



agya

ARAB-GERMAN
YOUNG ACADEMY
OF SCIENCES AND
HUMANITIES

Women in the field

Professional experiences from Algeria





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Halima Benbouza

Biotechnology

Doctorate in Plant Breeding and Genetics -
Gembloux Agro-Bio Tech, University of Liege -
Belgium

**Research Director – National Council for
Scientific Research and Technologies -Algeria**

Professor – University of Batna 1



1. Could you tell us about your personal journey?

I am originally from Aurès region, Batna city, but my family has always traveled across the country because of the work of my father, which allowed me to discover many cities and traditions of different parts of the country. I am the oldest child and have four sisters and two brothers. My parents did not go to the university because of the context of the French colonization at that time; but they studied to the secondary school level.

My primary and secondary education was between Ouargla and Batna cities, between 1977-1986, then I went to the Batna University for higher education. I wanted first to do medical studies, but I changed my mind and choose agronomic sciences. In the eighties and nineties, it was not a discipline that attracted a lot of young women, at least in my region, and only a few girls were interested to study such disciplines.

I worked hard which allowed me to be awarded with 2 fellowships for post-graduate studies in Belgium at Gembloux Agro-Biotech, Liège University, and the Prize Eric Daugimont et Dominique Van der Rest (in 2000). I received my doctorate of sciences in 2004 studying Plant Breeding and Genetics and was offered a postdoctoral position to work on a collaborative project with the Agricultural Research Service, United States Department of Agriculture in Stoneville, Mississippi, with Dr. Jodi Scheffler's team.

I came back to Algeria in 2007 and got a lecturer position at the University Batna -1, at the Institute of Veterinary Sciences and Agronomic Sciences. Then, from 2010 to 2016, I served as inaugural Director of the Biotechnology Research Center (CRBt) in Constantine, appointed by the Ministry of Higher Education and Scientific Research. I was also appointed as President of the Intersectoral Commission of Health and Life Sciences and a member of the Algerian National Council for Research Evaluation.

I got many honors from Algerian and international institutions and was appointed representative of Algeria to UNESCO's Intergovernmental Commission of Bioethics (IGCB).

Since 2015, I serve as member of the Executive Committee, Pan African Congress of Ethics and Bioethics (COPAB). In 2020, I was selected to be a member of the National Commission of Ethics and Deontology at the Ministry of Higher Education and National Research. In the same year, I have contributed as an expert in a foresight exercise, Dual-Use/concern, under the Health Foresight Function, within the Research for Health department of the World Health Organization (WHO).

In 2022, I was appointed as Director at the National Council for Scientific Research and Technologies (NCSRT), a constitution institution under the umbrella of the President of Algeria. I still consult for a number of international organizations on biosafety and biosecurity education and serve as research reviewer on various international scientific panels.

2. What drew you to your field, and how did it lead to where you are today?

I was always fascinated by genetics, as understanding genes give you the possibility to modify plants characters and studying agronomic sciences was way to follow my passion for genetics, plant genetics, with the perspective of creating new plants traits and new cultivars for the benefit of the country.

When doing my engineer thesis, I read many books, some were sent to me from professors outside Algeria which whom I corresponded like Pr Guy Mergeai, former PhD supervisor (Belgium). This last one helped and hosted me in his lab.

Working hard on a research project that request many skills in different disciplines with a team in a good environment, where you have the freedom, support and means to pursue your ideas, helped me to achieve what I have planned many years ago before traveling. Having the opportunity to work and collaborate with other research teams in other countries, mainly US, boosted strongly my knowledge and other scientific and managerial skills.

Another key element in my career development, other than a researcher, is accepting new and big challenges. In fact, I had a great opportunity to show what I was capable of, in 2010, the Ministry of Higher Education and Scientific Research gave the mission to launch and set up the first Biotechnology Research Center (CRBt) in Constantine. That was an exciting and hard job but that contributed to acquire new skills requested for other positions and strategic tasks that I had at national and international levels.

3. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

For a young woman, coming from Batna city and during the nineties, a critical period of terrorism, having the ambition to study abroad was not a common thing, especially if you do not have family or relatives living abroad. I did not have any objection from my parents although it was not a thing accepted by the local society (particularly in inland cities). Starting a new life in a new country where you don't know any one is always quite hard. Some minor difficulties like the country culture, society life style, customs and traditions, etc. were different but it took me few months to adapt.

When I started my post graduate studies in Belgium, one of the most important barriers was the study languages, French and English, as well as learning in deep some disciplines e.g., plant genetics and selection, chemistry, statistics, biotech, I was lucky to have encouragements at each step of my journey. The family support mainly my parents' encouragements was a substantial driver for the success. For my mother, studying was a way to get independence toward the society and to succeed in life.

In the laboratory, we were, at that time, only 3 women and I have faced some gender discrimination behavior, from few persons, but they didn't see my strong willing and commitment to perform my post graduate studies. Fortunately, I had support of Pr Guy Mergeai, my supervisor, who solved all the issues and I continued my PhD and post-doc in quite good conditions.

I had the support and encouragements of many professors, administrative staff, researchers, as well as some of Belgian citizens that, after many years, became second families for me and I still have contact and visit them when it's possible. I created my own social network through activities outside the university (volunteering in Gembloux Oxfam stores, taking care of abandoned animals...).

Finally, with the support of many people, even those on social networks, including those I don't know, and international recognition, it was helpful to be able to move forward and boost equity mainly when certain constraints, from different sources, and some unethical and unprofessional behaviors in some workplaces to try to shatter you and to stop your career development!

In addition, to what I mentioned before, and mainly in Constantine, I had support of the Ministry of Higher Education, particularly from the general director of scientific research general direction when I was the director of the National Research Center of Biotechnology (6 years). The Wali, some rectors of universities, the researchers and staff, and many people working at state local administrative in Constantine also supported me.

It is important to understand how to get and sustain the buy-in of people and other stakeholders involved in scientific research, to take time to explain your vision and the

scientific research objectives, the outcomes and its impact on daily life, the city as well as the country. One should also have the right behavior and be faithful to his word and apply to itself what we require from others (like working hard in transparency and equity and being accountable).

4. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

I cannot say a lot about the Arab world, because I did not collaborate with Arab teams. I have, however, participated in workshops and conferences and international academies and I have noticed, many times, that an idea expressed from a woman based in Algeria (or any other Arab country) is not well accepted, unlike when it is expressed by a man or by a woman scientist based in Europe or the US! That been said, I knew high outstanding scientists from the Arab world that were correct and respectful and very supportive to women's initiatives and ideas. The prejudice towards women's ideas or initiatives is not specific to the Arab world. It exists even in Europe and the US; the difference is that this behavior is more tolerated in the MENA region. We need more woman involved in science and in high level positions, trust and cooperation to change this situation.

5. What do you consider your key strengths that helped you develop professionally?

To develop professionally, you need to have a strong personality, a strong will and be flexible, to be courageous and never give up, not be afraid of trying, facing challenges and failing in some experiences. Because failure is not an issue but an experience from which we can learn a lot of new things. It's of utmost importance to have a vision and to define your objectives and know what you want to do of your life (at least when you got your baccalaureate). You need also to work hard, be a team player and develop soft skills.

That been said, external elements are important. I had the chance to go abroad and to have a supporting family. I also had a fair head of institution and a positive work environment. It is difficult for anyone, and particularly for a woman, to work and progress without these two key factors.

6. What are your proudest accomplishments in your career and life?

I am proud of what I have accomplished abroad (my research results and impact, my distinctions and awards). I am so proud to had come back to my country and had the chance to launch and set up the first national research center for biotechnology. At that time, this discipline wasn't taught in Algeria and was at its infancy stage, that was an amazing and very exciting experience. In fact, the CRBt was a newly founded research center with young staff and researchers without any experience, but I was extremely pleased to have had the opportunity to work

with them and gave them the chance to trust their self's and develop many of their skills.

It was an outstanding accomplishment to initiate many research projects on different topics at national level, as well as partnerships with knowledgeable international institutions e.g., US-National Academies of Sciences, Sandia National Laboratories. I am appreciative that I had the honor and opportunity to work with some UN-organizations e.g., WHO, and have been chosen, by many international scientific organizations, to represent Africa and the MENA region in many international scientific networks (DSI-Network, COPAB). These examples seem to be small things for academics working abroad, but in Algeria, it is something you can be proud of.

On the personal level, I am proud that after all this time, and despite difficulties and obstacles, I still have the same strong will to do better to promote responsible conduct of scientific research and innovation in Algeria as well as research integrity values.

7. If you could go back to the past, would you make the same choices? What should young women in the Arab world know about professional success and career development?

I do not regret any of my choices. I am pretty sure that I would not have a good scientific career if I did not go abroad to study. I do not either regret coming back to my country, I only feel, sometimes, a little bit sad that I did not find the best environment to progress in my

career as researcher. I wish I had a more powerful position that allow me to create a good workplace and environment for young researchers so they can realize what I wasn't able to perform in Algeria. This was my first motivation at CRBt and is still one of my motivation at the National Council of Scientific Research and Technologies.

Young woman in the Arab world should know that they have the right and the possibility to develop their professional careers like other women elsewhere in the world. When I talk to students, most of them think that people from small towns are at a disadvantage compared to others in big cities. Also, others think, unfortunately, that you cannot succeed unless your family has an academic background or is rich. Nevertheless, it is not really important from where you are to pursue post-graduate studies, if you have the will and a strong personality, you work hard, define your objectives, believe in your competences and take opportunities.

We have the duty as seniors to raise awareness among youth, mainly girls and young woman, that they must believe in themselves and they can succeed. We should develop mentorship programs to help them to depict their professional career plan and know what kind of research to do, how to do it, how to find fellowships, post-doc opportunities after PhD in their countries and abroad, internship, create a startup.... etc.

8. Do you think your path is reproducible today?

Yes, we can do the same thing today and even better. However, as there are more opportunities to study abroad (e.g., more fellowships), it became difficult to find a similar path maybe because the motivation is different. It seems that students do not have the same passion and objectives that I and my generation had a decade ago –we worked with limited means. Also, we should keep in mind that there are other key factors that are independent from the environment: your objectives, thinking process, your ideas structure, your strategy, your readings...

In life sciences, it is true that the ecosystem of research is somehow flawed. After 2-3 years, you lose motivation to continue because mostly everything is against your efforts (administration, environment, lack of recognition as a scientist). In the past, I worked hard but I had the chance to meet people that helped me to emerge. I had also the chance to get an international support without which I do not think people here would have fully recognized my competencies and achievements!

