

## EDITO

Traditionally we begin the New Year with an evaluation of the previous one and hope for the successful realisation of projects in the future.

As far as dynamism is concerned the results for Biopark in 2011 are impressive. As an illustration of this, may I just mention the Centre for Microscopy and Molecular Imaging (CMMI), officially inaugurated on 15<sup>th</sup> November in the presence of Rudy Demotte, the Minister-President of the Wallonia-Brussels Federation. This new centre is, moreover, the outcome of a collaboration between ULB and UMons, which found a particularly favourable environment in Charleroi. As for all «annual reports», we should first see this achievement as the result of a lot of hard work over a certain lapse of time. The same is true of one of the aspects of life in the Biopark particularly focussed on in this issue, that of international mobility.

An international outlook is a major quality criterion of any scientific institution and laboratories which do cutting edge research are inevitably the ones which offer the most benefits from international mobility. What's more, no training of quality is really complete without a spell abroad. The Université libre de Bruxelles has an undeniable tradition in this area. I'd like to point out that, every year, over 21% of the students who graduate with their Masters from ULB can take up the opportunity to participate in an exchange programme, either taking classes or getting work experience and, as we can see in the examples given in this issue, international mobility doesn't stop at the second cycle. All the past participants emphasise the quality of training they received at ULB and the benefits of their stay abroad, both for their personal enrichment and for the building up of a network of contacts.

In the same context, as ULB was anxious to improve the quality of how we take care of researchers and PhD students from abroad, we set up a Mobility

Centre which now helps with the administrative formalities. We can see in the following pages how important this is for the researchers who come to work with us, sometimes from very far away. The internationalisation of ULB campuses is a priority for our institution and the scientific renown of our laboratories, led by those based in the Biopark, is a powerful asset for the attractiveness of our campuses.

Finally, if we focus on this rather incomplete report for the development of some projects, we must also stress ULB's wish to strengthen its presence and dynamism, not only in the heart of the Biopark but also in Hainaut in general, and Charleroi in particular. The Board of Governors recently approved a first draft of our development strategy on the Charleroi site and, based on this, we are continuing with the constructive dialogue initiated a few years ago with our partners in UMons. We'll also certainly continue to work more closely with the economic and political players in the region, as the first mission of the establishment in Charleroi is a deep strategic commitment to local development, by bringing to it the essential assets of a renowned university. Among these assets, I'd once again like to highlight growing internationalisation.

All the best for 2012 to all of you!



**Didier Viviers**  
Rector of the Université libre de Bruxelles

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# Made in the Biopark

Nowadays research has become international and the Biopark has, of course, followed this trend. Anyone who needs convincing of this just has to take a look at the programme of seminars. Many of them are given by professors from abroad and a particular example is the American, Bruce Beutler, winner of the Nobel prize in medicine in 2011...

Another illustration of the international character of research is the number of ongoing collaborations. The three institutes - IBMM, IMI and CMMI - have set up collaborations in the US - Harvard, University of California, National Institutes of Health (NIH)... -, and Japan, Canada, Switzerland and the European Union - UK, Germany, France, Italy, the Netherlands, Denmark... -.

And, of course, the international character of the Biopark is obvious. English is everywhere, in conversations in the corridors or just outside seminars... Around a quarter of academic researchers in the Biopark come from abroad and about thirty of the people who recently got their PhDs in the Biopark are currently doing a post-doctorate abroad.

If the in/out movements are more or less balanced, the countries of origin and destination, however, aren't the same. The Biopark mainly receives Europeans: three quarters of the researchers who come in are currently from Europe and the other quarter from Lebanon, China, Brazil and Canada. Of the Biopark researchers who go abroad to continue their work, around half stay in Europe, almost half go to the US and others are in countries such as Singapore and Brazil. What's their motivation? Were they disappointed with anything? What did they really like? Were there any surprises? Biopark News went to meet a handful of them ...



