



Life Sciences Center

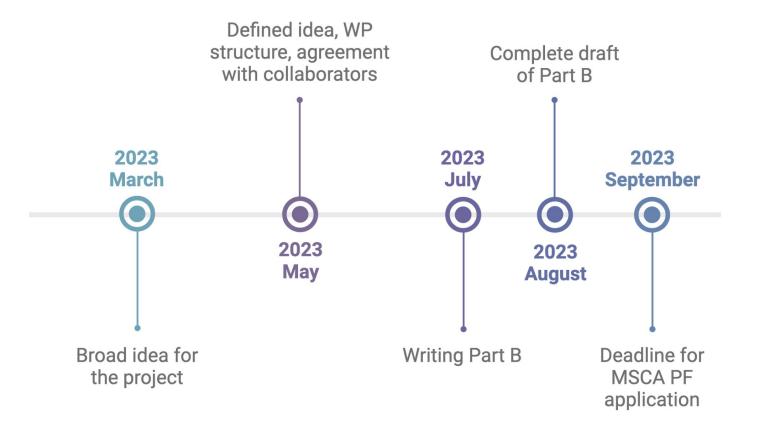
MSCA PF success story

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Funded by the European Union







MSCA Expected outcomes

For supported postdoctoral fellows

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond;
- New mind-sets and approaches to R&I work forged through international, inter-sectoral and interdisciplinary experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.



MSCA Expected outcomes

For participating organisations

- **Increased alignment of working conditions for researchers** in accordance with the principles set out in the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers;
- **Enhanced quality** and sustainability of research training and supervision;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations; better transfer of knowledge;
- Regular feedback of research results into teaching and education at participating organisations.



Independence of researcher



Independence of researcher

Researcher is expected to write the proposal and work independently as a potential future PI



From idea to a detailed plan

Genomics of Achromobacter spp.: diversity, transmission, evolution, adaptation

How?

Idea

Is there enough public data? Can I get more unpublished data?

What?

What can be done with the data? What are the research questions? Are they relevant?

Plan

Define work packages in an easy to follow and logical way.

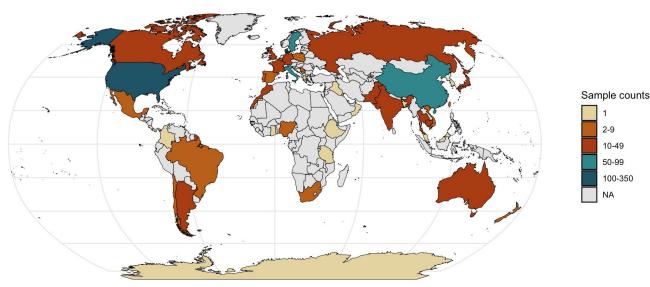


Coordination - do your homework

Project Objectives

Milestones

Collaborators





Coordination - excellent project proposal is not enough

Dissemination: poster presentations, oral presentations at conferences

Communication: interviews, podcasts, invited talks at schools, social media communication

Two-way transfer of knowledge: student supervision, teaching

Career development: courses, trainings, workshops for both hard and soft skills

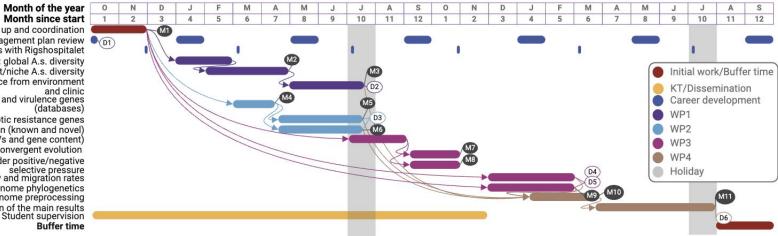


Writing and reviewing

It always takes more time than expected



How detailed should it be?



