



MTSonNAS

How to be excellent enough to get the funding?

Application of a New Kinetic Microbial Theory
-Microbial Transition State- on Activated Sludge Model

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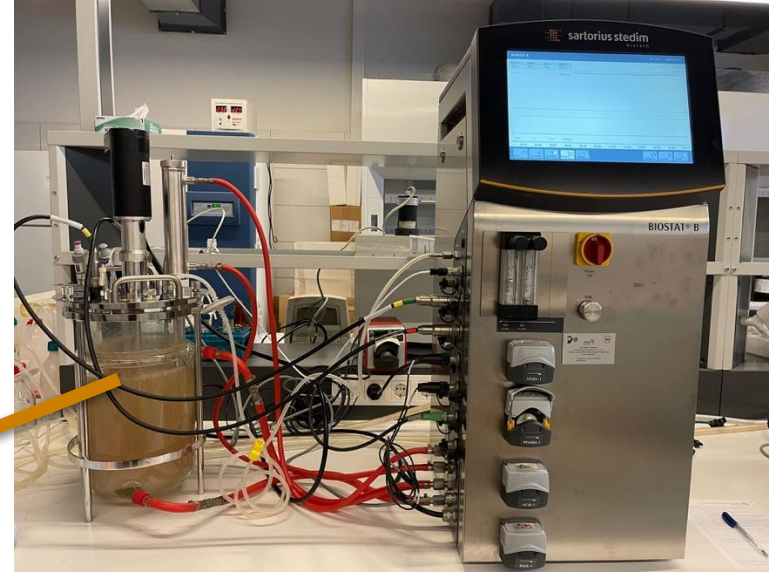
About the project

What is wastewater treatment plant?

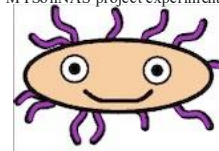


ISKI Paşaköy Advanced Wastewater Treatment Plant

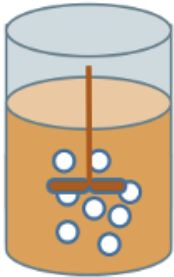
or



MTSonNAS project experimental setup



Hosts various microorganisms like **bacteria** to treat wastewater



What happens if
pollutants are present

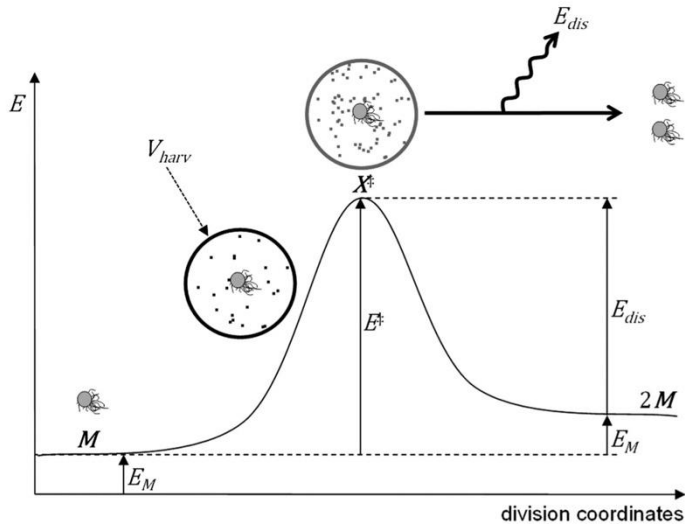
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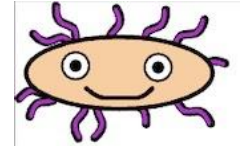
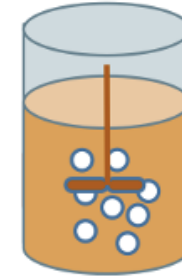
pharmaceuticals

Heavy metals

What is Microbial Transition State Theory (MTS)?



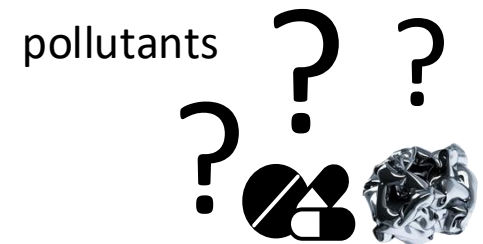
Desmond-Le Quémener and Bouchez, (2014) A thermodynamic theory of microbial growth. ISME J, 8, 1747–1751.