## Elsa Lauwers, in Flanders

Although Elsa Lauwers decided to stay in the country to further her career, she chose to cross the linguistic border. She's been working in the Laboratory of Neuronal Communication in KUL/VIB since October 2009. With a degree in biological sciences from ULB, Elsa Lauwers did her PhD and post-doc at IBMM, in the Laboratory of Cell and Molecular Physiology headed by Bruno André. «At the end of my post-doc, I wanted to continue studying intracellular traffic questions but wanted to change my model system or organism, and I especially wanted to use new techniques. My first choice was the Laboratory of Neuronal Communication at KUL/VIB. They had published articles on synaptic vesicle traffic in highly respected international journals. In addition, by going to work in Flanders, I hoped to discover a different work environment and maybe also a different way to do research» remembered the researcher. Today Elsa Lauwers is working in parallel on two complementary research projects which should enable her to better understand the mechanisms which control the formation of new synaptic vesicles by endocytosis. This process is essential for the maintenance of neuronal communication during intense stimulation and therefore of many phenomena such as memory or muscular control. Even if they're just a few dozen kilometres apart, there are nevertheless differences between IBMM and her present environment. «23 people of 8 different nationalities work in my laboratory. I can see great cultural and linguistic diversity in the department which has recently been re-baptised the 'VIB Center for Biology of Disease'. Many internal seminars are organised to encourage collaboration between different groups. Almost all the PhD students work in two laboratories in the department», she explains and then goes on, «When I arrived, the very high standard of the undergraduates, graduate students and post-docs really impressed me, as did the large number of projects ongoing in the laboratory. I had to learn lots of techniques, especially in Drosophila genetics which I didn't know at all. But in return, I could bring my own knowledge acquired at IBMM. Several members of the laboratory now use yeast as a model in certain experiments».

## Roberto Maldonado, in the United States



Born and raised in Venezuela, Roberto Maldonado left home when he was 19 to follow his family who had settled in Belgium. «It was the occasion for me to travel and learn French» he remembered. This was in 1993, the young man began studying biology at ULB. «The first year was difficult, all the courses were in French. There weren't many South Americans on the campus and the Belgian students seemed to me to be distant. In Venezuela, people are more open, they bump into you in the street and start speaking, they touch you on the shoulder... » he explained. However, Roberto Maldonado soon got used to Belgian ways. He did brilliantly and, after a final year project in immunology, started studying for a PhD in the immunobiology laboratory at IBMM. «I studied leukocytes (white blood cells) specialised in dendritic cell antigen presentation, under the supervision of Muriel Moser. At that time, other researchers had shown that dendritic cells were a heterogeneous cell population and we showed that this heterogeneity included functional diversity. In the presence of the same antigen, sub-populations of dendritic cells induced different immune responses. The articles we published at that time were certainly the most important of my career» says Roberto Maldonado.

### Harvard

With his PhD in his pocket, the researcher left to do a post-doc at the University of Harvard where he continued his research on dendritic cells. «In diseases such as diabetes and arthritis, the immune system turns against the

individual. I studied how to re-educate dendritic cells to adapt the immune response. At IBMM, I did pure research while at Harvard it was more oriented towards clinical applications» observed Roberto Maldonado, «I was well trained in the Biopark. When I arrived in Harvard, I had a good level of knowledge and was skilled in many techniques. The most difficult thing in the beginning was to become perfectly fluent in English. The first three evenings I came home exhausted after concentrating all day on what I had been asked to do and what I should reply, all in English. I'd already had a similar experience with French when I arrived in Brussels in 1993. Another big difference was, of course, the culture and pace of work. In the US, you try to get as many results as possible, you start an experiment and you change it, rectify it, as you go along... Everything goes much more quickly. In Europe, on the other hand, you're more relaxed, stress is put on style, on work well done. You read, study a question, before starting an experiment which will allow you to test a hypothesis».

### Europe

Today he works at Selecta Biosciences, an enterprise co-founded by his old lab director at Harvard. He really loves his work. «We're working on new therapeutic approaches to auto-immune diseases» he said, but he'd also be happy to come back to Belgium, to Europe. « Europe has a culture of doing things well which I like. For example, they built a bridge in Boston 4 years ago. It's new but it already looks old. In Europe, on the other hand, it takes time to decide to build a bridge but, once the decision has been taken, it's beautiful, durable » said Roberto Maldonado. « In Europe, you also pay more attention to personal development, it's important to have a good balance between professional and private life, but in the US the principal preoccupation is work. The quality of life is better in Belgium, in Europe, but today, in Boston alone, there are more work opportunities than in parts of Europe».