Month since start Data clean up and coordination Career and data management plan review Meetings with Rigshospitalet WP1: global A.s. diversity WP1: within-host/niche A.s. diversity WP1: A.s. gene content difference from environment and clinic WP2: antibiotic resistance and virulence genes (databases) WP2: novel antibiotic resistance genes

WP2: MGE identification (known and novel) WP3: convergent evolution (SNVs and gene content) WP3: clustering for functional convergent evolution WP3: identification of genes under positive/negative selective pressure WP3: evolutionary and migration rates WP3: joint core and pangenome phylogenetics WP4: 661,000 genome preprocessing WP4: Comparison of the main results KT1: Student supervision **Buffer time**



MSCA-PF-2023- EF (European Fellowships)

Number of proposals submitted (including proposals transferred from or to other calls):7181

Number of withdrawn proposals:	21
Number of inadmissible proposals:	10
Number of ineligible proposals: 70%	66
Number of above-threshold proposals:	5351
Total budget requested for above-threshold proposals:	1.055.42

1.055.428.702,24 EUR Budget: 221.400.000,00 EUR

Source: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/calls-for-proposals?callIdentifier=HORIZON-MSCA-2023-PF-01



It's not enough to write a good application, it has to be excellent

	MSCA-PF-2023: Cumulative percentage of proposals above threshold, with a given score or higher (funding range marked in green)															
	1074 proposals	121 proposals	1016 proposals	750 proposals	1575 proposals	160 proposals	808 proposals	1580 proposals	57 proposals	8 proposals	73 proposals	84 proposals	130 proposals	9 proposals	76 proposals	397 proposals
	93.0	89.0	94.0	95.2	94.4	92.2	92.8	94.6	95.6	96.2	95.8	97.6	95.6	97.2	94.8	96.0
	EF-CHE	EF-ECO	EF-ENG	EF-ENY	EF-LIF	EF-MAT	EF-PHY	EF-SOC	GF-CHE	GF-ECO	GF-ENG	GF-ENV	GF-LIF	GF-MAT	GF-PHY	GF-SOC
100	0.47%	1.65%	1.18%	1.33%	1.46%	0.00%	0.25%	1.52%	0.00%	0.00%	0.00%	1.19%	2.31%	0.00%	0.00%	3.02%
99	1.02%	1.65%	1.87%	2.13%	3.17%	0.63%	1.24%	2.97%	0.00%	0.00%	0.00%	4.76%	3.08%	0.00%	3.95%	5.04%
98	3.91%	2.48%	4.63%	5.87%	6.67%	3.13%	3.47%	6.77%	5.26%	0.00%	4.11%	15.48%	6.15%	0.00%	7.89%	8.56%
97	6.33%	4.13%	6.89%	8.93%	8.44%	3.75%	4.83%	9.56%	10.53%	12.50%	8.22%	19.05%	10.00%	11.11%	9.21%	12.34%
96	8.47%	4.96%	9.74%	12.93%	11.56%	5.63%	6.81%	12.22%	12.28%	25.00%	13.70%	27.38%	14.62%	11.11%	10.53%	16.88%
95	10.34%	8.26%	12.30%	16.80%	14.48%	6.25%	10.27%	15.00%	21.05%	37.50%	21.92%	28.57%	20.00%	11.11%	15.79%	19.40%
94	13.31%	9.09%	15.55%	19.33%	17.65%	10.00%	13.24%	17.66%	26.32%	37.50%	23.29%	38.10%	23.08%	11.11%	19.74%	24.69%
93	15.92%	9.92%	18.60%	22.13%	19.75%	13.13%	15.47%	20.19%	29.82%	37.50%	28.77%	39.29%	27.69%	11.11%	26.32%	27.46%
92	19.18%	10.74%	21.46%	25.07%	22.60%	18.13%	19.55%	23.16%	29.82%	37.50%	35.62%	42.86%	29.23%	11.11%	31.58%	29.97%