A Microbial growth model based on microbial growth thermodynamics

Used to better estimate growth rate of bacteria

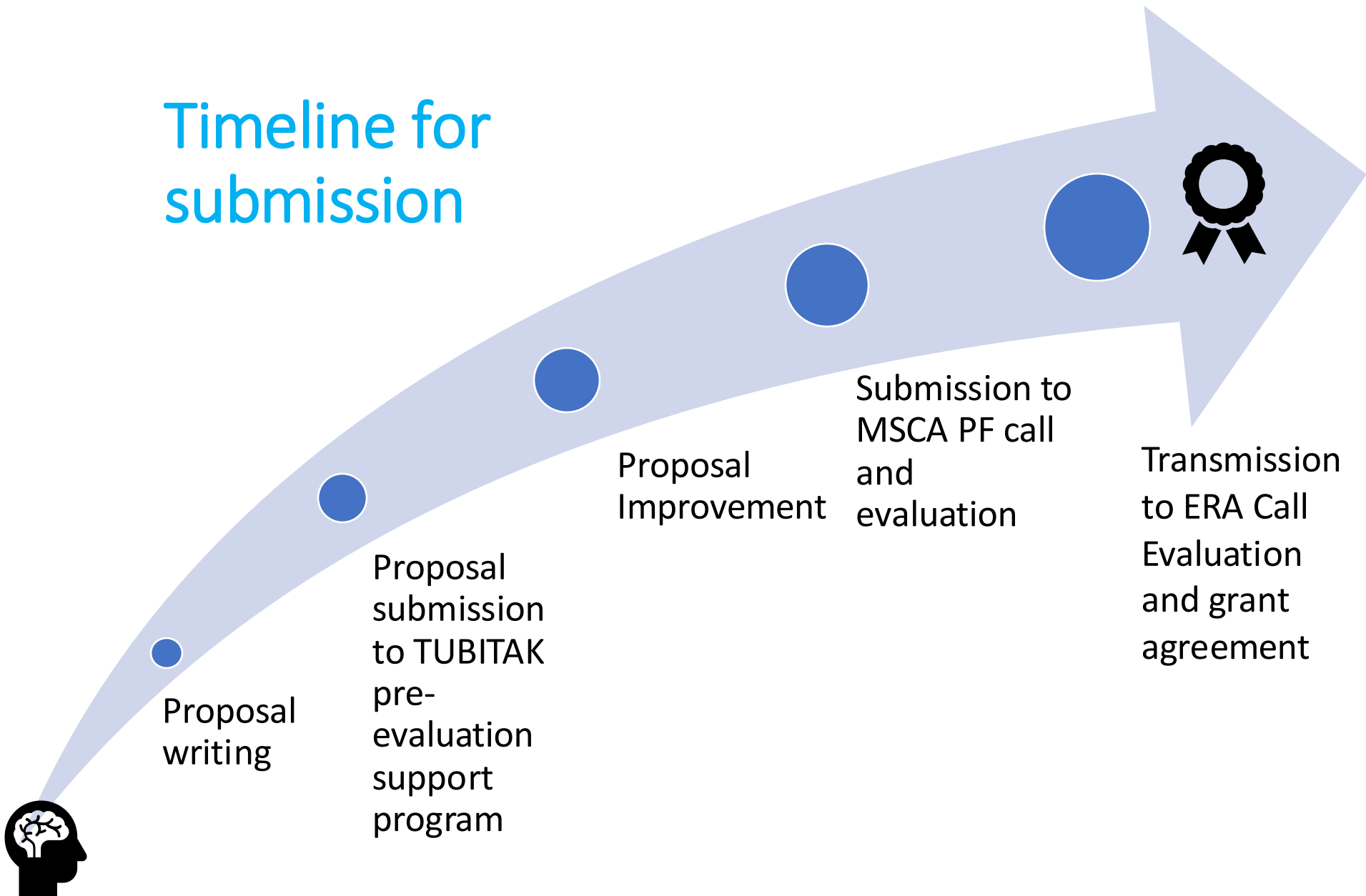
MTSonNAS

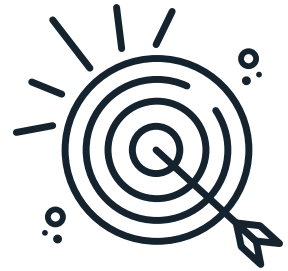


Applies MTS growth mathematical model for:

- answering how pollutants affect bacteria in wastewater treatment system
- estimating how fast bacteria grows when pollutants are present
- connecting microbial community composition and activity responses to pollutants

Timeline for submission





Motivations?