## Myriam Crapeau, from France



Doctor in genetics from the Victor Ségalène University in Bordeaux, Myriam Crapeau came to IBMM to do a 3 years post-doc in March 2011. «I worked for a long time on a yeast model and I really liked it. It's a practical, easy, rapid tool. I wanted to continue my research on this so I started by looking for laboratories which used it. I then classified them mainly according to the quality of their publications. I wanted to stay in a French-speaking country since my husband doesn't speak much English.

These criteria led me to apply to IBMM» explained Myriam Crapeau. In the Laboratory of Molecular Cell Physiology, she studies the regulation of the SPS system, which is the system of external amino acid sensors. Not too much of a change of scenery perhaps – her husband takes advantage of Charleroi airport to go to Bordeaux every month – even if, she continued jokingly «Certain words and expressions don't have the same meaning or absolutely no meaning from one region to another». Myriam Crapeau nevertheless sees a major difference from her previous laboratory. «In France, there's a marked separation between a lecturer/researcher and someone who only does research. There's sometimes even a certain contempt between them. In Belgium, on the other hand, research and teaching are more integrated and this is really a plus for the training of students».

## Sandrine Tonon, in Austria



A doctor in pharmaceutical sciences, Sandrine Tonon did her PhD at IMI. After a short break – two months' holiday in India – she thought about doing a post-doc abroad. «For me it was a difficult decision to make. I'd always been attracted by academic research and I knew a post-doc would be very useful. However, I was already 30 and didn't want to turn my private life upside

down, especially as I was happy in Brussels» she remembered. She finally decided to leave but to stay in Europe so as not to be too far away, or maybe New York or Boston...? Finally she chose the Ce-MM, the Center for Molecular Medicine, in Vienna. «It was a new research centre and there I studied the role of B1 lymphocytes and the regulation of IgM antibodies in atherosclerosis on a mouse model. The new aspect of this research appealed to me. I only knew a little bit about this disease and I'd never worked on this animal model... ».

But the researcher very quickly became disillusioned. «The four years I spent in Vienna were difficult because I arrived in an emerging institute, in a team where literally everything had to be set up and with a boss I didn't get on with. I could have stopped everything but decided to stick it out and, in the end, I'm pleased I did. You always learn something during a post-doc abroad, you gain experience and autonomy, even if the years of research don't end up with a good publication» explained Sandrine Tonon.

What she retains from her stay in Vienna is the discovery of another culture, «The straight talking mentality of Germanic people», she smiled. «When the light's red for pedestrians, you don't cross, even if there's not a car in sight. That doesn't happen here!». She appreciated meeting colleagues who became friends. «The Viennese are quite distant so it's not easy to enter their circle of friends and I didn't have many hobbies. I did make a few friends - a Brazilian woman and an Austrian guy who met in the laboratory and who have asked me to be a witness at their imminent marriage» she said. Finally, visiting the city «Vienna is very beautiful, culturally rich and very safe» she added.

In January 2011, Sandrine Tonon came back to Belgium. She had several job interviews, mostly in private companies. In the end she decided to stay in academic research for the moment and took up a post at IMI, in the team of her old PhD colleague, Stanislas Goriely. «The ambience at IMI is much more my thing than at Ce-MM. I'm part of a team who have confidence in me, let me be creative and be myself. My post-doc in Vienna helped me develop and let me acquire new scientific knowledge. The main lesson I learned is that you have to take time to choose the laboratory you're going to work in. You need to discuss at length with

the team leader and also, and even especially, with other PhD students or post-docs to make sure your personality and way of working can fit with the atmosphere and way of working in the laboratory» insisted the researcher.



## Laurent Gatto, in the UK

After his final year project in animal biology, Laurent Gatto dreamt of becoming a researcher and started doing

a PhD at IBMM in 2000. «I worked on a macroevolution project, studying mobile genetic elements and using their presence and position in the genome to retrace the evolution of cetaceans» he remembered. After getting his PhD, he was hired by DNAVision where he was in charge of the management of projects and customers, and also of bioinformatics. He stayed there three years. In his work he was often in contact with laboratories from all over the world, he got on well with researchers at the University of Cambridge and they offered him a post-doc position there. He accepted and he's been doing research at Cambridge since January 2010. «My work at DNAVision began to be a bit repetitive and I wanted to start doing academic research. I also longed to have more freedom» he explained. He fell in love with the English city. «The town is beautiful, pleasant to live in, rich in culture... » he said. Laurent Gatto also very quickly felt at ease professionally. «The University of Cambridge has an excellent reputation and I arrived in a new field of research, proteomics. But I was able to fall back on what I acquired in the Biopark, especially in bioinformatics. My time at DNAVision also taught me to be pragmatic. When I arrived in Cambridge, I fixed myself objectives and deadlines. It's important to show what you really want whether you work in a company or a university» he emphasised.