91	21.97%	12.40%	24.02%	28.00%	26.41%	20.00%	23.64%	24.87%	33.33%	37.50%	42.47%	45.24%	32.31%	11.11%	34.21%	33.00%
90	25.79%	14.05%	26.87%	31.07%	29.40%	24.38%	26.36%	27.28%	35.09%	50.00%	46.58%	45.24%	35.38%	11.11%	36.84%	35.26%
89	28.49%	16.53%	29.92%	33.33%	31.87%	26.88%	28.47%	29.68%	36.84%	62.50%	49.32%	46.43%	42.31%	22.22%	42.11%	38.29%
88	31.38%	16.53%	33.86%	34.93%	34.98%	29.38%	31.31%	32.03%	45.61%	75.00%	57.53%	46.43%	44.62%	33.33%	48.68%	40.55%
87	34.45%	17.36%	35.73%	38.53%	38.29%	35.63%	35.15%	33.92%	49.12%	75.00%	61.64%	48.81%	48.46%	33.33%	52.63%	42.82%
86	37.24%	19.83%	37.70%	41.47%	41.71%	37.50%	37.75%	37.03%	50.88%	75.00%	64.38%	52.38%	52.31%	33.33%	56.58%	45.09%
85	40.22%	21.49%	39.86%	44.00%	44.83%	41.88%	41.34%	40.06%	57.89%	75.00%	65.75%	54.76%	56.15%	33.33%	59.21%	47.86%
84	43.48%	23.14%	43.31%	46.67%	47.75%	43.13%	44.18%	42.22%	61.40%	75.00%	72.60%	54.76%	57.69%	33.33%	61.84%	51.13%
83	46.37%	25.62%	46.46%	50.27%	50.67%	45.63%	48.02%	44.56%	64.91%	75.00%	73.97%	57.14%	60.00%	33.33%	63.16%	53.65%
82	48.88%	32.23%	48.92%	51.73%	53.84%	48.75%	51.61%	46.84%	66.67%	75.00%	73.97%	60.71%	61.54%	44.44%	64.47%	56.17%
81	51.68%	33.88%	51.67%	53.73%	56.06%	50.00%	53.96%	48.42%	66.67%	75.00%	76.71%	64.29%	63.85%	44.44%	68.42%	57.93%
80	54.28%	38.02%	54.72%	56.27%	59.05%	53.13%	56.06%	51.08%	70.18%	75.00%	80.82%	69.05%	67.69%	44.44%	72.37%	59.45%
79	57.82%	40.50%	56.50%	58.93%	62.29%	57.50%	59.03%	52.91%	73.68%	75.00%	82.19%	72.62%	70.00%	44.44%	73.68%	62.97%
78	60.71%	42.15%	58.07%	60.67%	65.71%	60.63%	60.77%	55.32%	75.44%	75.00%	82.19%	72.62%	70.77%	44.44%	77.63%	65.24%
77	62.76%	44.63%	59.84%	62.53%	67.87%	61.88%	63.37%	57.85%	75.44%	75.00%	86.30%	73.81%	73.08%	55.56%	78.95%	66.25%
76	65.18%	46.28%	62.01%	65.07%	70.41%	64.38%	65.59%	60.82%	75.44%	75.00%	86.30%	77.38%	75.38%	55.56%	81.58%	68.26%
75	67.41%	47.11%	63.98%	67.73%	72.44%	65.63%	67.33%	62.66%	75.44%	75.00%	86.30%	78.57%	77.69%	66.67%	84.21%	69.27%
74	69.65%	49.59%	65.85%	69.60%	74.03%	66.25%	68.94%	64.75%	77.19%	75.00%	87.67%	80.95%	77.69%	77.78%	85.53%	69.77%
73	71.79%	52.07%	67.52%	71.60%	76.63%	66.88%	71.04%	66.27%	78.95%	75.00%	87.67%	80.95%	80.77%	77.78%	86.84%	71.03%
72	73.56%	53.72%	69.09%	73.20%	77.90%	69.38%	72.90%	67.59%	78.95%	75.00%	89.04%	84.52%	80.77%	77.78%	86.84%	72.80%
71	74.67%	57.02%	69.98%	75.47%	79.68%	71.25%	75.12%	69.11%	80.70%	75.00%	89.04%	86.90%	83.85%	77.78%	88.16%	75.31%
70	77.28%	58.68%	72.24%	76.27%	81.46%	73.75%	77.23%	70.82%	80.70%	75.00%	90.41%	88.10%	84.62%	77.78%	88.16%	76.32%



Criteria:

- Excellence (50%)
- Impact (30%)
- Implementation (20%)

Threshold: >94.4/100



Criterion 1 - Excellence

Score: 4.80 (Threshold: 0 / 5.00, Weight: 50.00%)

• Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art).

• Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices).

