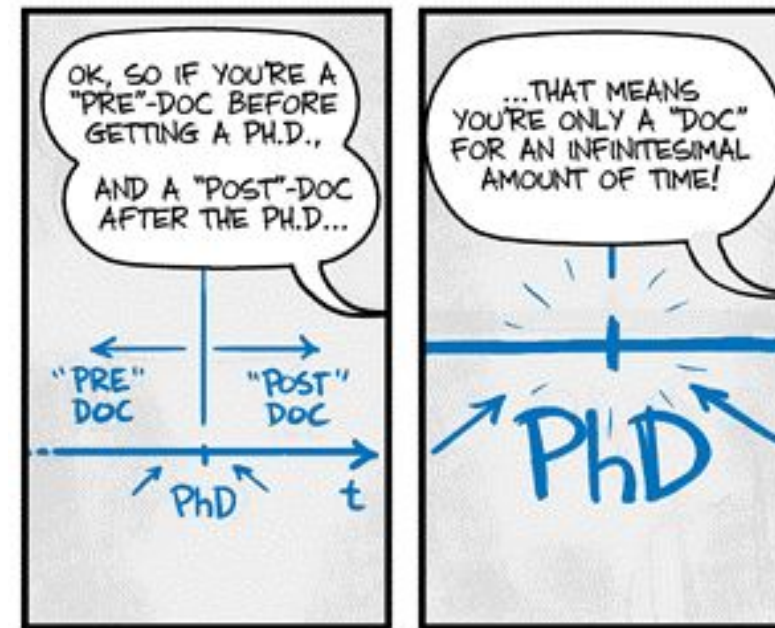# General tips to find a post-doc and how to write a Marie Skłodowska-Curie Indivi dual Fellowship and similar projects
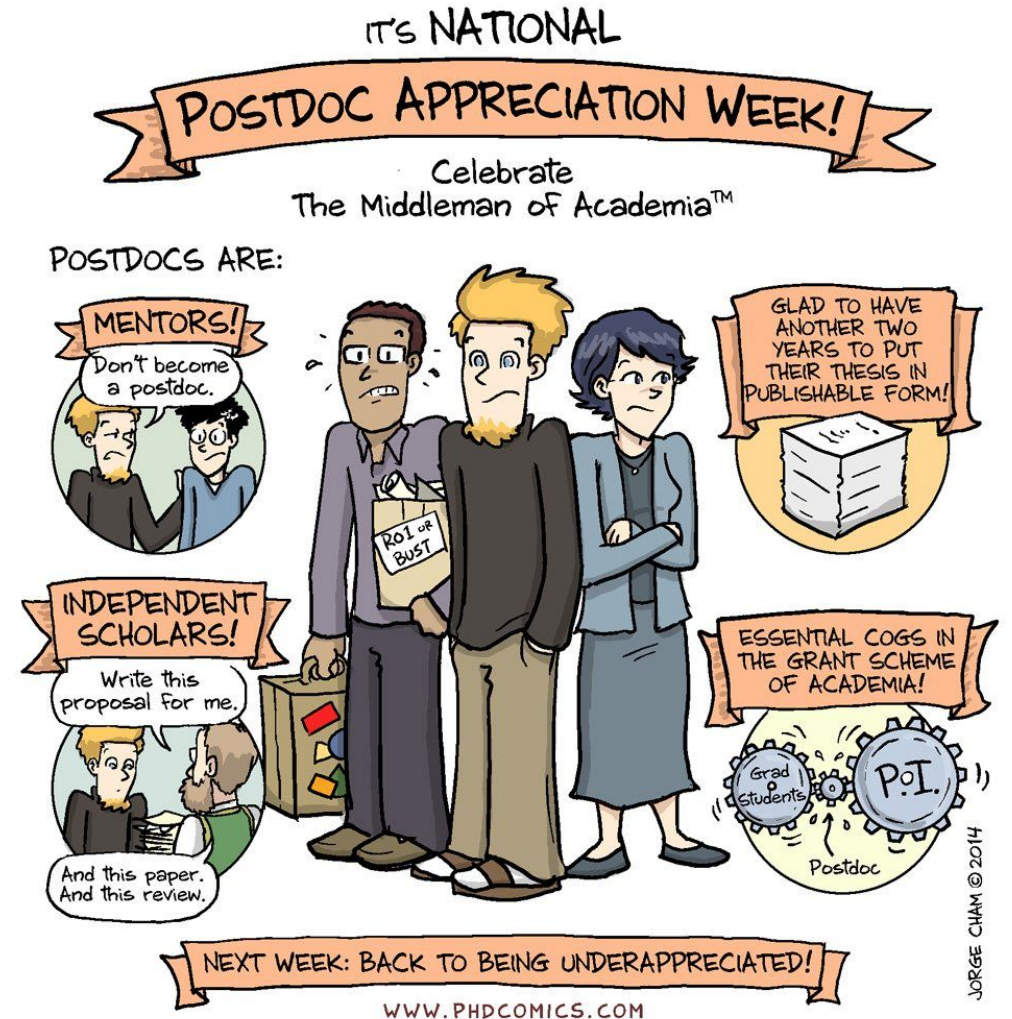