## Hussein Shehade, from Lebanon



Hussein Shehade is Lebanese, graduated from the Lebanese University of Beirut with a

degree in biochemistry in 2005. He worked there as a teacher for a year but soon felt the need to continue his training. He therefore enrolled for a master's in Biochemistry, Molecular and Cell Biology in ULB. At the moment he's doing a PhD in immunology at IBMM, studying the role of ATP (adenosine triphosphate) metabolism and hypoxia in the development of immune responses in the intestine. «I chose to come to Belgium for different reasons: I had an aunt who lived in Brussels so it was easy. And then Professor Arsène Burny (ULB) encouraged me during a seminar at the Lebanese university...» explained Hussein Shehade, «My first year in Belgium was a real challenge. It was the first time I'd lived abroad, I couldn't speak French... Fortunately the Lebanese are open to European cultures and can adapt to different life styles and, above all, my colleagues in the laboratory have always been very friendly and helpful».



## Fernando Bragas Dias, from Brazil

At the end of his master's in infectious and parasitic diseases at the University of Belo Horizonte in Brazil, Fernando Bragas Dias did his final year project on Chagas disease. He continued working on the disease at the Brazilian Ministry of Health in the Centro de Pesquisa René Rachou. In 2009 the centre organised a competitive examination for Master and PhD students and Fernando got first prize. The same year, during his doctorate, he spent 10 months in Paris, continuing his work on Chagas disease at the Institut de la Recherche pour le Développement (IRD). Back in Brazil again, Fernando Bragas Dias participated in a Canadian research project and left for Amazonia. In the summer of 2011, he came back to Europe, to Belgium to be more precise, within the

scope of a cooperation agreement between ULB and CAPES (Coordination pour l'Amélioration du Personnel de l'Enseignement Supérieur). He's now doing a one year post-doc at IBMM, working on the interaction between the Chagas disease vector and the parasite responsible for the disease. He'd like to continue his research at IBMM where he has found his feet. «I know how European people work, thanks to my 10 months' work experience in France. The only thing about working in France and Belgium is that people in the lab don't speak to each other much, everyone works in his or her little corner. There's not really any social life with colleagues outside work», he says.

## Pierre Smeesters, in Australia



FNRS researcher at IBMM, Pierre Smeesters took off for Australia this autumn. Winner of the ULB «Rayonnement international» prize, he joined the Murdoch Childrens Research Institute, an institute in Melbourne with around 1200 researchers entirely dedicated to paediatric themes. «My objective during these two post-doc years is to acquire specific experience in immunology which I can then bring back to IBMM and develop further», he explained. 36 years old, Pierre Smeesters has already travelled a lot, first as a medical doctor in Peru then a researcher in Brazil. In 2005 he joined the IBMM Laboratory of Bacterial Genetics and Physiology. In 2009, he spent 6 months in Australia in the laboratory of Kadaba Sriprakash, a specialist in streptococcus A.

«My work on infectious diseases at IBMM led me to study the host-

pathogen relationship and I came to train in Australia which is, along with the United States, a leader in this subject. I work in a research institute integrated into a hospital where 500 paediatric beds have just been installed. It's a real opportunity for me since I've always done translational research», the researcher went on. «By joining a new structure such as the Murdoch Childrens Research Institute and benefiting from the experience of new colleagues, I'll certainly evolve faster than if I'd stayed in Belgium ».

Even if he'd already spent time in Australia, Pierre Smeesters continues to be very surprised by the difference in procedures between the two countries. He explained: «Before taking up your job, you must have different training courses, either traditional or on the web, and pass different tests. This takes several days, covering questions as diverse as hand wash-

ing, ergonomics at work, security and fire alarms! In Melbourne, there's a huge amount of paperwork, lots of meetings, procedures, etc. It's certainly linked to the large size of the establishment and the high turnover of scientists. Melbourne is an impressive city, with its 4 million inhabitants, you can really feel its capacity for very large-scale projects. And to think they almost didn't let us in! When we left Belgium for Australia, we decided to make a detour via Brazil to take part in a congress. But when we got off the plane, the authorities refused us access due to the risk of yellow fever in Brazil at the time. We explained to them we'd been 4000 kilometres from the area where there was an outbreak of yellow fever but they wouldn't give up! They finally let us into Australia after an hour's wait and a visit from the airport doctor».