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

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



Criterion 1 - Excellence

Score: 4.80 (Threshold: 0 / 5.00, Weight: 50.00%)

• Quality and

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• Quality and Soundness of methodology

Supervision, two-way transfer of knowledge (researcher-host)

Researcher's professional experience, competences and skills



- The proposal clearly **outlines the research context** and provides a solid **basis for understanding key issues** in clinical microbiology.
- This is an **ambitious and innovative research** program focusing on less-studied pathogenic bacteria that affect populations with underlying medical conditions and have high antibiotic resistance, which is **highly relevant**.
- The proposal presents **well-structured**, **verifiable**, **and realistically attainable objectives** that are **clearly articulated** and easily discernible in **text and figures**
- The methodology is **sound and well described.**
- The principles of **open science and FAIR are upheld** through the deposition of data and pipelines into public code repositories, with documented and annotated information.



- The supervisor has a very strong profile in the field and proven track record of publications, active engagement in research, and a history of securing grants and collaborations. They are involved in international collaborative networks.

- Supervisor and researcher have collaborated and published previously, lending confidence to this proposal.

- **Bidirectional knowledge transfer** between the researcher and host institution is well documented.

- The planned **training activities are carefully designed** to incorporate academic components and also prioritize the **enhancement of soft skills** and other **essential leadership and management professional abilities**.



- The researcher has an **excellent publication track** record for their career stage with several first-author publications and more than 20 in total from a very recent PhD graduate.
- The **proposal aligns strongly with the researcher's expertise** and offers them the opportunity to **acquire complementary knowledge and abilities**. The researcher has developed some of the computational tools that will be used.



- Some interdisciplinary aspects are **not convincingly described** in the proposal.



Excellence: take home messages

Clear, easy to follow project description

Detailed methodology

Open science principles

Supervisor and host institution choice

Bidirectional knowledge transfer

Development as researcher and career advancement

Researcher profile

Proposal alignment with researcher's expertise

Interdisciplinarity



Criterion 2 - Impact

Score: 5.00 (Threshold: 0 / 5.00, Weight: 30.00%)

Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development.
Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan,

including communication activities.

The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts.



Criterion 2 - Impact

Score: 5.00 (Threshold: 0 / 5.00, Weight: 30.00%)

• Credibility of • Suitability an including comm • The magnitur velopment. on plan,

Measures to maximise expected outcomes and impacts

Project's relevance from the scientific, societal and economic points



- The **measures to enhance career perspectives** of the researcher are well described. They will acquire **essential scientific and leadership skills** to enable the next career steps. These will enhance employability in both academic and industrial environments.

- Public communication and engagement actions are appropriate and detailed.
- **Dissemination practices** are thoroughly considered and include scientists, clinicians, and junior researchers, with targeted measures well planned.

- **IP management plans are very well described**. If the need arises for the management of intellectual property, it will be adequately provided by the host institution.

- The proposal presents a clear depiction of the outcomes and their impact on various areas including science and society.



Impact: take home messages

Detailed description of how the project will help the researcher's career

Detailed plan for dissemination, communication

Plan for additional training



Implementation

Criterion 3 - implementation

Score: 4.50 (Threshold: 0 / 5.00, Weight: 20.00%)

Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages.
Quality and capacity of the host institutions and participating organisations, including hosting arrangements.



Implementation

Criterion 3 - implementation

4.50 (Threshold: 0 / 5.00, Weight: 20.00%) Score:

 Quality and c · Quality and (Quality of the work plan

Risks and their mitigation

Host institution's capacity to host the project



Implementation: strengths

- The proposal is logically divided into work packages/tasks that cover scientific, training, and dissemination aspects. These are presented in a comprehensively interconnected manner. The expected deliverables and milestones are documented clearly.

- Work packages have an appropriate scheduling, duration, and resource **allocation**. The allocation of person-months is sufficient to ensure completion of more computationally demanding tasks.

- The presented **Gantt chart aligns well and is coherent** with the project's work plan.

- The integration of the researcher into the host institution is clearly described with specific details of the interactions with other team members and a thorough depiction of the research environment.

- The host institution's infrastructure and facilities are well described and the arrangements for hosting are very good.



- The risk and mitigation section is **overly general** and **lacks a comprehensive evaluation** of the difficulties involved in combining information from multiple sources and methods for efficiently handling such integration.



Implementation: take home messages

Logical and easy to follow work plan

Integrated training and dissemination

Well defined timeline

Integration to host institution

Host institution's facilities and infrastructure



Take home messages

- Check the requirements for career stage, mobility, other eligibility criteria
- Use the guide for writing the proposal
- Webinars and courses on how to write the proposal
- An example of successful proposal
- It takes (a lot of) time to review and revise
- Ask as many people to read it as you can