Ester Eckert – Ricercatrice at CNR-IRSA

MEG Molecular Ecology Group
CNR-IRSA Verbania

What is a post doc?

- A post doc is a **job** as a **scientist**

- You are a group member that is however a formed scientist now

Should you do a post doc?

- **Only** if you want to stay in science/academia.

- Did you **love science** during your PhD, not the lab or the field, but the science?

- Do you know **why** you did the things you did and **not only how**?

- Do you like **writing and presenting (in English)**?

- Are you ready to study **statistics**?

- **Do not do it just because it is the next logical step.**

How to find a post-doc position

Stay where you did your
PhD

Apply for a job that is offered

Write your own project

Write to somebody who's
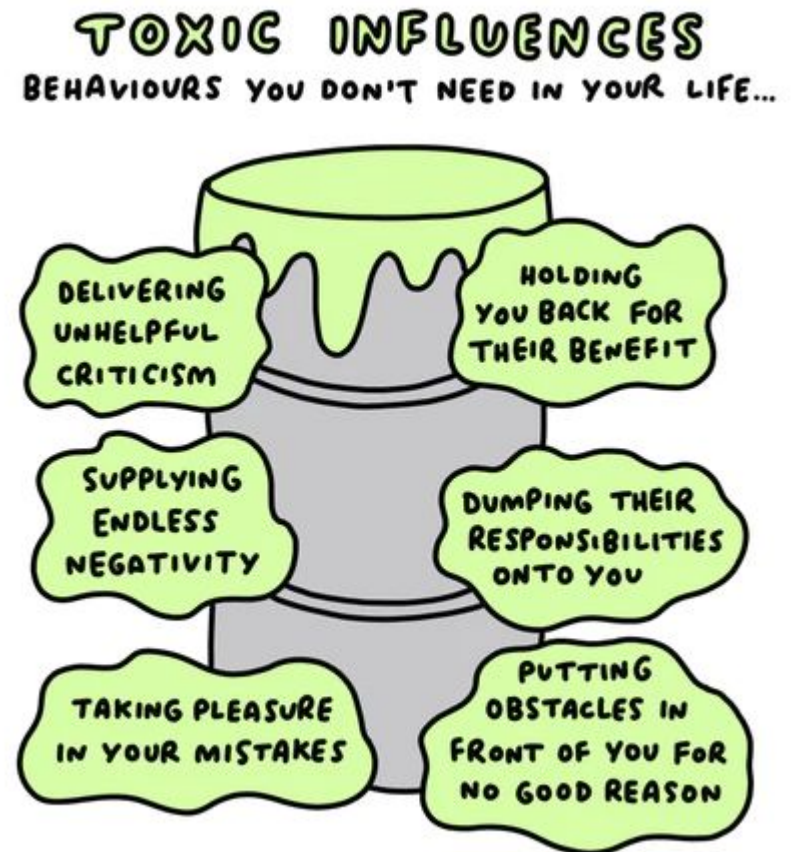work you like

If you stay where you are:

Find your own niche, collaborators and funding

If not you will be 50 years old and people will refer to you as «lo studente del Prof. Bertoni» (this really happens)

If you leave - How to evaluate a lab:

- Have good people **suggest** labs to you and also put you in contact with them

- Obviously look at their webpage, projects, articles …

- **Follow them** on twitter and other sources, you can learn a lot about them

- Check **where** the people are now, who did their PhD/Post doc there

- **Speak with people** that used to work there

TOXIC INFLUENCES
BEHAVIOURS YOU DON'T NEED IN YOUR LIFE...