## Zhang Jinyu, from China

Zhang Jinyu arrived at IMI in January 2011. She came from China, more specifically from the Third Military Medical University of Chongqing, where she got her doctorate. Zhang Jinyu's project was selected among the top 5% of doctorate and post-doctorate projects, she got a grant and came to the Biopark. Recognised to be one of the best students in her year, one reason Zhang Jinyu chose to come to Belgium was that she already had some friends here. Also «The scientific reputation of IMI attracted me.

I intend to use my stay to publish some high quality articles», explained the young researcher who went on, «My colleagues at IMI helped me a lot when I arrived so my adaptation was relatively easy. It's true, however, that everything in Belgium is so different from China: the language, the buildings, the way of life, etc.».

# Expatriate students

**More and more students decide to go abroad for work experience after their master's. We met three of them, now doing their PhDs at IBMM : Martina Stefkova (Aachen), Aurélie Hanoteau (Lausanne) et Maxime Dhainaut (Oxford).**



Maxime Dhainaut



Aurélie Hanoteau



Martina Stefkova

After their master's, ULB students can choose to do their work practice abroad. Martina (24), Aurélie (23) and Maxime (23) grabbed this opportunity. They went, respectively, to the Clinique Universitaire RWTH (Aachen, Germany), the Institut Ludwig (Lausanne, Switzerland) and the Weatherall Institute of Molecular Medicine (Oxford, UK). «This was the occasion to compare working in Belgium with working in another country», said Aurélie. «My supervisor directed me towards a laboratory with wide expertise in the subject of my final year project. That's how I came to join a team of German researchers», said Martina, who received an Erasmus Placement grant for the project. The motivation of students is often the same : to discover new techniques and scientific approaches, not forgetting the chance to learn a new foreign language or to perfect their English.

## Life in the lab

When they arrived in the laboratory, each student was given a project to be done in 3 months. Martina worked on liver fibrosis, Aurélie tested the effects of different adjuvants on anti-tumour vaccines and Maxime studied the molecular mechanisms regulating the emergence of Xenopus haematopoietic stem cells during development. «When I arrived in Oxford, I didn't feel any different from the students there. I hadn't done my final year project before my work experience but I realised I'd been well prepared», said Maxime. The young women, on the other hand, had already mastered certain techniques during the work for their final year projects.

«Around fifty people who were working on very similar subjects got together once a week to discuss or debate everyone's research subject. It was a melting pot of ideas, the occasion to discover everyone's point of view and to interpret results», said

Martina, who immediately qualified her statement by adding «There's a kind of team spirit at IBMM, people help each other. When I was in the Aachen laboratory, there was more individualism, I think». What the PhD students especially retain from their experience is the high standard of training received, working in an international team and also the shortness of their stay. «We didn't have time to worry about adaptation as we had to get results in only 3 months!», smiled Maxime.

## Returning home

After three months' experience abroad, the three students came back home with really precise ideas of how they wanted to continue their studies. All three are now doing a PhD at IBMM.

«I'd already decided to do a PhD well before leaving, while I was in the first year of my BA. I like research and I wanted to work on cancer» explained Aurélie. She's now doing a PhD on the role of immunosuppressive molecules, IDO and adenosine in anti-tumour resistance, jointly in IBMM and her host university. Martina only decided what to do at the end of her Master's in Biochemistry and Molecular and Cell Biology. She now works on the regulation of the functionality and diversity of the T lymphocyte repertoire by antigen presenting cells. As for Maxime, he's doing a PhD on the regulation of immune response by regulatory T lymphocytes. «For my work practice, I really wanted to go to a country where they speak English and I'd like to repeat the experience with a post-doc in the UK or the US. I'll be able to relive the experience but for longer than three months next time!».

# Tong Zhang

## « A colleague lent me a bike »

*Tong Zhang has lived in Belgium since she came from Inner Mongolia (China) at the age of 31. After being trained at IBMM and working in the Biopark (IMI, CMMI, DNAVision), she's now a Scientist at UCB Pharma.*



**> You're originally from China. What was your career in your homeland ?**

**Tong Zhang :** I studied at the Institute of Virology in Peking where I got a master's in microbiology. Then I worked at the University of Inner Mongolia, half-time in the lab and half-time on the management of projects and their economic development. But I didn't enjoy my work very much so I took part in a national competition and got a one year grant to study in Europe. I sent my application to different European universities, including ULB who replied very quickly : The Laboratory of Biological Chemistry headed by Georges Huez was ready to take me on. I jumped at the opportunity !

**> Your arrival in Belgium was a bit stressful...**

**Tong Zhang :** Yes, it certainly was ! I took off for Belgium but I didn't know at the time that the ULB Faculty of Science hadn't received the faxes and e-mails announcing when I was coming. When I arrived in the airport in Zaventem, there wasn't anyone waiting for me! It was 10 o'clock at night on February 1999, I was tired after a 15 hour flight, I could only speak a few words of French and I didn't know anyone in Belgium! So I went to one of the car rental companies in the airport and explained that I was looking

for a Professor Georges Huez. There, by sheer luck, the person I spoke to had a son who was studying at ULB and one of his neighbours worked in Georges Huez' laboratory ! But it was too late to contact a secretary, no-one answered the phone... I'd only been allowed to bring in 100 dollars and I thought I'd have use them for a hotel room until a Vietnamese woman stepped in. She explained to me that a few years earlier she'd arrived in Brussels and, as she didn't have any money and didn't know anyone, had to sleep in a park. She offered to put me up for the night. So I followed this woman I didn't know, into a city where I'd never set foot... The following morning, her son very kindly drove me to the ULB Faculty of Science. The Laboratory of Biological Chemistry, however, was on another campus so a member of the team came to pick me up.

**> Were your first months in Belgium easy ?**

**Tong Zhang :** Not really as China and Belgium have very little in common... I'd left my family and friends behind and in Belgium the language, alphabet, culture, food, etc., everything was so different ! Happily, the laboratory gave me a very warm welcome ! They found me somewhere to live near the institute, a colleague lent me a bike ... Originally I thought I'd only stay a year in Belgium but I wanted to do a PhD and asked Véronique Kruys, then head of the laboratory, if I could do it with her. Georges Huez found a grant for the project so I stayed and got my PhD at IBMM in 2005.

**> Having got your PhD in molecular biology, what did you do then ?**

**Tong Zhang :** I applied for different jobs but, as I'm Chinese, it was a complicated procedure for companies to hire me and it was rather off-putting. I heard that IMI, which had just been opened on the Biopark, was looking for someone so I applied and was accepted. I did a three years post-doc in immunology and was then taken on at

CMMI where I stayed a few months.

**> In March 2010, you turned towards the private sector.**

**Tong Zhang :** Yes, I stayed in the Biopark, becoming head of the Microarray section in DNAVision. The company, however, decided to focus on the human genome and they closed the section. So I left and two months later joined UCB as a Scientist in a new biological department.

**> You found not only work but also your future husband in Belgium.**

**Tong Zhang :** Yes, and that was in the Biopark too. Thomas works for AWEX as an expert on the Asian market. He came with the Chinese ambassador when he visited IBMM, saw me and ... a year later we got married. We celebrated our marriage in both Belgium and China.

**> Do you sometimes regret leaving your homeland ?**

**Tong Zhang :** No, my philosophy is never to regret anything. When I decide something, I see it through to the end, I come to terms with my choice. I arrived in Belgium and, after 3 or 4 years, knew that my life would be here. In China, everything depends on who you know. If you don't have good contacts, you won't manage to make your project a reality. In Europe, on the other hand, there's competition but the important thing is ability and, if you're motivated, you can always find something worthwhile.

# Alice Mayer

## « I just couldn't imagine life without research and music »

*After doing a PhD at IBMM, Alice Mayer left for the University of Oxford where she's continuing her research in immunology and, at the same time, indulging her passion for the accordion.*



When she was 8, Alice Mayer decided she wanted to play the accordion and she liked it so much that, when she was an adolescent, she then decided to become a performer and composer. She enrolled in musicology at ULB and followed it up with a master's in the Art and Science of Communication at ULg, with a specialisation in music. But the studies turned out to be very theoretical and she missed playing her instrument so she decided to enrol at the Conservatory in Liège.