Abroad, scientists have an excellent research environment; they only need to work and do research. They have also so many great opportunities to acquire new skills and master new technologies at research laboratories.

9. What have been your female role models? In Algeria or elsewhere?

When I was studying, I did not have Algerian female academic models. My mother was my

model. She knew what she wanted and planned for it, she was devoted to her family and her children's success. There are also female heroes of the war of independence who have been models for my generation. Moreover, when I went abroad, I had many female academic models; one of them was Dr. Jodi Scheffler (ARS-USDA).

There are many women in sciences that are resilient despite bad working conditions and environment. It is not easy for a married woman to have a high-level position in Algeria without an open-minded husband. Most of the time, and at early stages of careers, woman have to choose between family and professional career development because it is quite challenging if you don't have any support. This is why I consider that it is a mistake to compare female scientist based in Algeria with scientists working abroad in Europe and the US. The environment is quite different; thus, obviously, the outcomes cannot be the same.

10. Do you consider yourself as a female role model in your discipline and beyond?

I just consider myself a woman that has done tremendous personal sacrifices and, modestly, have achieved a lot of things despite many difficulties and obstacles that she has faced at each step of her life and career. A hard worker with a strong personality and a passion for scientific research.

Fatima Zohra Benhamida

Computer Sciences

PhD in Computer sciences – ESI - Algiers

Assistant Professor - Higher National School of Computer Sciences – Algiers (ESI)



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I grew up in a little city in the south of Algeria called Hassi Messaoud. I have a technical background as I pursued my engineer degree as a computer scientist. After that, I did a PhD at the Higher National School of Computer Sciences (ESI) in Algiers. Then, I worked for 2 and half years as an IT Engineer in an Algerian company. After my PhD, I enrolled for a position of teacher-researcher (assistant professor) at the ESI.

When I was in high school, I loved everything linked to STEM mainly mathematics and physics and life sciences. I landed in computer sciences by accident because in our little town, there was one of my brothers' friends who was studying at the ESI and I wanted to know what it is about. He told me they do a lot of math and many algorithms, so I said this is the thing I need to do. When I went at the ESI and discovered the

algorithms, the logical thinking, the critical thinking behind everything related to computer sciences, I liked it more. Therefore, I started with my engineering diploma but when I went to the working field, I found it was not enough for me so I went back to continue scientific research and become an assistant professor. So, what drew me to my field was first my passion for the STEM field and second my curiosity for new things and new fields, the need of skills like critical thinking and logical thinking and making projects.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

The main obstacle was the fact that being a woman willing to fly in a STEM field you feel people do not believe that it's made for women or for girls. Being a bright engineer trying to excel in my work as a teacher, as an engineer and as a student, wasn't that easy to be accepted by people. Another obstacle is

that people and society doesn't really like when you say that you want to be an excellent woman in STEM and in computer sciences. They think it is better to be in other fields, to be a physician but not a computer scientist.

I faced all this with my perseverance. I just believed in what I wanted to do! I didn't get any negative impact from what I heard or what I could have as obstacles. If I see that people just refuse my ideas because I am a woman, I insist, I change the way of suggesting it. I will also don't hesitate getting into new opportunities. I will not say, as most of the women say, this is a man thing, this is a man job. Since I have the competencies, the skills, and the background, I believe in myself and give it a try.

Fortunately, I had great support from my family and my husband. My parents gave me the absolute choice to select whatever I need to do at the university without even being influenced by the society. My husband was a great support for me, both physically and emotionally, saying that I can do it and helping at a daily basis. The support of my family was big enough not to be impacted by the obstacles of the environment.

Even if most women feel like their ideas are rejected and they cannot thrive in their professional field or get promotions, there are always one to three persons in the company that will help and believe in their thoughts and skills. To my personal experience, I always be trusted by my mentor, director and PhD

advisor. He even suggested for me new projects that I wouldn't even dare asking or submitting or applying to. His trust made me finally realize that I'm capable and can be at the same level of my male colleagues. I also have a female colleague who was a role model for me. I saw how she gained confidence and succeeded on her professional career path. She showed me what to do and gave me some responsibilities which make me scale up with new skills and new roles. That being said these supporting people don't represent the whole environment, so we need to find the right balance between the people that made obstacles to our career path, and the ones that support us and want to lift you up.

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

I think it is not more difficult in the Arab world than other places. I was surprised when I went to the Silicon Valley and heard my mentors and people working there suffering from stereotypes about women not being able to do mathematics or computer science or many fields, not being in the right place, not having the skills or the ability to be in management position. I was surprised to see these stereotypes still existing in the US in the heart of the Silicon Valley. In the Arab world, what is specific is that tradition and some believes and wrong interpretation of religion, make some people reject women in this kind of fields.

4. What do you consider your key strengths that helped you develop professionally?

My first strength actually is being a learner. I always look for new skills, new information, I love reading and learning. So, every time I have a new role which requires new skills, I just go for it, learn and try. The second strength is being a challenger. If I have something that just looks hard to achieve, I will see it as a challenge and see how to achieve it with success. The other strength is perseverance. When I try new things and challenge new ideas, I keep going even if I fail many times. Perseverance also helps to ignore negative messages and people.

5. What are your proudest accomplishments in your career and life?

Having my PhD degree was not that easy because research funding in Algeria was not that good and also because at that time I had to manage between my job, teaching and family duties especially when I had my kid in the last year of the PhD. It shows that every woman is able to do all the jobs she thinks she needs to do, in addition of what she wants to do. For me, I was motivated to get my PhD diploma whatever it takes so I worked hard, asked people for help to get access to resources that were not available in my lab and university and I even traveled to get experience abroad. I kept persevering to achieve my goals so this experience is for me the illustration of how perseverance and motivation can lead to good achievements.

6. If you could go back to the past, would you make the same choices?

I never regret the past even the bad experiences, I consider them as good learnings for career path. When we choose something that is not suitable for us, we will discover this over time and change the path. It is not meant to select your career path just after high school and keep on the same path for the rest of your life. People grow up, discover new things, change their passion and motivation, so they need to be flexible and being able to switch from a professional field to another, or from a technical role to a managerial one, etc. I feel privileged to be guided by Allah to the right choices for me and I always pray to be well guided. I also had the chance to have the support of my family when I choose not to pick medical studies even if I was the best candidate in town and traditionally the best student was expected to be the physician of this town. At the time, I choose computer sciences it wasn't rated as it is now, so I feel privileged that I was attracted by a field that is booming and offers many opportunities. To sum up, people have to believe in their choices, try to find a piece of advice from the surrounding and never regret the past. If they go through a bad experience, they just need to take it as a good learning experience and keep moving forward.

7. Do you think your path is reproducible today? What should young women in the Arab world know about professional success and career development?

I think that any path can be unique and reproducible at the same time since you give the same factors, the same elements that power your growth. I'm speaking about perseverance, challenging, learning more, being motivated and not impacted by stereotypes and negative thoughts. These allow anyone to get from a bad position to a good career path and a changing role that impact the person -let's say that woman-, personally, professionally, and also impact her surrounding, the society, and even the community at a bigger level.

8. What have been your female role models? In Algeria or elsewhere?

One of my main mentors that I mostly observed before being my research laboratory director was my teacher during the graduation for the engineering studies and my PhD studies: Karima Benatchba. She is the model of the Iron woman that proved she can have a great role and position at the institution. She was the director of an important and productive research laboratory, and also was running many projects (European projects, Maghrebian projects, etc.).

She trusted me by giving more high-challenging roles in the laboratory and also in her research projects. She mentored me to gain some skills and I was just focusing on how she was so confident and how she was working hard. She didn't fear to express her ideas, to explain and convince people by ignoring the fact of being a female. My mum also made a great role in my life since she was

a primary school teacher, and too little, I saw how she could have this successful life balancing between her family, the social life, and her professional life. I was so amazed how she managed to raise five kids and at the same time to have a very important role at school, being moving forward, being bold and facing all obstacles a successful woman could have.

I had also many mentors at the Silicon Valley where I worked in a very international environment. During my research project, I traveled and worked with some female researchers that inspired me a lot but for me a complete role model is the one that live in the same environment as me this is why I prefer highlighting more the Algerian women.

9. Do you consider yourself as a female role model in your discipline and beyond?

I always hear from the others that they consider me as a role model, especially coming from a little city in the south of Algeria, but to be honest I feel I am the standard of what a woman should be. It's not a fight, it's just bringing back the standard to its real definition which means equity and freedom for the women to make their choices. Our religion and our general rules say that we should be giving the same opportunities to men and women. This is what I did and the support I had, came from people that really understand that this is what should be really done.

I've been inspired by many women and I keep trying to inspire all other people around me even young people, females and males, but especially girls. I guess it is the role of every human being on this earth to keep being a helpful person to the society, having a positive

footprint, and trying to guide people to the right path.



Imene Ferhat

Petroleum Industry

Master in Geology - University USTHB (Algeria)

Master in Geomechanics - Austin University of Texas (USA)

MBA - Audencia Business School

Business development manager - GOWell International



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

From my young age, I was fascinated by Jurassic Park (the movie), my parents bought for me some books talking about dinosaurs and archeology but it was not enough for me, I was always searching for more information. In my family, my aunt is a geophysicist certified from USTHB in 1994, I was 5 years old when I went to her thesis presentation and was fascinated by the rocks, the wells, and the engineers. I decided to pursue my aunt steps especially that she worked for a big company and travelled around the world. When I got my high school degree, I choose earth science even if I've got enough credit to do medicine or pharmacy (my parents' wishes). I promised them that I will become a doctor but in earth sciences and the story began.

The message I would share here is when you are passionate by something you will always succeed. I was thrilled to discover the earth's

secrets and to know the why and what of every single question in my small head. After a Stanford study published recently, a matrix called LoveCanDo has been developed to show the progress of passionate people and their amazing achievements.

For me studying geology was about to understand the big challenges of our existence and I got most of the answers, I choose then to study petroleum geology to participate in the economic growth of my country. After the university, I didn't follow the destiny and I forced mine to pursue me, so I started my career with an American company who offered me a 2 years master in Texas. I came back to Algeria to work with the same company and was kept motivated by my passion, delivering a very good job and playing an important role in the geosciences department where I was responsible of borehole images and geomechanics studies. My ambition and dreams conducted me to try a new challenge, so I moved to the Middle East searching for a new beginning and I

founded the geosciences academy. A training school for professionals and fresh graduated. Then the COVID-19 crisis came.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I always have been special and unique in my choices, lifestyle, childhood, and study; everything I did and do is different and somewhere special.