Prestige



Skill development



Agreeable salary



Networking opportunities



Research opportunity/experience



Restart after career breaks



How to decide research topic?

Inspiration from

- colleagues



- trends
- multidisciplinary approach



Support



- TUBITAK MSCA Pre-evaluation Support Program
- ITU Projects Office
- Colleagues applied for MSCA calls
- Family and Friends



TÜBİTAK



Tips

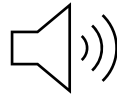
MSCA PF Proposal Writing Principles



Be realistic!



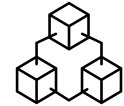
**Feasible
project
content and
plan!**



**Clearly state
what do you
want to do!**



**Discover
which skills
do you need
to acquire!**



**Imagine
multidisciplinary
work**

MSCA PF Proposal Writing Steps

**Decide the
Topic**





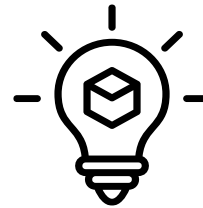
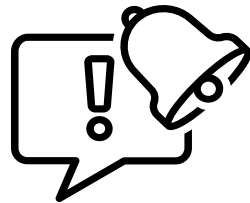
1.1 Quality and pertinence of the project's research and innovation objectives

1.1.1 Introduction

1.1.2 State of the art

1.1.3 Objectives and overview of the action

Why your project is important? What is novel?



Brief and clear explanation!



Relation with legislation?



MSCA PF Proposal Writing Steps

**Decide the
Topic**



Excellence





1.1 Quality and pertinence of the project's research and innovation objectives

1.1.1 Introduction

1.1.2 State of the art

1.1.3 Objectives and overview of the action



Originality



Innovation



Methodology

SMART GOALS

SMART



MSCA IF



1.3 Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host

1.3.1 Qualifications and experience of the supervisor

1.3.2 The new knowledge that the researcher will gain during the fellowship

1.3.3 The previously acquired knowledge and skills that the researcher will transfer to the host organization

1.3.4 Hosting arrangements



Career advancement plan

experience of the supervisor, institution

Technical training plan

new methods

courses

exploiting results

coursera

Transferable skills

managing research

supervision

networking

outreach activities



- ! Your expertise.. How can you contribute the existing knowledge in the host institution?
- Your network.. Any connections with the proposal?

Institution's infrastructure

equipment

academic staff/researchers

research centres

network

- ! Identify the required infrastructure

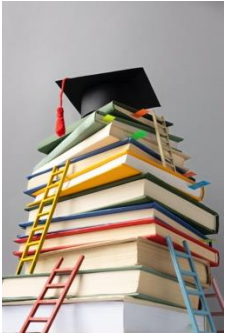




1.4. Quality and appropriateness of the researcher's professional experience, competences and skills

1.4.1 Contribution of personal experience

1.4.2 Contribution of proposed research



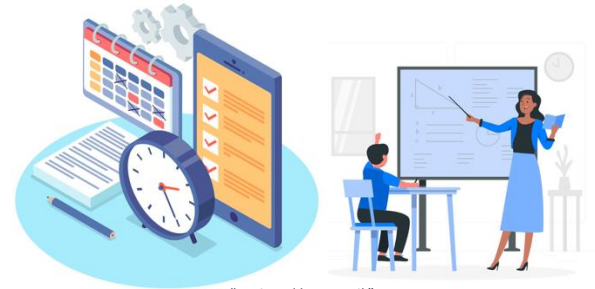
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What is your story?
Why are you the best candidate?

Demonstrate your power!