Alice Mayer began to give musical animations for children of between 2 and 8. «It was fascinating. You had to pay attention to every single gesture, to the slightest comment from the child and jump on it to keep their interest» she remembered. She also played the accordion in shows and plays in theatres... but, due to illness, she had to interrupt her début as a musician. In good health again, Alice Mayer realised that music was for her first of all a passion and not really a profession. She decided to go back to what had attracted her when she was a child, biology. «The first books I asked for were on the human body», she remembered.

University of Mons. She liked the studies and followed on with an inter-university (ULB-UMons) master's in molecular biology organised on the Biopark. She did brilliantly. «I started studying at 28 and knew I had to do really well so that my age wouldn't be a handicap on my CV» she said. Alice Mayer then started studying for a PhD in the Immunobiology Laboratory in IBMM where she had already done her final year project. Under the supervision of Fabienne Andris, she studied the mechanisms which allow the immune system to adapt its response to the type of pathogen invading the organism. «Immunology fascinates me by its complexity and essential role, defending man, and by its frailty – if it's badly regulated, our immune system can attack our own cells!» In December 2010, at 35, Alice Mayer got her PhD at IBMM.

### Oxford

The following month, with support from the Wiener Anspach Foundation, she left to do a post-doc at the University of Oxford. «I wanted to leave the country to do a post-doc in order to continue my research and also to discover

another culture and perfect my English», she explains. «Oxford is, of course, synonymous with scientific excellence. The UK has great cultural diversity in general, including a richness in musical culture – there are concerts every evening in or around Oxford – . I was trained well at IBMM was always stimulated, we were always exchanging ideas in the laboratory, criticising, perfecting our analyses... At Oxford, the work is more individual. I have to be more independent but that's no doubt the transition from final year project to PhD thesis and then post-doc».

### Biology

When she was 28, Alice Mayer therefore gave herself over to her first passion. She enrolled for a bachelor's in medical biology at the

University of Mons. She liked the studies and followed on with an inter-university (ULB-UMons) master's in molecular biology organised on the Biopark. She did brilliantly. «I started studying at 28 and knew I had to do really well so that my age wouldn't be a handicap on my CV» she said. Alice Mayer then started studying for a PhD in the Immunobiology Laboratory in IBMM where she had already done her final year project. Under the supervision of Fabienne Andris, she studied the mechanisms which allow the immune system to adapt its response to the type of pathogen invading the organism. «Immunology fascinates me by its complexity and essential role, defending man, and by its frailty – if it's badly regulated, our immune system can attack our own cells!» In December 2010, at 35, Alice Mayer got her PhD at IBMM.

When she was 28, Alice Mayer therefore gave herself over to her first passion. She enrolled for a bachelor's in medical biology at the University of Mons. She liked the studies and followed on with an inter-university (ULB-UMons) master's in molecular biology organised on the Biopark. She did brilliantly. «I started studying at 28 and knew I had to do really well so that my age wouldn't be a handicap on my CV» she said. Alice Mayer then started studying for a PhD in the Immunobiology Laboratory in IBMM where she had already done her final year project. Under the supervision of Fabienne Andris, she studied the mechanisms which allow the immune system to adapt its response to the type of pathogen invading the organism. «Immunology fascinates me by its complexity and essential role, defending man, and by its frailty – if it's badly regulated, our immune system can attack our own cells!» In December 2010, at 35, Alice Mayer got her PhD at IBMM.

She's still working on dendritic cells and, though her post-doc takes up a lot of her time, she's also taken up the accordion again. «There's a pub in Oxford where musicians go on Sunday nights. There I met a musician from Galicia whose girlfriend is doing a PhD in Galician literature at Oxford. He plays the bagpipes, I play the accordion, and we play traditional music together for fun», confided Alice Mayer.

The researcher would like to stay a few more months in the Oxford laboratory, to give herself time to publish a paper. And then what? She doesn't know, she prefers to take things as they come. «Today I've found a good balance between my principal professional activity, research, looking for something no-one else has ever thought about and which could in the end help improve human health, and music, which is a hobby and a real breath of fresh air». Both research and music involve a lot of meticulous work, you have to listen, be creative. I couldn't imagine my life without both of them».