafta





MICROBES AS CATALYSTS FROM FERMENTATION TO DATA



✓ IBPRS Microbiology Today

Starter cultures, bacterial preparations, fruit belts, whey drinks, innovative fermentation lines

Projects on alternative proteins from plant, animal, and marine waste



✓ New directions

AI + IoT for food safety and quality

Combining metagenomics and population genetics to create new microbiological solutions



GENE-TRACK

INTEGRATED MICROBIOME

INTELLIGENCE

Join us in Horizon Europe program!

01

Connecting the world of microorganisms with data – from the environment to humans

02

A new perspective on the spread of resistance throughout the food chain

03

A single, shared workspace for science, business, and regulators

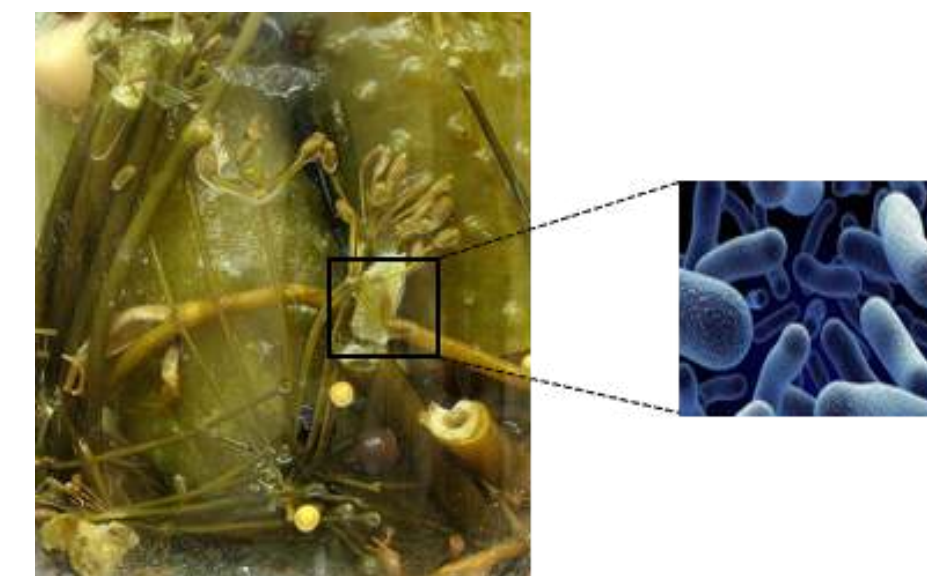
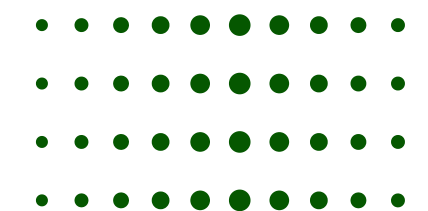
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A foundation for future microbiome monitoring standards in a One Health framework



FROM VISION TO PRACTICE

WHAT WE ALREADY DO



✓ Horizon projects: WheatBiome, PromiSeang, NeoGiant, Ho-Food

✓ Collection of Industrial Microbial Cultures - International Depository Authority

✓ Infrastructure : Polish Roadmap for Research Infrastructure + MIRRI

✓ Cooperation with regulators (EFSA, MRiRW) + industry

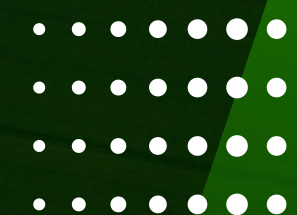


WHERE WE NEED YOU

COLLABORATION ZONES



- ✓ Data and samples – laboratories, universities, clinical networks, control units
- ✓ Technologies – SMEs in AI, bioinformatics, sensors, IoT
- ✓ Food and biotechnology industry – pilot implementations, model validation
- ✓ Co-creation & application of biobanks and standards (MIRRI-ERIC, ELIXIR)

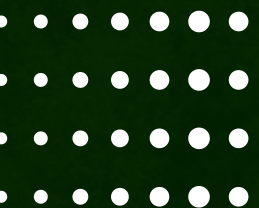




SUMMARY

MICROBES IN IBPRS

- ✓ Collaboration in Horizon EU project: GENE TRACK
- ✓ Industrial application of strains from SeCuRe biobank
- ✓ New products: starter cultures, bacterial preparations, alternative protein technologies
- ✓ Analysis in certified laboratories
- ✓ Expert support: from idea to product – biogas, bioethanol, biomethane, silage additives, animal by-products





THANK YOU FOR YOUR ATTENTION

Together, we can create a more healthy
future with microbes as catalysators.



(+48) 607490642



magdalena.kulczycka@ibprs.pl



www.ibprs.pl