I lost my father when I was 8 months only and I lived with my grandparents who took care of me until I got married in 2015.

I was special because I called my grandfather Dad, he was older than my friend's parents, but I was very proud of him, this taxi driver who gave me all what he can and pushed me to study and be exceptional.

When I got the baccalaureate, he respected my choice of studying geology even if he wanted me to be a doctor, I promised him to become a doctor in geology. He never stopped me to travel alone in Algeria or abroad and let me go to the US for 2 years, he said: My Daughter, this is your chance and your dream, take it and move on, I am proud of you, God bless you.

Those words are still in my ears, built confidence, and an open mind culture respecting other's choice, genders differences, equality, liberty, and dream realization.

The other man making me feel special is my husband, he light up my life and pushed me up for every small or big step, he believes in me as a woman, a wife, a mother, a manager and a leader, simplifying the daily life's tasks like taking care of our children when I am busy, and also respecting my decisions, opinions and vision, proposing always to try new professional challenges, read a new book or apply for a new training. He is the model of the modern man giving all the support to the woman he loves; he is my best friend and my love.

What makes my journey unique, is my family; Issued from an eastern culture where men impact 99% the decision of women and are their tutors for lifetime, I got a big chance to get an instructed family and being in the 1% normal people, my family's culture and environment of tolerance allowed me to build my journey step by step with confidence and respect making me a unique woman.

Yet, we are facing a lot of challenges everywhere, at home, with the society and at work, but the secret is to persist and resist to all those challenges, is to be different and to make the others accepting your difference of being a woman leader or a woman scientist or a woman manager and CEO. One of the biggest challenges I faced was gender discrimination, when someone tells you that your place is in the kitchen, and you reply by winning the award of the scientist of the year of the MENA region from SPE (Society of Petroleum Engineers).

In a concurrent work market, where everyday people are fired from their jobs it's hard to find support, but it's not impossible. In my case, I got the chance to work with professional people who value the human and respect the others. I always ask and never get ashamed if I don't have the answer or I don't know the information. For me, life is an open book where every single day is a new opportunity to learn a new skill.

Before being sad because your surrounding environment is not helping you, ask yourself am I visible, do they know me, do they know what I do. If no, start by working on yourself first and develop your self-confidence. One of my mentors said: if you don't ask, you don't have.

3. What do you consider your key strengths that helped you develop professionally?

Recently while in the US, I have participated in a survey workshop called Gallup; the results were amazing they give me my 5 top strengths. I will unveil 2 for you: I am a good learner and a great achiever.

In 2021, I launched via my LinkedIn profile the 100 books challenge. It was about to read 100 books in different formats (audiobooks, pdf paper books...) in a record of 1 year. I ended the year with 104 books, I highlight that I am a full-time mother of 2 little boys also and this experience was a life transforming and a new eye opening for me, my behaviors, my vocabulary, my achievements.

Reading so many books was not just for fun, I had a vision transformed to a mission to achieve the craziest things possible and grow my ambition and realization.

4. What are your proudest accomplishments in your career and life?

During my career, I got awarded in several events, participated in conferences, wrote articles... but the proudest think is playing a role in my country's economy even if this role is small and singular, but as an engineer, I contributed to something in this beautiful country. The identity and belongingness always make sense to what you do and why you are doing it.

For my personal life, I consider my kids as my biggest achievement because it's a huge responsibility, and I consider it as building the human, building the tomorrow's man that need to have all the values of the past and the opening of the future.

5. If you could go back to the past, would you make the same choices?

I will never change any single mistake or success in my life. It built my personality and the person I am today and thanks to the young ambitious and crazy woman I was in the last 10 years who drives me to my achievements.

I consider failing and weaknesses as part of the game, but try to never attend the game over level, always keep hoping for a better day and for so keep working and working, the good job always pays.

6. Do you think your path is reproducible today? What should young women in the Arab world know about professional success and career development?

Yes, I definitely think that my path is reproducible with a better performance, as by the development of new technologies, AI, machine learning, coding, physical computing can be all associated with any speciality and innovate it. It's opening the door for new challenges and also hundreds of new opportunities. As women in STEM, we need always to keep an eye on the huge changes, stay updated, participate in the conferences, and workshops and keep working to improve the skills.

7. What have been your female role models? In Algeria or elsewhere?

There are a lot of inspiring women that impacted me in my family circle, my society and abroad. The most influencing one is my grandmother: she started learning Arabic at the age of 65 years and now she is 75, she wrote 4 Quran by hand and published 11 novels for kids ... she is my role model and source of inspiration for me and for all the family.

I also consider Salima Souakri as an inspiring woman who succeed in a field normally designed for men and deserved her place with respect and courage. She looks like many of

the girls in Algeria and shares a message that you also can do it. I read her book: Black belt, white heart, it was full of good vibes, tips and emotions.

Abroad: I consider Oprah and Michelle Obama as inspiring leaders of persistence and perseverance, their lives weren't easy but they succeed and once again nothing is impossible, from my grandma to Salima Souakri to Michelle Obama all have the same ambitions and the same lessons to share: keep working to succeed and nothing is impossible, if we want it we will do it inshallah.

8. Do you consider yourself as a female role model in your discipline and beyond?

For me role model doesn't exist, because if we consider someone as a role model, we consider that this person doesn't make mistakes, or failures. But I do support the idea of inspiration and empowering others.

So, I consider myself as an inspiring person with a mission to empower others, especially girls and women in STEM and other fields. Sharing knowledge, information, tips and training makes me feel that I am serving my women's community, giving them confidence and guidelines to follow their dreams and realize them.

Abla Rouag (née Djenidi)

Psychology

State doctorate in Psychology - University
Mentouri – Constantine

Professor – Head of laboratory

**University Constantine 2 – Abdelhamid
Mehri**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

As a teacher's daughter with a baccalaureate in mathematics, I was destined for an engineering career. However, personal circumstances forced me to abandon the petrochemical engineering course I had started in favour of an "easy" specialisation.

In fact, I wanted to study Spanish after abandoning my engineering studies. Since there was no such thing in Constantine, I chose psychology by default and since you never judge a book by its cover, I quickly got involved in the discipline.

I obtained my diploma in psychology, then enrolled for a magister's degree and started teaching immediately. I defended my Magister's thesis in 1986. Then my doctoral thesis in 1996. Married, mother of two children, I began to progress rapidly in the field of research and became one of the first doctors in psychology, the first female doctor in my faculty and later the first female

professor. Due to compelling circumstances, I began to set up magister's programmes, first in child psychopathology, then in trauma psychology. I was naturally led to create a research laboratory in 2001 to host this training, then a journal to publish our work.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I have always been supported by my father, encouraged by my older brother, supported by my husband who is also my colleague.

On the other hand, I got little support from the institution. I have sometimes received support from some people who represent the institution. I would like to take this opportunity to pay tribute to my colleague who was vice-rector of pedagogy and with whom we formed a good team. I have found support from young colleagues during their training and after graduation. We have done many things together: research projects,

conferences, collective works, etc. May they find expressions of my deep gratitude.

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

I don't know if it's the same elsewhere, but there are a lot of barriers at university level here. Women's skills are rarely recognised and valued. We encountered a lot of sexism, misogyny, i.e. a form of "hogra" (contempt), and sometimes even certain forms of harassment. I was told by an administrator at the opening of my first magister's course to "stay at home like all the other women".

4. What do you consider your key strengths that helped you develop professionally?

The love of work, perseverance, good organisation and, of course, the support of my husband.

5. What are your proudest accomplishments in your career and life?

My children. I hope I have instilled in them a love of hard work.

I really enjoyed working outside the university, with international organisations such as (UNICEF, UNDP, etc.), which opened up specific avenues for research procedures where we experience reality and where we can offer direct practical answers.

6. If you could go back to the past, would you make the same choices?

I think I would make the same decisions. I have no regrets about the career path I have taken.

7. Do you think your path is reproducible today?

Today, people have fewer demands on themselves and others. Professional values have changed but many young women are certainly able to do quite well.

8. What have been your female role models? In Algeria or elsewhere?

I had great respect for Zahia Mentouri and the seriousness with which she approached her work.

In psychology, I've admired Samia Benouniche, who was the first to address the cultural problems of investigative tools and psychological assessment, and above all, she was the first to look for ways to overcome this major obstacle.

9. Do you consider yourself as a female role model in your discipline and beyond?

I do not look forward to being a role model, either in my discipline or in my life. But I would like to have given my students a sense of rigour. I am always proud to hear what is said about me in other universities: "The lecturers (or doctoral students) who have been trained by Mrs Rouag can only be serious and competent". It really is a great pleasure for me to hear this.

Bahia Bencheikh-El-Fegoun

Cinema

State engineer in Geology – University
Mentouri - Constantine

Film-maker



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I come from a middle-class background. My mother taught economics at the university, my father worked as a civil servant, such intellectual parents who were politically committed (in the vanguard socialist party - PAGES). We are a family of 4 children, of whom I am the second. I had a balanced childhood and a good school career. I spent most of my time reading. As a teenager, I spent a lot of time with books.

I came to cinema by chance, although in retrospect I found that what I had been looking for as a form of social engagement - in different "environments" and/or "sectors" - during my university years could be expressed in documentary films.

Days went by and things just happened "naturally". I was a production assistant, so I learnt my job on the job, then I took several

training courses in directing, writing, editing and producing.

As each film is unique, so is the way it is made. There is no set pattern or material. The stages of making a film are the same, but the paths to their realisation are different.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

The biggest obstacle for me was personal or psychological in a way. It was the idea that I was not in the place where I was supposed to be. Later I realised that what I felt or had as an image of myself is called "the impostor syndrome" and that many women experience it.

There are also the difficulties inherent in Algerian cultural policy, including production, film distribution, etc., which affect a journey without constituting a serious obstacle.

In terms of support, yes, I had some from my husband, first of all, both moral and financial. Also from my family and friends.

At the level of the institution: the Ministry of Culture, it depends on the tendency of the moment and, above all, on the state budget. At the moment, the film support fund has been dissolved, so we are waiting for proposals for other forms of film production. But the sector has been in crisis for several years, and unfortunately there is no film production, there are only produced films.