DELIVERING UNHELPFUL CRITICISM

HOLDING YOU BACK FOR THEIR BENEFIT

SUPPLYING ENDLESS NEGATIVITY

DUMPING THEIR RESPONSIBILITIES ONTO YOU

TAKING PLEASURE IN YOUR MISTAKES

PUTTING OBSTACLES IN FRONT OF YOU FOR NO GOOD REASON

My CV is not good enough for this job offer / University / group / project

- This is not a reason not to try. Often it is less important then you think
- Your CV is still strongly linked to your supervisor and people know that
- Job descriptions are written for the ideal applicant but those NEVER exist (we often have too little applicants)
- Your willingness to learn is more important then what you are able to do
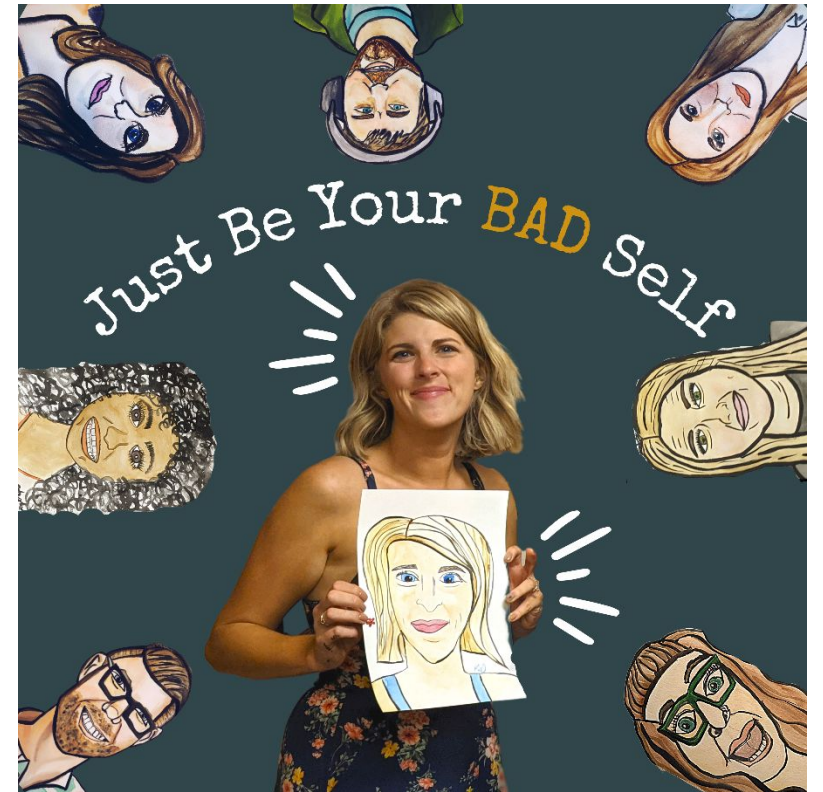
General considerations

- Be brave to detach from your supervisor and topic

- A post doc is short so you can also do something that is not 100% you passion but where you will learn something, try things – any topic can be interesting once you know more about it, so always read something

- Don't loose too much time planning your career

- Your decision can also be based on non scientific reasons
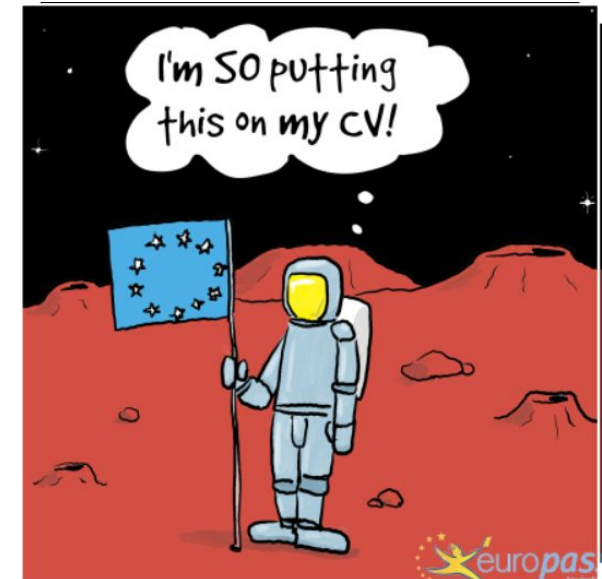
The ideal post doc lab

