Roundtable Interview with Dr Alba Maiques-Diaz and Dr Anna Kabanova

YoungEHA Committee Members

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Q1 What inspired you to specialise in haematology research over other disciplines?

Dr Maiques-Diaz: This was not something I planned. I ended up doing an internship during the last year of my university degree in a cytogenetics laboratory and got fascinated with the haematology field they were working on. From there onwards, I decided to stick to it. I am still fascinated with the fact that our body can constantly create millions of blood cells with specific functions and that it is done correctly. It is a fine-tuned system with many unanswered questions.

Dr Kabanova: Joining the haematology field happened almost by chance for me as well. I did my PhD and first postdoctoral studies in the immunology field, studying B cell responses to vaccination and infection. When I started a second postdoc, the hosting laboratory was collaborating with the haematology unit at the local university hospital. This is how I started my journey into the field of B cell malignancies. Here, I became fascinated with the multitude of existing experimental approaches that can be used to perform translational research and the variety of questions that you may address with them.

Q2 What is your current research focus, and what in your opinion are some of the most important areas of haematology research needing increased attention in years to come?

Dr Maiques-Diaz: My research focusses on understanding the role of transcription factors in driving blood tumours. I have studied them in acute myeloid leukaemia and have recently started to do so in chronic lymphocytic leukaemia (CLL). Transcription factors are like the directors of the orchestra, if they do not do their work properly the music will sound out of tune. Understanding the biology of transcription factors will help in finding therapies that target their 'Achilles heel' and inhibit their aberrant activity in tumours.

I believe that technology is very much driving research revolutions nowadays and a current big step forward is single-cell analyses. This will allow us to learn whether the entities we have created are homogeneous populations or if there is a strong cellular variability. This can change how we define and probably treat haematological diseases.

Dr Kabanova: My projects focus on CLL. In my work I aim to get a deeper understanding of gatekeeper circuits that help to keep tumour B cells quiescent. CLL is characterised by a high incidence of indolent disease suggesting that an active molecular network suppressing tumour progression might be in place. Our knowledge on this network and its regulation is relatively fragmentary; therefore, we aim to deepen it and use this knowledge to treat aggressive forms of CLL and potentially also other B cell tumours. In my work, I like to combine approaches at different biological scales. We are interested in studying micro-processes such as receptor signalling and organelle biology, while at the

same time taking advantage of omics technologies to analyse functional protein networks at the systems level.

Q3 In your opinion what attributes are necessary for being a successful translational scientist, and what would be your advice to fellow young scientists embarking on their careers?

Dr Maiques-Diaz: Nowadays science is moving fast and changing quickly. This means that on top of being curious, you should also work on being resilient and flexible. To be able to adapt and transform your research accordingly with new discoveries and technologies is essential. Being a translational scientist means that you need to gain a lot of knowledge and master many different abilities. Whether you come from a clinical or a biological background, you will need to learn a lot from both fields and ideally also become fluent in computational analyses. This is key! Be prepared to learn to code in R and to deal with lots of different data and software. I would advise young scientists not to specialise too soon and to learn as much variable knowledge as possible. Also, they should not forget to expose themselves to challenges and expand their professional skills. Those will be essential to have a fruitful career in the future.

Q4 How did you become involved with the YoungEHA committee and what was the goal you set out to achieve when you joined?

Dr Kabanova: I joined the committee by applying to an open call that I spotted on the EHA website almost by chance! The call was issued in the summer of 2018 and at the end of the year I got a reply from the EHA with an invitation to join the committee. Committee members, ongoing mandates, and the newcomers first met during the EHA24 in Amsterdam; that was a very lovely start!