As far as the corporation is concerned, I think I have to speak of solidarity rather than support, because it is a question of material support (loan of equipment, work for a relatively low salary, technical assistance, etc.).

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

This is always a difficult question to answer. I do not know facts from elsewhere (neither from the Arab world nor from the Western world). I only know those from my own country, related to society, culture, education and religion. The most difficult thing is to get out of the comfort zone and go to geographical places, different environments and deal with issues that are far from my daily routine, from what I know and master.

However, the reality on the ground is that I have been able to travel, to cross the country by car, albeit with a feeling of insecurity, which turned out to be a biased feeling, since I have been able to make my films in many

cities, including (Sétif, Algiers, Constantine, Tebessa, Oran, Skikda, El Oued, etc.).

I can also say that, contrary to what was thought, my status as a woman opened doors for me, especially during the production of my second feature film when I was pregnant. I am fortunate to have always enjoyed great respect and to have never been harassed or denigrated, which I think is quite common.

4. What do you consider your key strengths that helped you develop professionally?

My first asset is my perseverance. I think I can say that I have not given up in spite of all the difficulties: financial, administrative, family (when you are a mother, it is very difficult to be absent for several weeks).

Second asset: I would say my creativity. In an environment where funding is very limited, I have always managed to find different ways of obtaining financial support.

Third asset: I would say my social network. I think it is the most valuable, because human support remains the greatest asset of all. Cinema is teamwork, you cannot produce or direct a film alone.

5. What are your proudest accomplishments in your career and life?

My films.

My marriage.

My children's education.

6. If you could go back to the past, would you make the same choices? What should young women in the Arab world know

about professional success and career development?

Yes, I would make the same choices, maybe with more courage. I think the biggest need is to develop self-confidence. Training is essential. Support between women is also important (during the making of my last film and those to follow, it seems essential to me to work - as much as possible - with teams of women). Making technicians work seems essential, and as women, we must realise that our strength will also come from what we build among ourselves and for ourselves.

7. Do you think your path is reproducible today?

Yes! Definitely.

8. Do you consider yourself as a female role model in your field and beyond?

I try to live my life in line with my professional choices:

What kind of role model should I be on a daily basis?

What kind of mother should I be?

What kind of female role model should I pass on to others?

For me, it is about creating a living cinema, a platform to share experiences, vivid experiences and memories. But above all, to achieve coherence: the production of my cinema has acted out the themes it carries. My approach, my choice of themes, my choice of characters, have been modest, and have been directed towards the objectives of all my work today.

The idea is not just to create a space for speech, or to show characters, or even to tell stories, but to make a gesture that could be radical: to make women's films that deal with eminently feminist issues, with an all-female technical team. Today, I think it is essential to work with technicians and artists in order to bring women's skills to the fore and to update them.

Noura Mansouri

Automation

Doctorate Eng. - University of Compiègne
(France)

State doctorate - University Mentouri
Constantine

**Professor - University Mentouri
Constantine**

**Member of the National Council for
Scientific Research and Technologies -
Algeria**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

My personal and family history is similar to that of many women of my generation, who experienced all the enthusiasm of a young country under construction, where education for all was a priority, regardless of gender.

I received a traditional education from my parents and my family, and a lot of encouragement to study and move forward because, as they told us, studying is the most powerful weapon in life. Since my primary education, I have always preferred scientific subjects. It was natural for me to see myself moving towards a scientific or, more precisely, a technological career. After graduating from high school, my parents offered me to study medicine, which was the most prestigious profession at the time, along with law and pharmacy, but I refused and convinced them of my desire to enrol in the first year of the core curriculum in exact sciences with the aim of becoming an engineer. Afterwards, I

decided to graduate in electronics and then to continue with postgraduate studies in automation.

Electronics was a field of technology that would grow rapidly and gradually transform activities in all sectors, being at the heart of the digital revolution. As I was very interested in the development of technologies linked to digital technology, I naturally chose to specialise in automation for my postgraduate studies. An ever-evolving field that deals with the modelling and control of systems through the mastery of electronic and computer elements.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I had no problems as a woman. The problems I faced are the same for all people, men and women. I think what determines how others see us is competence and mastery of the basics of work, whether in administration,

with colleagues or with students. Personality also plays an important role in the quality of the relationship you can have with others. Although the profession is predominantly male, I am happy to have cordial relations with most of my colleagues. Of course, there are those with whom you do not get on, but this always remains within the bounds of respect.

It is rare to find a career path without many difficulties. Sometimes you work as hard as you can and get very little, while sometimes it comes easier and without much effort.

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

Women are omnipresent in the field of research, whether in Algeria or in any other Arab country. I believe that the obstacles that can hinder the performance and scientific development of these women are mainly the lack of conditions that allow them to reconcile work with the many responsibilities of family life.

4. What do you consider your key strengths that helped you develop professionally?

Competence, availability, perseverance and respect for others.

5. What are your proudest accomplishments in your career and life?

More generally, my involvement in the implementation of numerous projects related to my field, in my university (undergraduate and postgraduate training courses, research projects), as well as the creation of the Automatic and Robotics Research Laboratory.

There is also the feeling of satisfaction and pride when I see the students I have trained succeeding in their professional careers internationally and thanking me years later.

6. If you could go back to the past, would you make the same choices?

Of course! Yes.

7. Do you think your path is reproducible today? What should young women in the Arab world know about professional success and career development?

Certainly. I think it is easier now, with all the resources and fewer constraints.

Young women need to set realistic goals at every stage of their lives, but achieving them requires hard work, patience, listening to others and accepting to give more and receive less. They should also have ambitions commensurate with their abilities and avoid shortcuts.

8. What have been your female role models? In Algeria or elsewhere?

I did not have a particular role model in science because there were few female role models as scientists around me. Over the years, I imagined the role model I wanted to be.

Currently, many Algerian women scientists attend major universities and research centers abroad. Unfortunately, their paths are not sufficiently known to the general public to be considered as role models.

9. Do you consider yourself as a female role model in your discipline and beyond?

I do not claim to be such a person. I have built my career step by step in a technological specialty that is constantly evolving and I am very happy with it. I think that the answer to

this question can only come from the appreciation of those who have known you.



Anissa Belfetmi

Biochemistry- Biophysics

PhD in Biochemistry - Molecular Biology -
University Paris-Saclay (France)

**Post-doctoral researcher at Harvard Medical
School (USA)**

**Co-founder of Algerian Women in Sciences
(ALWIS)**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I identify myself as an explorer driven by a passion for discovery. I had a beautiful childhood in Algeria, and I lived there until the completion of my Bachelor's in Biochemistry at the University Badji Mokhtar Annaba in 2012. I pursued my studies in France at Sorbonne University, where I developed an interest in using NMR spectroscopy to understand infectious diseases. I thus did a Ph.D. thesis to investigate the functional, structural, and dynamic properties of the Human Immunodeficiency Virus Type I (HIV-1) nucleocapsid protein, under the supervision of Dr. Olivier Mauffret at the Ecole Normale Supérieure Paris-Saclay, in 2017. After completing my degree, I wanted to explore other infectious organisms and I joined the Leger-Abraham lab at Harvard Medical School (HMS), Microbiology Department, to study protein interactions within parasites. When the COVID-19

pandemic hit, I got an interest in studying human receptors. Combining my knowledge on viruses and parasites, both interact with host cell receptors at the infection stage and trigger series of cell signaling pathways and modulate immune response. Since host cell receptors are highly conserved within mammals, I believe their study is highly important to pathogen surveillance, pandemic prediction, diagnosis, and therapeutics. So, I transitioned to James Chou's lab at HMS, in the Biological Chemistry and Molecular Pharmacology Department, to study TNFRS receptors that play a crucial role in Immunology and autoimmune diseases. I am now a postdoctoral researcher in Gerhard Wagner lab at HMS, a pioneer in NMR spectroscopy and mRNA translation initiation. My focus is to reconstitute membrane proteins in different lipid environments to mimic the cell environment to study their structure and function.

I am also the founder of the Algerian Women in Science (ALWIS)¹ initiative that started with a group of friends in 2020, and became a massive community of women in STEM. The primary purpose of ALWIS is to provide online mentoring. We also host E-events, workshops, or discussion panels to give voices to successful Algerian women scientists. Our volunteers do fantastic work, and I am amazed by their talent and am learning a lot from them.

The stem of becoming a researcher came very early. I remember reading an old biology book, Biology Terminal D that belongs to my father during high school. The introduction to every chapter starts with discoveries and unresolved questions related to autoimmune and genetic diseases, for example. I checked online the status of these blind spots; they were resolved at my age. It felt like I had a trip in the past and looked with the perspective of someone there and back in the future. I realized how humanity could tackle challenges through science. I wanted to be part of this, being at the front line of improving patients' lives or curing diseases by becoming a researcher.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I moved forward to pursue my education in France to fulfill my goals, and I had amazing mentors in my Ph.D. lab. Back in Algeria, my family and my network have always been

supportive. However, the perspective of having a good career with a biology degree was sometimes undermined because of the lack of resources onsite. The difficulties and obstacles come from a lack of information and understanding of the system. It would help if you talked to the right people who give you honest feedback or learn things hard by experimenting. I believe that's one of the reasons that drove me to start the Algerian Women in Science initiative (ALWIS) and to create collegiality among our scientists.

That being said, I found there are more resources at Harvard than at any other institution I have been to before. For example, they have a postdoc office providing support and guidance for postdocs to transition into their career. There are a lot of courses we can take, either technical or professional development. The libraries are vibrant with manuscripts and books. I had a chance to meet experts and renowned international scientists. However, as a student in France, I had more frequent interaction with my mentors in the lab, which was a vast source of knowledge, and they fostered a great environment. I wish this were the same in Algeria. However, our universities have a massive lack of resources, and students feel lost. I believe getting online access to scientific publications, building proper mentoring, and providing career guidance would considerably help Algerian students.

¹ Algerian Women in Science :
<https://www.algerianwomeninscience.org/>

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

The Arab world is a vast region, and each country has its history, economy, and system, meaning political decisions impact the research environment. Based on my experience within ALWIS, I sometimes interact with young scientists from Turkey, Morocco, and Malaysia. They all reach out because they need the proper mentoring and have difficulty finding the right person in their network. I think this tells a lot about the importance of mentoring and how a mentee needs to feel safe and comfortable and identify with the person giving guidance. I also find resilience in philosophy, literature, and Art. I am personally very grateful to all the amazing mentors I have had in my life. Without their advice and cheering, maybe I would have given up.