A place where you can use your knowledge or skills but at the same time learn new skills and theory.
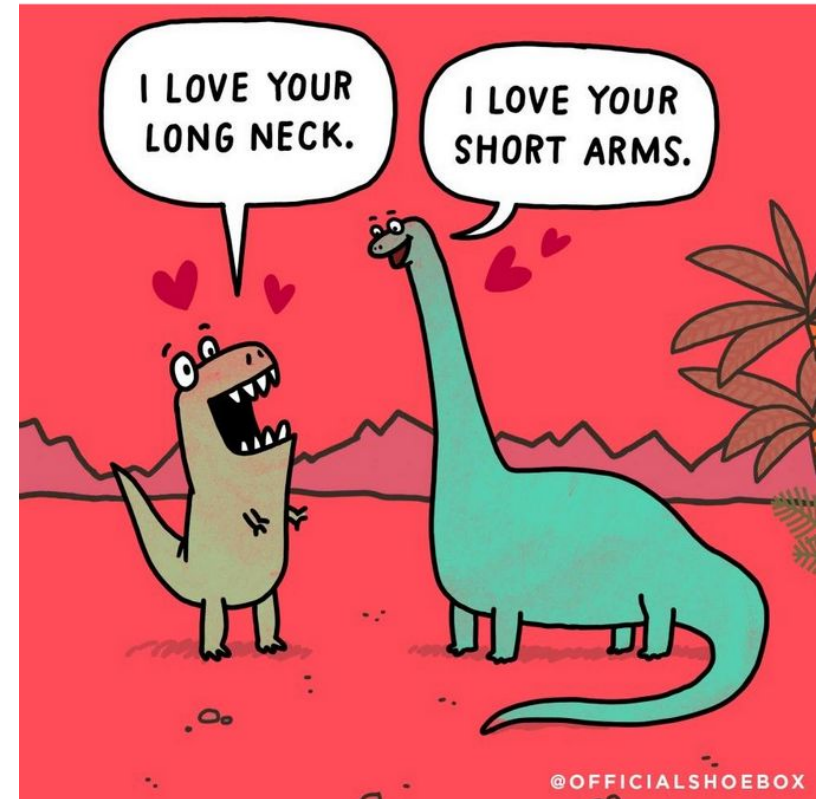
Your CV

- In academia often more is more. This is very different in industry (!!!)

- Write every course (post-laurea), article (also divulgative), teaching and conference, be precise, write it with dates and places

- How we evaluate CVs at the CNR (by law):

CV evaluation CNR

A1) Titolo di dottorato di ricerca	Punti 7
A2) Esperienza documentata nel settore di pertinenza del bando	Max Punti 35
Anni di attività nel settore, fino ad un massimo di anni 5 (5 punti per anno) (per un periodo inferiore all'anno, il punteggio è stato calcolato proporzionalmente al numero di mesi) Per ogni titolo preferenziale (corso formativo, premio, responsabilità scientifica) in base all'art. 3, comma c) del bando	Max Punti 25 Max punti 10 Punti 1-3 p titolo (dipendente durata prestigio del titolo)

Thanks Sven for the CV

Example:

B1) Per pubblicazioni su riviste indicizzati su Web of Science (Clarivate)	Max Punti 21
Per ogni pubblicazione (nel settore) Per ogni pubblicazione (in settori affini) Punto aggiuntivo per ogni pubblicazione come primo o ultimo autore	Punti 3 Punti 1,5 Punti 0,5
B2) Per pubblicazioni su riviste non ISI, atti di congressi, libri o rapporti tecnici (peer reviewed) Per ogni pubblicazione	Max Punti 2 Punti 0,5
B3) Per presentazioni orali e poster a congressi Per congresso (laddove non sia chiaro chi ha tenuto la presentazione o se il candidato sia stato effettivamente presente al convegno, verranno valutati solo i lavori a primo nome)	Max Punti 5 Punti 1

