

MiFoBio Round Tables Sunday November 7th 2021

CAREER DEVELOPMENT PERSPECTIVES FOR YOUNG SCIENTIST

General information

Place: Amphi Porquerolles, 21:30 – 00:00

Organizer: Imabio YSN (**Clément Cabriel**, **Hana Valenta**, **Valerio Laghi**)

Invited guests: **Marie Fournier** (R&D engineer, Abbelight), **Sébastien Huet** (maître de conférences, Université de Rennes)

Number of participants: around 20–25

People present among participants: one maître de conférences (Ignacio Izeddin), two application specialists from BioAxial, Leica's European demo team manager, one engineer from Imaris, one senior employee from Nikon. The rest of the participants were PhD students or postdocs.

Main organization of the session

- General presentation by HV and CC of the Imabio YSN, its goals and intended audience, and how to join.
- Short presentation by MF of her career and choice to work in industry. A spontaneous discussion follows.
- Short presentation by SH of his career and his role as a maître de conférences. Discussion follows
- After the presentations, the discussion follows on varied topics according to the interest of the participants, the answers of the invited and the reactions of YSN members as well as other academic and industry participants. Overall, the discussion about the academic field focuses on the French system, while the discussion about industry is more global.
- Overall, the discussion about the academic field focuses on the French system, while the discussion about industry is more global.
- Finally, given the high number of questions, it was decided by the organizers to split the audience in two groups for the last hour. One group deals with industry (HV, VL, MF, industry participants and around 60% of the PhD/postdocs audience). The other group deals with academia (CC, SH, II and around 40% of the PhD/postdocs audience)

Summary of the tackled topics in the entire session of RT

- *Is working in a company after the PhD/postdoc necessarily a plan B?*
The industry participants and MF stress that there are some jobs in industry that are similar in terms of scientific content as the PhD/postdoc. Big companies have full research positions, and startups offer one-man projects.
- *Is a PhD necessary/desirable to work in a company? More generally, what are the criteria to be hired in a company and how to be efficient in one's application?*
MF stresses that companies in France tend to favour grandes écoles diplomas over PhD. She advises candidates to focus interviews on what they can bring to the company and why they are the right person to handle projects rather than on the technical skills acquired during the PhD. She raises a problem of language when doing interviews that PhDs do not master while engineers do. She advises to get in touch with companies early, express interest and try interviews to get more experience.

To this question, industry participants highlight that it depends on the position—sales department does not benefit from a PhD diploma, while application teams may. They say that it is more about what the candidate is interested in rather than the diploma. It reminds that academic staff expect strong technical knowledge when discussing application possibilities with the companies.

- *What to say/not to say during an interview for a job in a private company?*
MF explains that the candidate should know how to sell himself. It is indeed not an easy task, and she advises to follow specific trainings and also to ask the former lab for help. MF also encourages to negotiate the salary, in other words 'to know your price'. For this, MF says it is good to search for salaries on the internet and also directly ask people in a similar job position around you.
- *Is it possible to switch between academia and industry during the career?*
Industry participants answer that it is very possible to go from academia to industry at any stage of the career.
SH and II answer that it is almost impossible to leave industry for a position in academic research.
- *Is there teaching involved in companies?*
Industry participants answer that there is somewhat, although this is not really a recruitment criterion
- *Is abroad experience required to get a position in a company?*
The employees from Leica and Nikon say that is not necessary. In general, it mostly depends on what position are you looking for and which company you target. For example, if you want to work in R&D for Nikon, there are no open positions in France, but in Japan yes. The man from Nikon says also it depends on your motivation. If your goal is to make money, he advises to go abroad for some time and then come back (e.g. in Switzerland, they pay well).
- *What should I do if I want to do R&D but not to go to Japan?*
The man from Nikon says that there are other companies than Nikon. You can search for smaller companies, mainly startups, this could be the way. Also depends on your location in France. MF adds that it is worth it to move from one city to another if we are passionate for the exact job position. You should know your priority—is it the city where you live? Or the job what you do/want to do?
- *Are researchers evaluated in terms of numbers of papers per year?*
SH and II answer that in France, academic positions are permanent, and that researchers do not have to justify a given number of publications per year. Still, having publications (preferably high impact) are one of the main criteria for equipment/staff funding applications
- *Does one really get to choose between CNRS researcher or maître de conférences?*
SH and II answer that not really, they applied for several positions (CNRS/University) and picked the first positive answer
- *Is teaching a recruitment criterion for maître de conférences positions?*
SH and II answer that yes, it is important to advertise one's teaching experience when applying. Monitorat or ATER are ideal.
CC asks how many people among the PhD students/postdocs did teaching—roughly 60%
- *Do postdocs have teaching duties?*
SH, II and CC answer that not in France, although it is more common in other countries. They remind the existence of ATER positions.
- *How to choose a postdoc?*
SH and II answer that it is important to do it in advance, sometimes even years in advance. It is important to show interest, discuss possible research topics, and be ready to apply

whenever a postdoc funding or call for projects becomes available. Planning in advance also allows to have multiple possibilities.

II advises to be pragmatic and take a postdoc where one can be efficient and get publications quickly (for example in a team where a project is already going on instead of starting from scratch, or a team where fundings are easily accessible)

- *Is abroad experience required to get an academic position?*

SH and II answer that it is not mandatory, but desirable. It shows that one is able to adapt to another system.

- *How important is the professional network when applying for an academic position?*

SH and II answer that it is important. More specifically, it is important that the research work of the candidate is known to the community. When applying for a position, the candidate should get in touch with the lab to perform visits, give seminars and have discussions. One important point is to discuss with the lab members as a colleague rather than as a candidate. II stresses that it is important to get in contact even if the subject does not seem exactly the same, it can be useful to get practise with the exam. Also, if one is interested in a maître de conférences, he recommends to call the lab to ask them if the call for applications is really open or if a candidate is already selected and the call is only an official formality.

Aside from this, academic positions are also a matter of opportunity, one has much better chances by being at the right place at the right time (i.e. in the lab where a position becomes open). SH insists that it is important to have the maître de conférences qualification ready in advance to be ready to seize the opportunity.

- *Should one change topic for the postdoc?*

II answers that it is both risky and potentially rewarding. Changing topic (for example moving from physics to biology) is a big investment as one has to get trained from scratch, which means less expertise and efficiency, and less publications. Still, it also shows that one is able to adapt.

- *Is it possible to get an academic position with an average CV?*

SH answers that it is extremely difficult, competition is so high that if the PhD or the postdocs are not good in terms of publications, then it is not enough.

- *Are maître de conférences positions more research or teaching oriented?*

SH and II answer that it really depends. It very much reflects the need of the university—sometimes they mostly need to fill teaching duties, sometimes it is more about research. Also, the research subject may be fixed or open to discussion.

List of the topics of interest identified but not tackled

- Research engineer / platform engineer specificities compared to maître de conférences / CNRS
- Balance between work and personal life
- Career breaks
- International academic careers, moving to another country
- Balance between technical science and team management
- Creating a startup
- Leadership skills

Outlooks and perspectives

Some people from the audience requested another session to be organized during the week. This was not done due to time constraints, but it might be useful to organize one or several

events specifically about this after MiFoBio within YSN activities. One event could be meeting with the industry representatives and one with the academic ones during coming 2022 year.