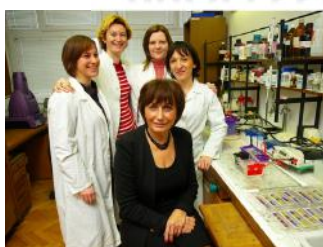




University of Zagreb
Faculty of Food Technology and Biotechnology
Department of Biochemical Engineering
Laboratory for Antibiotic, Enzyme, Probiotic
and Starter Cultures Technology



SEMINAR: CREATING A WORK PLAN INCLUDING DOCTORANDS' PROFESSIONAL DEVELOPMENT



PhD Jagoda Šušković, Full professor, Head of Laboratory
PhD Blaženka Kos, Full professor
PhD Jasna Novak, Full professor
PhD Andreja Leboš Pavunc, Assistant professor

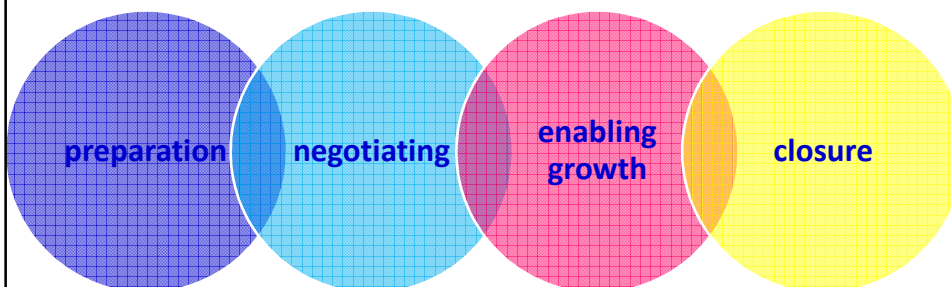
ERASMUS+ project "Harmonization and Innovation in PhD Study Programs for Plant Health in Sustainable Agriculture –HarISA" February 5th, 12th, 19th and 26th, 2021

DECISION TO BE THE MENTOR

- helping professional development of PhD student
- mutual interest and compatibility
- my role is clear
- adequate time for the mentoring relationship
- my network of contacts to help in the progress
- resources to support PhD student learning and experiments
- developing my own mentoring skills

©2006 S. E. Metros and C. Yang ,The Importance of Mentors, Chapter 5 The Ohio State University

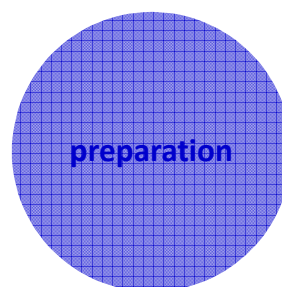
MENTORING RELATIONSHIP PHASES



SIGUCCS advisory team: B. Allen D. Herrick, K. McRitchie D. Pfeiffer, B. Rugg, C. Vucinich, M. Zocher)

PREPARING THE RELATIONSHIP

- **initiate appointment**
- **exchange background information**
- **get to know each other**
- **share past mentoring experiences**
- **learning and development goals**
- **personal expectations of the relationship**
- **PhD student expectations from mentor**
- **desired outcomes**
- **share personal assumptions and limitations**
- **discuss learning styles**



©2006 S. E. Metros and C. Yang ,The Importance of Mentors, Chapter 5 The Ohio State University

MENTORING GOALS



negotiating

- **S**pecific
- **M**easurable
- **A**ttainable
- **R**ealistic/Relevant
- **T**imely

S. E. Metros and C. Yang ,The Importance of Mentors, Chapter 5 The Ohio State University, 2006.

ENABLING GROWTH STRATEGIES



enabling
growth

- *Investigations: PhD student report*
- *Discovery Questions:*
 - What did you learn from this experiment (research)?*
 - What worked best?*
 - What concerns you?*
 - What are your further ideas?*
 - What would happen if you try to do__?*
 - What conclusions can you draw?*
 - What else you would consider before making a conclusion on that?*
 - What is your reasoning?*
 - Give me two alternative ways of thinking about this!*
 - What else could you have done?*
- *Empowering and further investigations (experiments):*
 - What outcome are you expecting?*
 - What will you do first?*
 - What must you do to make that proved?*
 - How will you begin?*
 - What resources do you have/need?*
 - What is the risk of doing/not doing this?*
 - How might you perform it in your own way?*