4. What do you consider your key strengths that helped you develop professionally?

Being a good team player is key to success, and I enjoy working in a collaborative environment. It's essential to be confident in your knowledge, but I always stay open-minded to learn new things and hear insight from my peers. Of course, there's strength in individual work, and sometimes I need to focus. However, the best ideas come around a table, so good communication skills are essential.

5. What are your proudest accomplishments in your career and life?

I would say my supportive husband, a loving family, and daughter Kahina. I got pregnant during my 2nd postdoc, and surprisingly, I received many negative comments from a few scientists, especially women peers. For instance, I heard that my academic career was over and that it was time for me to enjoy my life; after all, I was no more competitive. It was hard to be bashed like that, making me greatly doubt. Thankfully, I got support from other mothers in STEM that helped me to prepare for motherhood and build a plan for maternity leave without hurting my project and career. It shows how women's solidarity is essential and emphasizes the barriers that women scientists face. Today, being a mother has made me stronger on different levels: I have better time management, build efficient strategies before executing an experiment, and am more focused during my time in the lab. I am also more prone to speak up and feel more confident to ask for credit for my work, and I think it's a strength that comes with motherhood.

6. If you could go back to the past, would you make the same choices?

I certainly made good and bad choices; after all, life is a succession of options, and it's crucial to assume the consequences of our decisions and acts. Of course, bad decisions can be fatal, so it's always good to be skeptical and careful. Whatever the reasons for choosing a field, lab, or project, you need to find indicators that will tell you they are the right one for you.

On a scientific level, I would have built a more substantial basis in mathematics very early.

Unfortunately, biology programs don't have a good curriculum for mathematics besides an introduction to statistics. However, when you reconstitute the biological system in vitro, you must also consider the cell or proteins in terms of geometry, distances, surface occupation, etc. There's also a misconception that you don't need to understand deeply the theory and how a machine works because we rely on the automatism, but how can we trust the data we generate if we don't understand the numbers that the device is using? Within ALWIS, we have a lot of interest in AI and ML from members, and I think this is very interesting. I would encourage working at the interface of different sciences because it is always stimulating to learn from different backgrounds and will help to get a stream of idea to develop or execute a project.

7. Do you think your path is reproducible today? What should young women in the Arab world know about professional success and career development?

It's reproducible as long as the person stays grounded. I have always been chasing mastery in my field and am still working on it. The ambition to build knowledge capital is an investment over the years and demands a lot of sacrifices. If anyone is sincere about what drives our intellectual passion and motivation, a realistic plan, patience, and sometimes courage are essential.

8. What have been your female role models? In Algeria or elsewhere?

Our society emphasizes women's role during the Algerian revolution, which is excellent because it shows an independent and courageous figure! I personally have always been intrigued by the matriarch and Berber queen Kahina. She was both a revolutionary and avant-gardist; for the record, I named my daughter after her. Unfortunately, in Algeria, we didn't grow up with Algerian women scientists as role models or at least the major figures were women from the West which makes it hard to identify to. However, I had a chance to meet a few of them belonging to my mother's generation, like Pr. Chafia Touil-Boukoffa, who's currently at USTHB University in Algiers.

Engaging in conversations between different ages is essential to hear their stories. For example, Pr. Touil-Boukoffa is among those trained abroad but decided to return to Algeria to bring their knowledge and contribute to building the country, which is not very common nowadays. Building a bridge between Algerian women scientists will give voices to successful ones and for sure will create role models.

9. Do you consider yourself as a female role model in your discipline and beyond?

I feel all women can be role models. I see my mother and grandmother as ones that inspired me with their strengths and morale. If someone wants to pick me as a role model, I will tell them dream big, work hard and never give up.

Ilhem Tir

Communication

Post- graduation Diploma in Chemistry -
University Mentouri Constantine

Journalist, Senior reporter

**Office manager at the National Daily « Le
Soir d’Algérie »**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

Born in Constantine, my life is divided between writing, family and friends. I am a mother of two children, a boy and a girl, with whom I am in grace. I had my baccalaureate in mathematics with honours. My dream was to become an astronaut or a pilot. It was an achievable dream after my brilliant school career. Ambitious, I wanted to attend the Tfraoui aeronautical school in Oran, which my parents refused to allow me to do, so I ended up enrolling at a university (without much satisfaction), but I had no choice, I chose a field that would not take up much of my time: exact sciences. However, after four years of study, I did not see myself in an ordinary or rather monotonous job. The graduate studies were for me the necessary background to realise my second dream, that of writing and participating in intellectual and liberal works.

With the opening up of the media sector at the beginning of the 1990s, in accordance with Law 90-07 of 3 April 1990 on information, I, like several other academics, wanted to accompany the "intellectual adventure" following a discussion with great journalists in Constantine: Mr Kamel Benmohamed and the late Mr Aziz Rahmani. After a written test, I was the only one selected among several literary candidates, despite my scientific background. That was in 1994. I joined the first regional newspaper "El Acil" during my last year at university. I discovered my passion for this free profession and decided to make it my career. But I also discovered a profession traditionally reserved for men, where women get very few jobs. The pressure is sometimes specific to gender, such as smear campaigns, sexual violence or threats against families.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

The choice of journalism was obvious to me, but not to my family and relatives, who rejected the idea because they wanted me to continue my university studies (magister and doctorate), since I had good results. At the time, we were living in the midst of a period of terrorism and the risk was doubled because intellectuals and journalists were being murdered. For two years, I was regularly threatened by telephone or in anonymous letters (...) I was told to leave my job and that if I did not, I would be responsible for the death of members of my family. The job required commitment, but also specific challenges and risks that I took in the course of my professional activity.

Under family pressure, I gave up work for six years to devote myself to family life as a mother. It was a difficult time in every way, because in 1996 I lost my brother, who was murdered by the savage horde of terrorists during his military service. Reconnecting with my passion, I decided to leave Constantine and settle in the capital, in one of the biggest national newsrooms, where I could make my mark and progress in the profession, surrounded by great figures of Algerian journalism. To be honest, I was lucky enough to be mentored by great journalists, without forgetting the great support I received from my late editor-in-chief, Mr Fouad Boughanem, who believed in me and helped me with all his heart. And because it was doubly difficult for a woman from the provinces, you had to work hard to make a place for yourself in the profession. I did not give up, I covered all the political and security issues, I joined the National Union of Algerian

Journalists (SNJ) and in 2005 I was elected secretary general of the Soir d'Algérie section. The first woman to hold this position, I was then elected national coordinator of women journalists in 2008. This position allowed me to establish contacts with the International Federation of Journalists in Brussels (IFJ), which entrusted me with the first national survey on the representation of women in the Algerian press. I travelled all over the country for this work and it was a great job that allowed me to meet passionate people.

Although the profession has become more feminised in recent years, it has long been masculine, especially in the 1990s and early 2000s. Many women choose to remain silent about the specific difficulties and risks they face in their work. Physical safety was a constant challenge for me and my colleagues in the early years.

My great support in my institution was my late editor Foued Boughanem, as well as the editorial directors and the editor-in-chief, who finally understood that there are no difficult or easy subjects for me. If there is a subject, I have to do my best to present it well. You should know that one of my assets is my scientific training, which allows me to write with coherence and rationality, according to all the testimonies. Although I did not have a degree in journalism, I was considered one of the best journalists in my newsroom. I had been assigned to the national section, which had previously been reserved for men.

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

In the Arab world, only a third of journalists with press cards are women. How can we explain that the process of feminisation of the journalism profession is so slow when for many years they have been in the majority in journalism training and among young people entering the profession? Many of them decide to leave the profession after a few years of practice because of the obstacles they encounter throughout their careers: difficult employment and working conditions, the managed organisation of newsrooms with assignments to certain sections or barriers to access to positions of responsibility, the complexity of reconciling private and professional life, and the harsh conditions of a journalistic world where acts of organisational violence are numerous. Gender stereotypes (e.g., regarding the expected skills of male and female journalists) still exist in newsrooms and influence the distribution of topics and the allocation of journalistic specialities. The massive arrival of women in newsrooms has set in motion a process of segregation that will continue as long as so-called women's newsrooms are reserved for them (society, health and culture sections). Female journalists are almost non-existent in positions of higher responsibility (editor-in-chief and publication director), according to the results of the study carried out by the Ministry of Communication in partnership with the UN of Women.

4. What do you consider your key strengths that helped you develop professionally?

My scientific background is my first asset, because as a scientist I am Cartesian in my

writing; my perseverance, my extensive address book, my contacts and my rigour. Then there is my commitment to gender issues and, above all, respect for my name. Since the beginning of my career, I have always signed my name and refused to use a pseudonym, even during the dark period of terrorism.

5. What are your proudest accomplishments in your career and life?

As far as my career is concerned, my first pride is that I have made a name for myself; even if people don't know me personally, they know my name. I am also proud to have been the first journalist to carry out the first national survey on gender issues for an international institution (the IFJ). I am also proud to have launched the first gender association in Algeria in 2013: The AJC (Association of Female Journalists of the Constantinois), of which I am the president. It is a space for exchanges and continuous training for young journalists, thanks to the solid partnerships I have established, in particular with the Ministry of Communication and the German Konrad Adenauer Foundation, which has been with us since the beginning.

On a personal level, my hope for my children is that they will find their way and be successful in life.

6. If you could go back to the past, would you make the same choices? What should young women in the Arab world know about professional success and career development?

Of course, because I was passionate about my work. For women, professional success and career development must be the top priority, without neglecting the other aspects of a woman's life. They must not be constrained by unequal social status.

7. What have been your female role models? In Algeria or elsewhere?

In the world of journalism, my role model was Malika Boussof, a psychologist by training. She became a journalist in 1985 (African Revolution, Le Midi Libre, RTL) and joined the editorial staff of the independent daily « Le Soir d'Algérie » in 1991, where she became editor-in-chief, editorial director and now, editorialist.



Fadila Benayache (née Boukhenchouche)

Chemistry

State doctorate in Organic Chemistry -
University Paris-Sud, Orsay (France)

Professor - University Mentouri Constantine

**Member of the Algerian Academy for
Sciences and Technologies**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I started school in October 1959 at the age of seven. I immediately liked school and everything about it. In the first year of primary school, I was the best of my classmates, but the following year I did very badly in the first examination. I couldn't understand why my classmates from the previous year were not with me, and I didn't understand the difference in level between me and my new classmates. After much confusion and sadness, which I refused to share with my family members, I decided to ask my new teacher and finally found out that I was not in the first grade but in the second grade, that I had been made to skip a year and that I had to do my best to catch up academically. I was eight years old and I had to fight without any help from my family. Since then, everything related to studying has been like a battle for me and my education has become my top priority.