B1

PUBLICATIONS

Frontiers in Environmental Science (2020) — **Iburg, S.**, Nybom, I., Bonaglia, S., Karlson, A. M., Sobek, A., & Nascimento, F. J., *Organic contaminant mixture significantly changes microbenthic community structure and increases the expression of PAH degradation genes.* — 3+0,5=3,5

mSphere (2021) — **Iburg, S.**, Izabel-Shen, D., Austin, Å. N., Hansen, J. P., Eklöf, J. S., & Nascimento, F. J., *Effects of Recreational Boating on Microbial and Meiofauna Diversity in Coastal Shallow Ecosystems of the Baltic Sea.* — 3+0,5=3,5

Marine Environmental Research (2020) — Bonaglia, S., Hedberg, J., Marzocchi, U., **Iburg, S.**, Glud, R. N., & Nascimento, F. J., *Meiofauna improve oxygenation and accelerate sulfide removal in the seasonally hypoxic seabed.* — 3

Molecular Plant (2012) — Polko, J. K., Temanni, M. R., van Zanten, M., van Workum, W., **Iburg, S.**, Pierik, R., & Peeters, A. J., *Illumina sequencing technology as a method of identifying T-DNA insertion loci in activation-tagged Arabidopsis thaliana plants.* — 3

tot:13

B2:0pt
B3:0pt

The interview

- Try not to be too focused on methods and show that you know the **why** not only the **how**

- **Think** about the question and answer in a structured way

- If you don't know something say: "**I don't know, but based on this and that I think this and that …**" and hypothesis something

- Show that you read articles related to the topic

What can I do during my PhD to facilitate the transition?

- If you don't like your PhD topic much, try to learn something that you can apply to other fields, too.
- Go to conferences and speak (drink) with people, you can also network with other PhD students and post docs, you don't have to directly go to the department head (follow up on such encounters)
- Engage in societies
- Participate to workshops / courses
- Don't be afraid to write emails and ask questions
- Read, read, read… organize Journal Clubs
- Push yourself: Make presentations in English, learn statistics and R

Snapshots at jasonlove.com

COMPANY PARTY

"All right, I wanna know which ones of you really like me and which ones are just *networking*."

I have a good idea and want to write my own project

- Great! Go for it!

- I would always suggest to find a post doc position and then write a project it just makes you more relaxed.

Marie Curie Fellowship

MSC Fellow at the CNR-ISE 2015-2017
Reviewer for MSCF 2019

In our group: **Diego Fontaneto** (MSCFellow at the Imperial College London 2007-2009, Reviewer for MSCF from 2019, **Gianluca Corno** (MSCFellow at the University of Zurich 2009-2010, Reviewer/Rapporteur for MSCF from 2016), **Alejandro Martinez** (MSCFellow at the CNR-ISE-IRSA 2017-2018), **Stefano Mammola** (MSCFellow at the University of Helsinki 2020), **Sivalingam Periyasamy** (MSCFellow at CNR-IRSA 2021-2023), **David Brankowitz** (MSCFellow at CNR-IRSA 2021-2023)

This is **not** an official presentation of the next MSC Call, it is simply an excursus on how to write a good application based on our experience both, as successful candidates and as reviewers.

What is a MSCA?

The MSC Individual Fellowship is a call for *experienced researchers* (cit. EU) already holding a PhD, to favor the mobility between EU and associated countries and to favor the growth of EU research.

It is covering every scientific field, although we are generally interested in Life Sciences, or in environmental engineering.

The duration of the fellow is up to 2 years, the salary of the *experienced researcher* is indeed very good and covers all the costs:

- Salary
- Family allowance
- Research costs
- Admistrative costs
- Travels

The proposal can include one or more «secondments», research stay in third institutions wherever in the world.