My primary inspiration to join the committee was dictated by the fact that being a biologist and quite new to the haematology field with only several years of translational research in my background, I wanted to get to know haematology peers better. Furthermore, I was really interested in understanding how scientific associations and committees work and to get involved in various activities such as the EHA Congress organisation. In reality, the activities turned out to be much more diverse than expected. Every committee member is free to choose the type of activity that has the most affinity with his or her own interests and background. I chose to bring some personal 'fresh' experience of being a mum and an active researcher to the YoungEHA. Having found an affinity in this aspect with some other members of the committee, including Dr Maiques-Diaz, we set off to implement some changes to the current EHA criteria for grant eligibility and congress participation to provide more support to parenting researchers. Our initiative has resulted in the uptake of childcare facilities during congress (which can't be experienced yet due to the COVID-19 pandemic in 2020) and the implementation of a change in eligibility criteria across all EHA Talent Acceleration programmes (mentoring programmes and research grants). This is only an example of how a personal experience could drive the involvement in committee activities. Luckily, EHA gives space to the YoungEHA committee members to propose new ideas. We feel great support which is very inspiring and drives us to set new goals.

Q5 What is the mission of the YoungEHA committee, how does it contribute to the annual congress, and what are some of your typical roles?

Dr Maiques-Diaz: The mission of the committee is to represent the voice of early career researchers and clinicians in haematology within EHA. We are an inclusive community that aims to inspire young haematologists and help them to achieve their full potential. Our team has grown in the last 2 years and we are now 13 members and ambassadors actively working together representing different European countries including Italy, Spain, Germany, the Czech Republic, Bulgaria, Belgium, and the Netherlands. The space EHA is giving juniors is expanding and this is indeed a great opportunity to raise the needs of junior researchers, clinicians, and other young professionals involved in haematology. One concrete example of our results is a future launch of a new training programme in bioinformatics which will join the existing EHA Clinical Research Training in Hematology and EHA Translational Research Training in Hematology programmes. We have a voice now

and are working together with the EHA Board and the rest of the EHA committees to promote this and other activities for the benefit of the YoungEHA community.

We are heavily involved in the organisation of the annual EHA Congress, co-organise the YoungEHA Experimental Research Meeting (YERM) together with local researchers from the area of each year's meeting, and the Young EHA track. In these sessions we aim to highlight research topics that are a bit different than the rest of the congress, either because they have a more flexible format, or because we cover topics that are not as well represented. Usually, these topics look at new developments in or outside of haematology that are of use to haematologists. For instance, this year artificial intelligence and the effects of nutrition and microbiome on haematological outcomes will be discussed. The YoungEHA track is meant to inspire and to educate.

Q6 What could research associations such as EHA do to support haematologists during the pandemic?

Dr Maiques-Diaz: Research associations are very much needed at this moment. We are going through difficult times where we feel isolated and the anxiety and stress levels are rising together with the uncertainty we are going through. I believe research associations should work to build communities and networks. We now need to feel connected more than ever, feel that we are not alone, understand that other people are going through the same issues, and also be able to exchange scientific and clinical information in a safe and professional environment. Particularly for us juniors, still in the process of building our career, it can be emotionally damaging to feel alone at home and not being able to do our laboratory work or to take care of our patients properly. Building supportive networks between peers is essential to overcome these difficulties and to transform challenging situations into strategies that will help us to feel empowered.

Q7 EHA has now launched the COVID-19 EHA Hub which is driven by the YoungEHA committee members. Could you please tell us more about these initiatives?

Dr Kabanova: The EHA Hub[1] was launched online at the end of March, roughly a month after COVID-19 first hit Europe. The creation of the Hub was initiated and driven by the YoungEHA committee, and the idea behind it was to provide a virtual space for haematology professionals and researchers to discuss challenges, share relevant information, and find support, both professional and psychological, if needed. The impact of COVID-19 globally is massive. Patients, clinicians, and researchers are all impacted by this situation. Therefore, the Hub was devised to help join forces and collaborate as a community. The Hub is organised in different sections, grouping the different topics in a useful way, including guidance and publications, case reports, personal protective equipment and ethics, research ideas, and coping and sharing. Many haematology professionals are currently using it to share and exchange.

Q8 YoungEHA has conducted a survey to understand the challenges researchers are having associated with the lockdown, can you share with us highlights of the answers?