Nothing was easy. I passed the 6th grade entrance exam, but there was no middle

school or high school in the region where my parents lived. So I had to study 450 km away from home. I was 12 years old at the time and I had to make it work. Thanks to some family friends, I was able to get closer to my home and later I was allowed to stay as a resident at the El-Houria High School (Constantine) for 3 years. I am very grateful to this wonderful high school, which marked my youth and that of thousands of young girls from eastern Algeria. Thanks to the serious teachers of this high school and to the teachers of the high school of Youghourta, where I spent my last year, I managed to obtain in June 1971 both the Algerian and the French baccalaureate in mathematics. The nature of my two baccalaureates opened all the doors to higher education. After much hesitation, I decided to study exact sciences at the university. There was nothing to worry about because $1+1=2$. I just had to work. All I needed was some help from books, and fortunately, the library of the Faculty of Exact Sciences was well stocked. After that, I had submitted a simple application to the University of Constantine, which resulted in a scholarship from the

French government. With the agreement of the Algerian authorities, I benefited from this scholarship until three months before I obtained my doctorate in Physical Sciences, option Organic Chemistry, on 27 March 1981.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

In Algeria, as in many countries, traditions have a lot to say about women, especially working women, who are constantly balancing a very demanding professional life in a male-dominated world with a very demanding family life. In the 1980s, for example, there was such a shortage of water that a drop of water in the tap was a relief, even if it often came at night, but it also meant sleepless nights washing the clothes, washing the dishes and bathing the children. These constraints, which may seem trivial at first sight, had a serious impact on the quality of life and aggravated the situation of the women, whose work required them to be active and dynamic in the classroom from the first hours of the day, in addition to preparing the lessons. This is in addition to preparing meals on their return from work and doing other household chores such as ironing, sewing and so on. In addition to the water shortage, this period was also characterised by other shortages of all kinds, oil, meat, etc. So, indeed, how do you go on and keep your spirits up!

Regarding support, I have to admit that I did not really need the support of colleagues because I was not alone. I got married in 1977, while I was preparing my doctoral thesis.

Since then, my husband and I have fought all the battles together and since our return, we have both worked a lot for the University of Constantine, including the creation and follow-up of postgraduate studies, the implementation of new practical works, teaching, the implementation of national and international research projects, the study and preparation of contracts for the equipment of the new universities to be created, the supervision of students in master's and state doctoral theses, not to mention our participation in the examination of these.

3. If you could go back to the past, would you make the same choices?

I don't think I would make the same choices again, because there is too much ingratitude and lack of recognition of the work done by Algerians who have sacrificed a lot. Young people who want to follow my path must understand and know that they should expect nothing from anyone.

4. Do you think your path is reproducible today?

I don't think so. There were too many sacrifices that today's girls could not make.

5. What have been your female role models? In Algeria or elsewhere?

In the field of science, I would like to mention: Marie Curie, born Maria Skłodowska, double Nobel laureate in physics and chemistry.

Tu Youyou, a Chinese researcher in pharmacy, Nobel prize in physiology or medicine.

Katherine Johnson, a NASA researcher whose calculations played a major role in American space exploration.

In Algeria, I would like to mention the heroines of the revolution: Hassiba Benbouali, Fadila and Meriem Saadane.

Closer to my background, I would like to mention my mathematics teachers: Mrs Biolet

at el-Houria high school, and Mrs Martin at Youghourta high school in Constantine. Finally, Mrs Jullien, born Renée Fraisse, CNRS research professor and supervisor of several doctoral theses in the structural organic chemistry laboratory, where I was enrolled for the preparation of a DEA (M. Sc.), and then a doctorate under the supervision of Professor Jullien (her husband).



Saoussen Cheddadi

American Studies, Business

BA in Business and Marketing - BA in English
– University Mentouri Constantine

PhD in American Studies – University of
Kansas (USA)

**DEI advocate (Diversity, Equity and
Inclusion)**

**Co-founder and CEO of Limitless Learning -
Algerian Institute of Professional skills**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

Coming from a family of medical doctors, I never really thought about a career other than in the medical field. But when my BAC grades did not allow me to start medical school I was devastated. I tried again, but my parents told me back then that it would be a great idea to explore other career paths. They helped me take a hard look into my interests and what I truly loved. I realized that I was passionate about two things: marketing and American culture. Of course, these were two different fields and the Algerian higher education system did not allow me to pursue a major and minor so I decided to start two different bachelor degrees in these two fields. It was not easy but I never regretted my choice

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

Moving to the U.S. by myself at a young age and starting graduate school at an American university which I knew nothing about, was not easy. Being able to talk to my family was key in keeping me afloat during these doubtful times. The local community in Lawrence, Kansas, was also of tremendous help. Other international students as well as American peers were a central part of my experience and expedited my adjustment period.

Business wise, when I started Limitless Learning, I received a lot of unsolicited advice that almost stopped me from creating my dream company for Algerian students and professionals. The truth is that when you know exactly what you want, take some of the advice but don't let anyone tell you what you can and cannot do. You are resourceful and smart enough to have come this far, don't let the haters stop you.

3. Are there difficulties women face in the Arab world that they may not face elsewhere (or to a lesser extent)?

Traditions and culture are a large piece of who we are, but sometimes these same traditions hold us back. When it comes to Arab women, I think it is all about the mentalities and how these should be slowly evolving so that they don't hold women back. I do believe however, that in the Algerian context, women do have a lot of freedoms and opportunities that we are not always aware of or grateful for. It is only when you travel the world extensively and meet other people from different cultures that you realize how lucky we are to be Algerians. To name a few examples, equal pay regardless of gender is a big one, the percentage of university level educated women, no legal restrictions in politics or when it comes to leading key positions...etc.

4. What do you consider your key strengths that helped you develop professionally? What should young women in the Arab world know about professional success and career development?

Being consistent and persistent are my biggest strengths. Then, the support system I had become the link between my aspirations and reaching my goals.

Clearly defining your goals is also very important. Having a one year plan and a 5 years plan allows you to plan accordingly and stay focused "eyes on the prize!"

Networking should become an important part of your career development because without great men allies as well as fellow women professionals, it is hard to advance professionally at a desirable pace.

Next, work on controlling your imposter syndrome. We all feel it at some point. It is about how you overcome it that makes the difference.

Lastly, knowing who you are and understanding where you come from determine your core values that will move you forward throughout your professional life.

5. What are your proudest accomplishments in your career and life?

Being granted the highly selective Fulbright scholarship. They select about 5-7 students yearly from Algeria. I was proud to be selected and grateful that the US government believed in me, my unique accomplishments, and what I had to bring to the US and to Algeria.

6. Do you think your path is reproducible today?

Of course! If I can do it, you can do it. It is all about knowing exactly what you want and giving yourself the tools to succeed. Nothing ever comes if you don't try hard enough or if you don't sacrifice something (time, money, time with loved ones...). Also, remember that someone's path does not have to be yours to achieve success. Each path is unique and sometimes you can do better than your role model.

7. What have been your female role models? In Algeria or elsewhere?

I have a few role models. First, my advisor Dr. Sherrie Tucker is my female academic role model in the field of American studies. She is thorough, smart, eloquent, patient and confident. Second, in business Huda Kattan from Huda Beauty is my absolute favorite

Arab business woman. She is confident, knows how to take risks and a source of inspiration to so many Arab women and girls. Lastly, Hassiba Benbouali is my Algerian role

model for resilience, courage and the strong conviction in a free and just Algeria.



Karima Aït Aïssa

Cardiovascular Physiology

PhD in Vascular Physiology and Pharmacology – University of Lorraine – Nancy (France)

Assistant Professor – Lincoln Memorial University -Tennessee (USA)



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I was born and raised in Ouzellaguen, a small town in Bejaia. I am the eldest child and I have 3 brothers. My mother is a housewife and my father worked in a family business and died when I was 15. My family is a very traditional Kabyle family and as such, we all lived with grandparents and uncles. Growing up, I dreamed of becoming a doctor one day. Probably because I was surrounded by people in the field and I always admired the humanistic aspect of the profession. When I was a student at the University of Bejaia, I had the opportunity to do an internship at the hospital, where I was involved in taking blood and doing biomedical analyses. I also had daily contact with patients in the emergency room. It was then that I realised that I would not be able to work in such an environment and naturally decided to pursue a career in research.

After graduating, I moved to France to do my Masters and PhD in Health Sciences. In 2013 and after graduation, I moved to the US for my postdoctoral studies. It wasn't easy, but I am now a faculty member at the University of Iowa, where I focus on studying the effects of cancer therapy on the cardiovascular system.

My family was the first to believe in my abilities and supported me to continue my studies abroad. I would later learn that my father had this dream for me, a dream that my grandmother and uncle worked to make possible for me. Studying in France was not without its challenges. Apart from being away from my family and friends, it was difficult to integrate into a French university, especially as the education system is very different and I was behind my other classmates. I had to work a lot harder and catch up with the gap I had started with. Besides these problems, and even though my family was willing to support me financially, I felt the need to support myself financially (at least during the

first 2 years) and I took on several part-time student jobs after classes and on weekends.

My interest in cardiovascular diseases began during my postgraduate studies. I was involved in a project on the formation of blood clots in hypertensive patients. This was important to me because hypertension is very common in Algeria. Since then, I have always been involved in projects related to cardiovascular medicine.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I am lucky to have a very supportive family. They have always been there when I have had problems. Although I have not experienced any specific problem as a woman, I did have a bad experience with a supervisor during my first postdoctoral fellowship. This happened when I moved to the US. After 3 months in his lab, this supervisor subjected me to a few months of moral harassment. As this was a professional matter, I did not tell my family about it. For a few months I received very late emails (sometimes in the middle of the night) threatening to terminate my contract if so and so. I decided to take the matter to the head of department and the human resources department, who took disciplinary action against him. Their responses helped me a lot to know that I had their support and to look for another job in another institution.