EDITORIAL

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Philipp Baumert[1]*, **Francesco Cenni**[2], **Mikhail L. Antonkine**[3]

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- Rule 2: Be sure to develop a competitive CV
- Rule 3: Develop your idea properly
- Rule 4: Find a good match with the host institution
- Rule 5: Highlight the 2-way transfer of knowledge
- Rule 6: Study and strictly follow EU proposal template
- Rule 7: Take care with all sections
- Rule 8: Proposal: Structure, structure, structure
- Rule 9: Get as much feedbacks as possible
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Evaluation

IF - Marie Skłodowska-Curie Individual Fellowships		
Excellence	**Impact**	**Quality and efficiency of the implementation**
Quality and credibility of the research/innovation project; level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects	Enhancing the future career prospects of the researcher after the fellowship	Coherence and effectiveness of the work plan, including the appropriateness of the allocation of tasks and resources
Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host	Quality of the proposed measures to exploit and disseminate the project results	Appropriateness of the management structure and procedures, including risk management
Quality of the supervision and of the integration in the team/institution	Quality of the proposed measures to communicate the project activities to different target audiences	Appropriateness of the institutional environment (infrastructure)
Potential of the researcher to reach or re-enforce professional maturity/independence during the fellowship		
Weighting		
50%	**30%**	**20%**
Priority in case of proposals with the same score (*ex aequo*)		
1	**2**	**3**

NB: An overall threshold of 70% will be applied to the total weighted score.

Evaluation

Actual research proposal

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Coherence and **effectiveness of work plan**, including appropriateness of allocation of tasks and resources

- Make a clear time plan with Gantt chart: Work packages, Trainings, Milestones, Deliverables, Secondments (if applicable)

- Mention person-months for people involved in project

- Your project needs to be realistic, real experts read it

Example:

Risks and contingencies:

- Progress monitoring: who, how often, which frame

Risks and contingency plan (mention pandemic as a risk) – if your hypothesis is risky mention it, reviewer will notice

- Financial risks

- Administrative risks: Who will help you, how much experience do they have already with EU MSC projects

Example: Person months

Researcher: 24 months

Host: 6 months (3 per year)

Technician: 4 months first year, 3 in the second year

The other members of the group will have periodical discussions and meetings with the ER, as from the established calendar of the MEG (1 group meeting per week, 1 round table per month, 1 journal club per month, 2 group retreats per year).

Example:

Work package	Description of risk	Risk likelihood	Potential delay	Risk impact	Contingency plan
WP1	Low quantity and/or quality of FED	Low/ Medium	1- 3 weeks	High	FED extraction will be standardized with optimal method and/or alternative with large volume of (10 L) water samples
WP2	Low sequencing quality output from sequencing	Medium	1 month	Medium	Extensive DNA quality check before Illumina NextSeq analysis, replication and performing of the more sensitive targeted enriched metagenome
WP2	Limited correlation between taxonomic data of the microbiome and the antibiotic resistome	Medium	1 month	Low	Good quality of DNA in order to produce longer DNA reads, replication of the samples
WP3	To reach and maintain a steady state in chemostat, FED degradation/niche differentiation	Medium	2 months	Medium	In case of contamination cont. cultures should be restarted, the stability of the comm. will be check daily and FED continuously added in the vessels
WP4	Limited survival of the engineered strains in the microbial communities	Medium	2 months	Medium	Exp. Conditions will be adjusted to those ensuring higher survival chances for the strains

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Be specific, realistic and built on existing resources

Example: Distribute your results in social media

Too little:

We will distribute our results through social media.

Too much:

We will make a twitter, Facebook and Instagram page for the project. We will host a blog and weekly YouTube videos with our progress.

Good:

The project will be present and updated on the curated institute homepage irsa.cnr.it/projects and new results will be promoted by the working groups twitter account (@MEG_Verbania) with 200 followers from the field

Start building tools now:

- Open science, know what it is, and start your profiles

- Same for social media

General considerations

- Everything is in the guidelines, follow them carefully
- Think first about what you have at the institute: seminars, courses, journal club and use it.
- Take your time, don't write the project in the last weeks
- Let us know if you need an example project: estermaria.eckert@cnr.it

Apply to other funding agencies too

- EMBO Post doctoral Fellowship

- National funding agencies (many countries have them)

- Be brave: Start to think about you ERC and similar projects (FIS)

BANDI CARIPLO 2023
"GIOVANI RICERCATORI"

Thanks to: