

Streamlit App

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Key in proposal title or summary

"Impact of Low-Dose Radiation on Microbial Resistance and Evolution"

This research aims to investigate the effects of low-dose radiation on microbial resistance and evolutionary adaptations. By exposing various bacterial strains to controlled radiation levels, the study will explore how radiation influences genetic mutations, resistance mechanisms, and microbial community dynamics. The findings could provide insights into microbial survival strategies in environments with elevated radiation, such as space, nuclear sites, and medical settings, with potential implications for public health, environmental safety, and understanding

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summarising proposal based on language model

Summary:

This research will study how low doses of radiation affect bacteria, focusing on their ability to resist changes and evolve. By exposing different bacterial strains to radiation, the researchers aim to see how causes genetic changes and affects how bacteria interact with each other. The results could help us understand how microbes survive in places with high radiation, like space or nuclear areas, and may h important implications for health and safety.

Disciplines/Subfields:

1. Microbiology
 - Bacterial genetics
 - Microbial ecology
 - Microbial evolution
2. Radiation Biology
 - Effects of radiation on living organisms
 - Low-dose radiation research
3. Environmental Science
 - Impact of radiation on ecosystems
 - Microbial roles in environmental health

4. Genetics

- Mutation analysis
- Genetic resistance mechanisms

5. Public Health

- Implications for human health in radiation-exposed environments

6. Space Biology

- Microbial survival in extraterrestrial environments

7. Medical Microbiology

- Effects of radiation in medical settings

8. Evolutionary Biology

- Evolutionary adaptations to environmental stressors

9. Biostatistics

- Data analysis of microbial responses to radiation exposure

10.

getting initial list of reviewers

name	h-index	gender	Content
reviewer_144	45.0	M	Application of mathematics in Biophysics Cell biology and developmenta IDNA repairEpigenetics and gene regulatioGenetics, Genomics Graphics and Image ProcessingHost-pathogen interactionsMicrobiology and InfectionModelingMorphology and functional imagNucleusOpticsPhysics, Computer Science, InfScientific computing I work on biological image analysis at Institut Pasteur, Paris, France, in the Quantitative Image Analysis Unit (headed by J-C. Olivo-Marin), since late 2000. Prior to that, I worked on space physics at the Observatoire Midi-Pyrenees, Toulouse, France (1994-1997) and at University of California, Los Angeles, USA (1998-2000).
reviewer_195	18.0	F	Head of the Laboratory of Molecular Microbiology of Bacteria Pathogens Research carried on in the Lab MolMicro of Bacteri Pathogens focusses on the molecular mechanisms of antibiotic resistance in Staphylococcus aureus, in particular the role of the bacterial cell wall and the physiology of the peptidoglycan polymer.
reviewer_122	49.0	F	Agrotechnology and Food Sciences, Ecology Molecular genetics Bacteria Microbial diversity Microbial ecology Microbial interactions Microorganisms Gastrointestinal

name	h-index	gender	Content
			microbiota Microbiology, agro food robotics, Molecular Ecology Microbiome Mucus & Milk aims to understand the way microbial species in the gastrointestinal tract are able to degrade host-produced glycans (human milk and mucus). The ability of these microorganisms to ferment host-produced glycans makes them keystone species within the intestinal microbiota, crucial for immune, metabolic and neurologic imprinting. The main research lines are: 1) microbial degradation pathways; 2) microbe-microbe interactions (synthetic communities & cross-feeding) and 3) microbial interaction with, and adaptation to, their host. Research is expected to reveal the dependencies shaping the overall intestinal microbiome structure in early and later life, and microbial roles in maintaining host health. Additionally, applicability of findings will be investigated, such as innovative nutritional and microbial intervention strategies by which the structure and function of the microbiome can be modulated to prevent or treat disease.
reviewer_119	59.0	F	Nano Engineering Bioengineering Radiology plant virus-based nanomaterials targeting human and plant health applications: such as drug delivery, molecular imaging, and next-generation vaccines and immunotherapies.
reviewer_57	32.0	M	Chemical Physics, Radiation chemistry His field of expertise is radiation chemistry, fluorinated polymers, and synthesis of smart polymers. Recently his research team is working on the sensitivity copolymers for drug delivery. His research interests are Polymer chemistry, Polymer characterization, Biomaterials, Drug delivery and Radiation-grafting.

name of reviewer	rating	list of expertise	reason why this reviewer may be a good fit
reviewer_195	85	Molecular Microbiology, Antibiotic Resistance, Bacterial Pathogens	Reviewer_195's expertise in bacterial pathogens and molecular mechanisms of antibiotic resistance aligns well with the study of how radiation affects bacterial genetics and evolution.

name of reviewer	rating	list of expertise	reason why this reviewer may be a good f
reviewer_122	90	Microbial Ecology, Molecular Genetics, Microbial Interactions	Reviewer_122's focus on microbial interactions and genetics makes them high suitable for understanding the effects of radiation on bacterial evolution and ecolog
reviewer_119	70	Bioengineering, Nano Engineering, Radiation Applications	Reviewer_119's background in bioengineering and applications of radiatio in health contexts provides a unique perspective on the implications of radiation exposure on microbial health and evolution