S. E. Metros and C. Yang ,The Importance of Mentors, Chapter 5 The Ohio State University, 2006.

PhD WORK PLAN - LIVING DOCUMENT

- 1. research plan**
- 2. research studies abroad**
3. conferences and workshops attendance
4. scientific articles
5. conference presentations
6. other relevant activities

PhD WORK PLAN

1. Research plan - PhD theme submission

„REQUEST FOR APPROVAL OF THE DISSERTATION TOPIC” Content:

- **Title of the proposed topic**
- **Background**
- **Objectives**
- **Research topics**
- **Research methodology**
- **Work plan**
- **References**

Adapted from <https://sph.umd.edu> and
<http://www.unizg.hr/istrazivanje/doktor-ski-studiji/obraci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN

1. Research plan - PhD theme submission

- **Background**
 - the state-of-the-art
 - scientific motivation and relevance of the topic
 - sub-topics and challenges

Adapted from <https://sph.umd.edu> and <http://www.unizg.hr/istrazivanje/doktorski-studiji/obrasci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN

1. Research plan - PhD theme submission

- **Objectives and hypotheses of research**
 - short and precise description
 - verification

Adapted from <https://sph.umd.edu> and <http://www.unizg.hr/istrazivanje/doktorski-studiji/obrasci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN

1. Research plan - PhD theme submission

- **Research topics and expected scientific contribution of proposed research**
 - the tasks for research topics realisation (How?)
 - expected scientific contribution (What? Why?)
 - collaborators, institutions (Who? Where?)

Adapted from <https://sph.umd.edu> and <http://www.unizg.hr/istrazivanje/doktorski-studiji/obraci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN

1. Research plan - PhD theme submission

- **Research methodology - material, participants, methods and research schedule**
 - experimental set-up
 - ethical approval (if applicable)
 - statistical analysis

Adapted from <https://sph.umd.edu> and <http://www.unizg.hr/istrazivanje/doktorski-studiji/obraci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN

1. Research plan - PhD theme submission

- **References**
- **Total cost estimate of proposed research**
- **Proposed sources of funding for research**
- **Agreement of the mentor and the doctoral candidate for PhD topic approval request**

Adapted from <https://sph.umd.edu> and <http://www.unizg.hr/istrazivanje/doktorski-studijj/obraci-dr-sc-dr-art/scientific-areas-dr-sc/>

PhD WORK PLAN - LIVING DOCUMENT

1. research plan
2. research studies abroad
- 3. conferences and workshops attendance**
- 4. scientific articles**
- 5. conference presentations**
- 6. other relevant activities**

DUAL DEGREE PhD (*Cotutelle*)

- **bilateral scientific cooperation**
- **the participation of 2 expert advisers (supervision agreement)**
- **2 research units included (institutional agreement)**
- **affiliated with 2 doctoral schools**
- **single PhD defense**

THE END IS THE BEGINNING...



closure

- **when the relationship should end**
- **express your feelings**
- **give thanks**
- **express the positive benefits you gained**
- **identify what you learned**
- **identify what you will do differently**
- **Celebrate!**

S. E. Metros and C. Yang ,The Importance of Mentors, Chapter 5 The Ohio State University, 2006.

TOPICS FOR DISCUSSION

- experience sharing -

- experience with mentorship as mentor or as mentee
- unofficial mentors during professional career
- co-mentoring opportunities - advantages and disadvantages
- learning from your own PhD students

THANK YOU!

Doctoral students financial support through projects and grants:

- **Croatian Science Foundation research project** „Potential therapeutic biomolecules of next-generation probiotics“ (HRZZ IP-2019-04; 2019-2023; Project leader: Prof. Blaženka Kos, PhD)
- **Croatian Science Foundation research project** „Probiotics and starter cultures – surface proteins and bacteriocins“ (HRZZ IP-2014-09-7009; 2015-2019; Project leader: Prof. Blaženka Kos, PhD)
- **Support of University of Zagreb** (2015-2020) Projects leader: Prof. Jagoda Šušković, PhD)
- **FEMS Research and Training Award** “Isolation and characterisation of exopolysaccharides from selected autochthonous *Lactobacillus* strain” (for Katarina Zorić , FEMS-GO-2017-004), Department of Life Sciences, University of Trieste, under the supervision of dr. sc. Paola Cescutti)