When I joined my first lab here in the US, I found a great support in my then co-worker. He helped me not only with my personal affairs (paperwork, orientation, speaking on

my behalf when my English was very limited...) but also, and more importantly, with my work. He showed and guided me how to get started in the lab, but also advised me when I had problems with my former mentor. Apart from that, I have always been lucky to have supportive supervisors and colleagues.

I also benefited from the advice of my professors when I was doing my PhD in France. Unfortunately, there is a clear lack of mentoring in Algeria.

3. Are there difficulties women face in the MENA region that they may not face elsewhere (or to a lesser extent)?

Misogyny is not specific to developing countries. In the US, women face inequalities in pay and promotion, and there is no maternity leave, which leads to a degree of precariousness.

In the MENA region, some people still cling to traditions that limit women's freedom of movement and financial independence. Not being allowed to travel remains a major obstacle for some women in Algeria. For example, they can't apply for jobs outside their town or pursue postgraduate studies abroad. In addition, traditional education does not prepare girls to be autonomous, making it harder for them to build a career.

4. What do you consider your key strengths that helped you develop professionally?

I think I am a very persistent person. I never give up, no matter what the obstacle. But I also recognise when I need help and I do not hesitate to seek advice and mentorship when I feel that something is beyond my expertise.

Hard work and ambition have also been the foundation of my entire career.

5. What are your proudest accomplishments in your career and life?

I am proud of what I have achieved in my career: working on topics I am passionate about and running and securing funding for my own research projects.

6. If you could go back to the past, would you make the same choices?

I would never change my decision. I am really passionate about my work. I believe that whatever challenges I have faced and will face, it is worth it.

There are more opportunities to study today than there were twenty years ago. Young women shouldn't limit themselves; they have to take the initiative and seek help to find their way.

7. Do you think your path is reproducible today? What should young women know about professional success and career development?

Of course, my path can be reproduced. It takes motivation and hard work. There are a lot more opportunities and resources available today than there were when I was growing up. Use them and exploit them as much as possible.

The best way to start a career is to go for it, get out of your comfort zone and understand that you have to make mistakes in order to progress.

Girls shouldn't be afraid to ask for advice. Back then, it was harder to find help; I had to learn on my own without a mentor. That is why I am involved with ALWIS², to give young women the opportunity to grow and get the right advice to move forward.

I help young graduates with their CVs and applications, and I realise that sometimes they expect me to do the work for them. That is the wrong attitude. You have to work on yourself to succeed

8. What have been your female role models? In Algeria or elsewhere?

My first female role model was my late grandmother, Zahra Ait-Aissa, born Iberaken. She was a real inspiration to me. While many grandmothers in my culture encouraged their daughters and granddaughters to prioritise marriage and rely completely on their husbands, she always told me to focus on my studies and be independent. When the time came that I wanted to continue my studies abroad, she was the first to support me. She was the strongest person I've ever known. She faced many losses, many challenges and conflicts and yet she always kept a straight face and was always the conflict solver, the glue of the family that helped generations to live in peace. She never went to school and she wasn't a businesswoman, yet she was the greatest leader I ever knew growing up.

My second role model was a cousin who died. She was the first female surgeon I ever met and she always inspired me with her hard work, perseverance and ambition. As a

² Algerian Women in Sciences : <https://www.algerianwomeninscience.org/>

surgeon in a major hospital in Algiers since the 1980s, she managed to rise through the ranks with all the challenges of being a single female surgeon at the time.

9. Do you consider yourself as a female role model in your discipline and beyond?

I do not see myself as such, but I am actively working to share my experiences and offer mentorship to other girls and women in the field and beyond. I see it as 'our' duty to help the next generation navigate their respective careers to success and build a better future for younger girls.



Fatima Zohra Guechi

Modern and Contemporary History

3rd cycle doctorate in History – University of Paris 12 (France)

State doctorate in History - University of Tunis 1 (Tunisia)

Professor - University Constantine 2 - Abdelhamid Mehri



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

Coming from a family of small landowners and merchants, I was supposed to have a good education, as my father and his cousin had just moved into a house with a courtyard in the mixed municipality of Fedj-M-Zala. But after several simultaneous operations by the ALN throughout the country, there were reprisals. On 9 May 1956, at 8 a.m., my father was ordered by the colonial authorities to evacuate the house before the breaking fast (it was Ramadan). I was too young to realise what was happening. The only image that remained in my mind was a shapeless pile of belongings from a hasty move to the family farm. Unaware of this silent agitation, I asked for my school bag. I was underage at the time, but I was accompanying my sister to Arabic classes at the free school.

Two years later, my father, an autodidact who loved the education he had been denied,

enrolled me in a French school and before I was eight, I was boarding with maternal cousins. Two difficult years for me and for everyone. Events such as prosecution, imprisonment, abuse and, finally, the murder of my maternal grandmother (by mistake) during a raid on the family farm led to our final move to Constantine.

From then on, I benefited from better conditions. I finally had the right to work and to revise on a table! This soon had an effect on my school results, and after a rather poor start, I came first at the end of the year, much to the surprise of the headmaster. Although my parents couldn't read French, they made sure I was always at the top of the class. I was first in my class with a distinction at El Hourrya High School until my baccalaureate.

Yet, I chose my field by accident. At the transition from middle school to high school, the best students had to choose between three orientations: science, mathematics or art (letters). I wanted to study medicine, but

my father's disapproval (long and expensive studies), combined with the influence of my English teachers, directed me towards the arts, with the prospect of gaining a broad knowledge. For me, the prospect of teaching math or science in high school wasn't at all amazing!

Unfortunately, and despite being a valedictorian of the baccalaureate, there wasn't any English course at the University of Constantine that year due to a lack of qualified teachers. The enrolled students were then sent to the University of Algiers. I had no chance of persuading my father to go there and had to enrol in a history course instead. ... This had been Arabised the same year and, despite having a "francophone" profile, I completed all my credits from the first semester. I took classes with Arab teachers (Iraqis, Egyptians, Syrians and Algerians) while teaching in a technical college for girls (at the time I thought my father was trying to free himself from our expenses, but he never accepted our money, my sister and me, he only reduced his contribution after the baccalaureate).

With a degree in history, I was one of the three valedictorians who were kept on in the department as contractual assistants to ensure the tutorials.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

After graduating in history, I enrolled in an English language course to fulfil a wish: to teach, translate and perhaps work in

international organisations such as UNICEF, FAO or UNESCO, sharing knowledge with the most disadvantaged people on the planet. Afterwards, I realised that it was not so easy to get into these organisations and that the competition was (and still is) tough.

I had to be realistic, so I enrolled in a one-year distance-learning "methodology course" to complete a four-year bachelor's degree, which would allow me to apply for a diploma of advanced studies (DEA). At the time, the main obstacle was my father's refusal to let me travel. I overcame it with the help of my family network and my brother, and was able to go to Algiers and stay with some friends who lived 200 metres from the Central faculty.

It was then that my father realised that my passion for studying had no limits. As a valedictorian, I was encouraged by the Normal School (ENS), with which I had a contract, to pursue postgraduate studies, which weren't available in Constantine. Travelling became inevitable.

Being bilingual in a monolingual environment was an advantage and led to my first trips abroad. Most people knew either French or Arabic, so I was asked to join the Inter-University Relations Department, which worked with Arab universities. Despite his reluctance, my father couldn't refuse the trips related to my activities within the department because they were official missions within the framework of the periodic meetings of the Union of Arab Universities.

His concerns were finally allayed by two professors: Mahfoud Kaddache, with whom I had registered for a postgraduate diploma on

the colonial press at the University of Algiers, and Charles Robert Ageron, who had supervised me during my DEA and doctorate in Paris. We met him, my father and me, in Batna during a conference on Islamic thought.

In 1978, the university offered scholarships to study abroad. I applied, despite the fear of a paternal rejection. At the time, I had expressed my wish to study British civilisation in England, but I overlooked the "rigour" of the ministry, which decided that Algerian history should be studied in France, because our archives were there! So I got a scholarship in France and Professor Kaddache recommended me to his colleague and friend, the historian Charles Robert Ageron. He directed me and the new DEA students towards the subject of the Algerian press, knowing that the newspaper collections were available at the National Library in Paris. In 1982, I defended my doctoral thesis in the history of ideas at the University of Créteil-Paris XII with honours. My supervisor had been transferred there at the end of his career. A man of great intellectual rigour!

Throughout these years, my mother, who had no say in the face of my strict but fair and respectful father, supported me in her own way. She waited for me in the evenings when I returned from university, worried that I worked a lot, contrary to the popular belief that academics have a lot of free time. She was impressed by one of my answers: "In research, even after retirement, I will still have work". Which is true!

3. Are there difficulties women face that they may not face elsewhere (or to a lesser extent)?

In the enthusiasm of the seventies, with Arabisation and the reform of higher education, the issue of gender took a back seat. The most deserving were recruited at the end of their studies. Those in charge were happy to be able to rely on young people. I had put so much effort into my job and my studies that I forgot I was a woman, and so did my colleagues, I suppose. That was the price of having absolute respect without ulterior motive.

From the beginning, I was in contact with female heads of department and directors of institutes in the same building. It is in the social and family environment that misogyny is expressed. It is more insidious at the university. As an example, I would like to mention my participation in the commissions that discussed the criteria for the allocation of housing by the university. The criteria of marital status and the number of children were put forward, and we had to defend the primacy of the diploma and the grade. Marital status and children were a clear disadvantage for women.

4. What do you consider your key strengths that helped you develop professionally?

Without hesitation, and this applies to everyone, men and women, I'd say perseverance, rigour, and the ambition to go further; for me, I'd add a solid trilingual education.

For example, to obtain my state doctorate, I had to enrol either in Algiers or in Tunis (because the diploma no longer existed in France). I chose Tunis to discover a different school; I tried to study modern history through a collection of manuscripts from the Ottoman period, more precisely the notarial acts of the Malekite and Hanafite "mahakmas" of Constantine (1787-1857), found in the basement of the City Court. It was a new beginning for me! A change of direction that would take me more than ten years. I wanted to write a history based on local documents and not on the correspondence of consuls and other travellers. A challenge to which, in time, I added the computer processing of the data collected!

5. What are your proudest accomplishments in your career and life?

Brilliant success, in my curriculum and in my research, with innovative topics and methods. The important thing was not to have the degree itself, but to contribute to the discipline with an original approach.

The masters and doctorate programme that I initiated at the University of Constantine, which had a good impact, even if it came a little late in my career... A training recognised as reliable by colleagues from other universities.

6. If you could go back to the past, would you make the same choices? What should young women know about professional success and career development?