Dr Maiques-Diaz: We started this survey as we wanted to understand the main challenges the young haematology community is going through and to use this information for the special webinar[2] for researchers on 30th April. This webinar was part of the EHA COVID-19 webinar series[3] that aimed to create a space where both clinical and translational/basic researchers could share the ideas, views, and strategies they were using to cope with the lockdown and to plan reopening their laboratories. We are still analysing the data from the survey and aim to publish this as soon as possible, but the answers are already interesting.

Out of the 215 responses we got, only 17% of the respondents consider themselves having similar productivity to before the lockdown. There were no major differences between biologists (with a PhD) or clinicians (who do research) in how productive they are feeling, and most of the people (42% of the responses) consider themselves being 0–40% productive. The reasons for the loss of productivity are "not being able to do experiments" or "to use relevant facilities to work." Many people also stated that this was due to "having to take care of the children as they have no child-care" or that "the stress/anxiety of the situation make me less productive." We still need to analyse whether we observe different answers between junior and senior researchers

or between the different countries we got the most responses from (Italy, Spain, UK, USA, and Germany) where the lockdown policies were different. We also asked about research funding and this is a topic that resonated with many people. This is a complex issue as each country has different funding strategies, but overall many people were unsatisfied with the information they got from their funding agencies. Which is already something to think about.

Q9 What is your favourite aspect about the EHA congress and what are your thoughts on EHA25 VIRTUAL?

Dr Kabanova: For a translational researcher, the EHA congress is a great opportunity to improve one's knowledge on the clinical side of pathologies that we are working on. Additionally, being extremely broad and filled with events, one can always find an interesting and inspiring talk to listen to. Being involved in the organisation of the YoungEHA track and YERM meetings, we all really enjoy listening to the speakers and participating in the professional-skills session. At EHA24, the YoungEHA voice was definitely heard and catered for.

The fact that EHA25 will become virtual was met with great joy. First, it meant that fortunately the congress was going to happen despite COVID-19 which is already a great achievement since many research meetings scheduled in 2020 were cancelled. Second, it gave the YoungEHA committee and the EHA an exciting possibility to evaluate two interesting ideas: 1) can we make the EHA Congress available to more participants since virtual platforms lower the costs of the meeting attendance and 2) is there a possibility to translate a part of future EHA congresses to the virtual space or maybe hold 'live' and 'virtual' congresses in parallel. We are very curious to receive feedback from EHA25 participants and see how this will shape the future organisation of EHA congresses.

Q10 COVID-19 has forced many countries to lockdown and thus a lot of research has been stopped, what are you doing to adapt to this situation?

Dr Maiques-Diaz: Adapting to being at home and working with a computer when you are a wet-lab researcher who loves doing experiments is not easy. I have recently moved to a new laboratory and it took over 1 year to have experiments running appropriately and to start answering some of the questions we have. This was just happening when the lockdown came. We had to change gears and redefine new objectives. I need to work with a direction that is divided into small objectives and tasks, to feel the progress, and not get lost. Finding new directions is what has worked for me. I was able to identify two major goals to do these months. First to finish a manuscript I have pending from my former laboratory and second to do further computational analysis to define in more detail the project we are starting. During these months, the latter is also helping the PhD student I supervise to start learning computational biology, something that she will heavily benefit from. On top of this, I feel that holding laboratory meetings to discuss projects from laboratory mates and to keep connected is also emotionally essential.

Dr Kabanova: My story is very similar to that of Dr Maiques-Diaz, with the difference that after a period of lockdown our institute has gradually reopened its doors. Since May we have been back in the laboratory with the limitation imposed by the security conditions to work at a reduced number of personnel. We have also had some uncertainty with starting the internships for new students and signing contracts for the new members of the laboratory. These challenges are shared by many laboratories around the world. Luckily the funding agencies that provided me with a start-up grant provided the grantees with the necessary flexibility such as no-cost extensions and allowance for free budget reallocation. This flexibility and more funding support, to protect 'vulnerable' groups and vulnerable fields of research, is what is now needed. A response should be immediate to avoid long-term consequences of the lockdown for many years ahead.

References

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