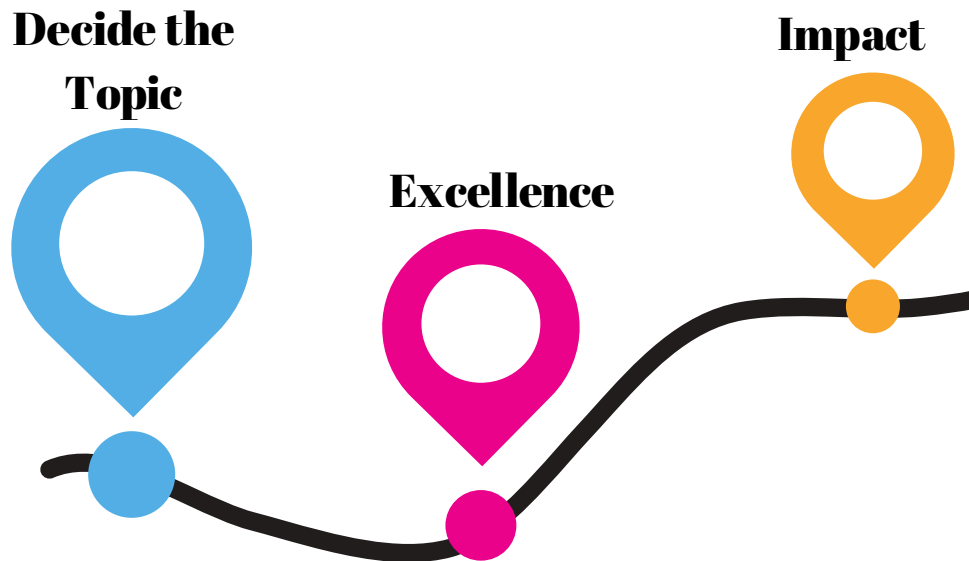
Academic track
Task management
Supervision
Teaching
Collaborations
Awards
Skills

.



"Designed by Freepik"

MSCA PF Proposal Writing Steps





2.1 Credibility of the measures to enhance the career prospects of the researcher after the fellowship

Be personal and specific!

How will the acquired skills, experiences, collaborations improve your career?

What are you going to do **after** this fellowship?

What is the **added value** of MSCA fellowship?



Research excellence?

Applications?

Leadership?

Gender issues?



2.2 Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities

Communication/public engagement and dissemination plan

To whom?
Why?
How?
Where?

Experts, public, children



journal articles
seminars/talks
science fairs
face-to-face events

Results' exploitation

Experts

contribution to new research paths,
legislations, decision making criteria..

focus on new research areas,
collaboration opportunities..

MSCA PF Proposal Writing Steps





3.1 Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages

3.2 Quality and capacity of the host institutions and participating organisations, including hosting arrangements

Quality management plan

How to set up, maintain and improve the quality of the project?

Work packages/Charts



Financial management plan

Who is responsible?
Expected costs?

Risk Management and Contingency plans

What are the risks? How will you handle?
Have Plan B?

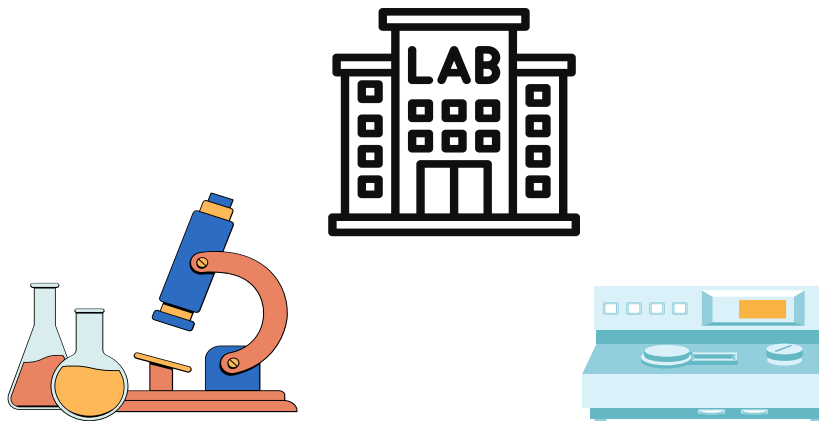


3.3 Appropriateness of The Institutional Environment (Infrastructure)

3.4 Competences, Experience and Complementarity of The Participating Organizations and Institutional Commitment

! Agreed responsibilities of institution's departments and researcher

! The competence of the institution for the tasks and researcher's career/skill development

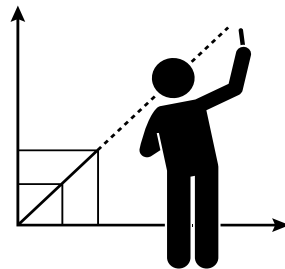


Technical Tips

To attract attention and explain your point

Bold/italic characters

B *B*



figures

colours



Final remarks!

- Think about your academic background!
What are your strengths?
What do you want to study?
With whom do you want to work?
Where do you want to do research?
- Imagine!
- Attend conferences/Talk to researchers
- Do not underestimate power of multidisciplinary approaches
- Innovation does not mean technology!
Revisiting traditional approaches is also innovation!

Good luck!