I don't know if I'll make the same choices. Studying history can be exciting, but you never get the whole story... It's frustrating

sometimes. Translation was a motivating profession, but I lacked the proper training... other fields would have tempted me but you make choices according to the opportunities you have at the moment!

In our day, we didn't think about career planning. Today it's different. However, if you manage your career, you can reach top positions earlier, be involved in training and be productive for much longer.

7. Do you think your path is reproducible today?

Apart from the initial obstacles, all we had to do was work hard and get ahead in our careers. It's even easier now, especially with the support of my parents. I made it despite detours, expectations and delays, especially in promotion due to changes in laws and degrees, unfairness and inconsistencies. Fortunately, I have not become bitter!

8. What have been your female role models? In Algeria or elsewhere?

When I think about it, I had models that I admired, but who seemed unattainable and remained in the abstract.

Marie Curie was an exceptional, unrepeatable case of a Polish immigrant who became the first woman to win the Nobel Prize in both chemistry and physics. In the modern Arab world, there were a few poets or writers, such as May Zyada or Bint Elchatee, but no renowned historians, as far as I know. The national activists of the Algerian revolution, the pioneers of women's emancipation who defied colonialism (and patriarchy!), were hard to follow. So our role models were some

of our teachers, because they were more accessible and human. Their rigour, integrity and critical thinking impressed me greatly, especially as most of them were French, originally from the former colonial country.

9. Do you consider yourself as a female role model in your discipline and beyond?

Apart from the female teachers, these real-life role models, the pioneers in every family, paved the way for the younger ones. In this context, my perseverance and even stubbornness to continue my studies was a

challenge that was largely met. My cousins, who remained on the farm, could not go beyond the school-leaving certificate. The younger ones benefited from boarding at El Hourrya High School. But I remain the first doctor in the family, albeit in history and not medicine! My father, who finally accepted my project and followed it with interest, admitted to my mother one day that if he had known I was going to study for so long, he would have let me study medicine and finished earlier!



Samia Benabbas (née Kaghouché)

Architecture and Urbanism

State doctorate in Urbanism - University
Mentouri Constantine

**Professor - University Mentouri
Constantine**

**Member of the Algerian Academy for
Sciences and Technologies**



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

I obtained my Algerian baccalaureate in June 1980 in the science series and the French baccalaureate in the same month in the C series (mathematics).

With a mark of 20/20 in math, in a year when the baccalaureate pass rate was 15%, my teachers expected me to enrol in the exact sciences, for a DEA in mathematics; my parents wanted me to study medical sciences, to become a doctor or a teacher.

However, I wanted to study architecture and on the day of the public announcement of the results of my baccalaureate at the Reda Houhou High School, my French teacher at the college, Mme Serdouk, reminded me of my answer to an essay on our future when I was in the first year of secondary school in 1973: "I would become an architect to build skyscrapers for my country".

At the time, I had to fight with my father, who tried to dissuade me from studying architecture by reminding me that it was a man's job and that it required spending a lot of time on building sites, which could have a negative impact on my family life in the future.

I did not renounce my choice and proposed to my parents that after my architecture studies, I would teach in this speciality. Such a personal plan would satisfy the whole family. Since then, my family has been by my side, supporting me along the way. Architectural studies are characterised by their difficulty, working on projects to exhaustion ("les charrettes"), never-ending thinking time. The repeated waking ups were very frequent and there was also an almost total mobilisation of my dear parents. When it came to fieldwork, collecting documents and information, my dear father was always there for me.

When I got a scholarship to continue my studies abroad, my family was against it. They encouraged me to do my postgraduate

studies in Constantine. It was the year that the Ministry introduced the magister competition and I came first out of two hundred candidates in a competition consisting of three tests: a written test, an oral test and a final test on issues and the state of the art on a research topic.

I was immediately recruited for my first job as a trainee assistant at the Department of Architecture and Urbanism in Constantine on 1st October 1985.

I was able to complete my magister's thesis in less than three years, in June 1988, and my real professional career began from that date. I was also lucky to have a husband who supported me in everything I did, while respecting my choices.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

I did not encounter any obstacles because of my gender in the university environment. Competence and seriousness were the path to success and the only key to making my own way.

Some colleagues gave me all their support. They were mainly my teachers to whom I always owe recognition, respect and great consideration.

3. What do you consider your key strengths that helped you develop professionally?

My voluntary choice to teach architecture as a profession and my enthusiasm for the subject led me to invest myself fully in my

professional tasks. This also motivated a great passion for reading and research in the many fields that opened up to me in the multidisciplinary, interdisciplinary and transdisciplinary approach of architecture, which brings together artistic, plastic, technical, sociological and identity aspects at the same time.

I worked hard in a male-dominated environment, but the gender issue never occurred to me, and if there were some hostile attitudes towards me that I could not explain, they came mainly from a few female colleagues.

However, as time went on, the professional environment, both for trainers and trainees, became more and more feminised. Mentalities have evolved and society no longer sees the profession of architect as exclusively male.

4. If you could go back to the past, would you make the same choices? What should young women in the Arab world know about professional success and career development?

I would make the same choices without hesitation. My advice to young women would be related to the evolution of professions and employability, because the present and future contexts are different.

5. Do you think your path is reproducible today?

I think that my career is reproducible, if all the family, social, and professional conditions are met, crowned by an iron will, sacrifice and enthusiasm for one's personal professional project.

6. What have been your female role models? In Algeria or elsewhere?

In Algeria: Yaker Allab Malika (nuclear physicist), Kabouche Zahia (chemist), Daho Kitouni Keltoum (Historian), Chabbi Chemrouk Naima (Architect, landscape designer), Belkhodja Nadjine (gynecologist), Yakhlef Nadia (biologist), Djebari Laraba Fatima (biologist).

Abroad: Marie Curie, Françoise Choay, Julia Morgan, Elisabeth Diller, Gertrude Bell.

7. Do you consider yourself as a female role model in your discipline and beyond?

You cannot make a value judgement yourself; that is a task that must be left to others.

Nevertheless, in my discipline, architecture and urbanism, there were eighteen candidates for founding members of the Algerian Academy of Sciences and Technologies, and the international committee, made up of twelve members from six prestigious world academies, chose my only application.



Ibtissem Djinni

Microbiology - Microbial biotechnology

PhD in Microbiology - University Abderrahmane Mira - Bejaia (Algeria)

Assistant Professor - University Abderrahmane Mira - Bejaia



1. Could you tell us about your personal journey? What drew you to your field, and how did it lead to where you are today?

My father was an agricultural engineer and my mother a French teacher. I was brought up with a love of science, technology and literature from a very young age. In primary school, I was always excited to ask questions about unknown things and was very attentive to scientific discoveries in physics, natural sciences and archaeology.

The more I progressed in both secondary and high school, the more I knew that I wanted to do research in science and technology, as I always received a lot of support and encouragement from my parents.

After my baccalaureate, I had to make a choice. I had no hesitation in choosing biology to do research. Full of ideas and with a good impression of the university and its academics, I entered Abdelrahman Mira University in Bejaia. I soon realised that I wanted to go as far as possible in my studies.

However, I still did not know which direction to take and which specialty to choose. In my second year, I studied microbiology with teachers who introduced me to the even more mysterious world of the infinitely small, where there was still so much to be discovered. This led me to pursue a five-year degree in Biological Engineering, which I completed as valedictorian. I then had the opportunity to do a two-and-a-half year magister's course in Applied Microbiology, which allowed me to familiarise myself with research and enrol for a PhD.

Meanwhile, in 2009, I was hired as an assistant professor at the Microbiology Department of the University of Bejaia. During my second year, I was lucky enough to win an 18-month Erasmus scholarship as part of the Averroes programme, where I had the opportunity to work in a bio-organic chemistry laboratory at the University of Trento, Italy. I had important encounters with researchers whom I really appreciated, especially their human qualities and their guidance of my

research. After 4 years, I defended my thesis, but I still had the desire to continue along the same path.

I obtained my accreditation to direct research in 2019 at the University of Bejaia, where I am still an associate professor in the Applied Microbiology Laboratory and this year I am in charge of the PhD programmes in Biotechnology.

I am currently working on the problem of bacterial multiresistance to antibiotics through the development of new molecules, and also on the use of bacteria in the bioremediation of polluted sites.

2. Did you face obstacles and difficulties along the way? How did you cope with them and did you have support and encouragement?

Being a woman has not an obstacle for me. On the contrary, I feel that I have always been valued for my work.

Thanks to the international cooperation of the University of Bejaia, I received an excellence grant, Erasmus (Averroes 2011), as part of a PhD scholarship. I was granted a stay of 18 months at the Laboratory of Bio-organic Chemistry of the University of Trento in Italy. For me, it was the high road to the world of research. However, in order to do research or carry out a research project, you need funding and it is not easy to get it.

3. What do you consider your key strengths that helped you develop professionally?

I would say perseverance, ambition, determination and believing in my abilities, always striving to achieve the very best.

4. What are your proudest accomplishments in your career and life?

Supervising and mentoring undergraduate students. Introducing them to the fundamentals of research.

The approval of my research project about the bioremediation and depollution of ecosystems, industrial waste and toxic substances -such as plastic polymers- through the use of microorganisms. A subject close to my heart.

5. If you could go back to the past, would you make the same choices? What should young women in the Arab world know about professional success and career development?

I would never regret any decision, I would make the same one.

Just follow your dreams! It is better to try what you like and fail than to regret it later.

Never give up at the first attempt or difficulty. It is by facing different problems and learning how to overcome them that you become successful. Teaching and doing research is more than a profession, it is first and foremost 'a passion'.

6. What have been your female role models? In Algeria or elsewhere?

First of all, my mother, who was my role model and the starting point for everything. Then comes my supervisor Pr. Ines Mancini, at the Bio-organic Chemistry Laboratory of the

University of Trento, from whom I received a lot of advice and learned how to be passionate about research. I also learned from her perseverance and the will to get to the heart of things.

7. Do you consider yourself as a female role model in your discipline and beyond?

I do not see myself as a female role model, at least not yet, because I still have so much to achieve and so many goals to reach.



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Editorial work:

Nadia Bahra (AGYA)

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Ilhem Boubkira

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Jägerstr. 22–23

10117 Berlin, Germany

+49 30 20 370281

agya@bbaw.de

www.agya.info





ARAB-GERMAN
YOUNG ACADEMY
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HUMANITIES

