

A day in the life of a Senior Scientist



Dr Cristina Gutierrez-Caballero is a molecular and cellular biologist. She graduated with a BSc in Biology from the University of Salamanca (Spain), where she subsequently completed her PhD studying proteins involved in cell division and their role in cancer, aging and longevity. After her PhD, Dr Gutierrez-Caballero continued her research in cell division at the University of Warwick as a postdoctoral researcher, funded by Cancer Research UK. More recently, her interests have transitioned towards translational work and drug discovery, and in 2017, she started a position as a Senior Scientist in Exonate Ltd, an early-stage biopharmaceutical company that develops novel drugs to treat age-related macular degeneration (AMD). Lorenza Giannella (Training Manager, Biochemical Society) spoke with her about her work.

How did you get into science?

I have been always interested in science. When I was a child, I wanted to be an astronomer or a biologist, and because I was not very keen to complete a physics degree in order to become an astronomer, I opted for biology BSc. The advantage of doing a general biology degree is that it includes a broad range of subjects, including zoology, ecology, genetics, biochemistry and so on. Hence, you have the opportunity to decide which topic attracts you the most as your knowledge expands. In my case, I found that I loved genetics, and molecular and cellular biology, so I chose a PhD project in which I could use genome engineering to develop mice models to study the role of uncharacterized proteins in cell division and cancer.

Can you describe a typical day?

A typical day in my current role would include designing and executing experiments, analysing data, contrasting information in the literature and, on 1 or 2 days per week, presenting and discussing the results with the head manager, CSO and colleagues. In general terms, the

experiments I typically carry out investigate the effect of the compounds we are developing in human cell lines. I run a considerable range of experiments; therefore each day can be very different from the other.

What inspires you about your job?

During my research in academia, I was inspired by the opportunity to contribute knowledge to the understanding of how cells divide and how this process could go wrong. Also, just simple things such as being able to see the chromosomes or to record and visualize the division of a cell still thrills me (even after doing it for more than a decade!).

Working in drug development in a biopharmaceutical company, I am inspired by the possibility of contributing to improvements in the life of patients.

What has been the greatest challenge in your career so far?

Probably, moving to another country on my own and starting my journey as a postdoc in a new lab with a new project and in another language, which I did not fully master

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right away. Luckily, my supervisor was patient and helpful, which made the transition easier; I don't regret it at all. The move gave me an opportunity to improve my CV, meet lots of people in my and other fields, experience another culture and broaden my outlook. I really encourage anyone who is interested in doing a postdoc to consider doing it abroad.

What is your advice for someone who would like to move from academia to industry?

If you are a PhD student considering moving into industry in the future, I would advise you just to do it after the PhD,

as there is no need to carry out a postdoctoral position first; many available positions in industry are for recent PhD graduates. Of course, you can also move after a postdoc; but if you are sure you want to leave academia, it would be better to invest those years in acquiring experience in industry.

The most important tip when looking for a job in industry is to adapt your CV to the industry format, which is very different from the academic one. You should create a profile on a professional social media platform (i.e., LinkedIn) and start building up connections. ■

Job Profile – Senior Scientist

A Senior Scientist works in a laboratory on a specific project. The job can be based in a university, hospital, research institute or industry. Senior Scientists plan and conduct experiments, and analyse results, either with a specific end use, such as developing a new product or a commercial application, or to broaden scientific understanding.

Responsibilities

Senior Scientists will often manage a project; they will plan the project and experiments, conduct the experiments, analyse results and write reports. They may also supervise junior members of the team and ensure smooth running of the lab. The role requires the individual to keep abreast of the current research in their field and to present their work at relevant conferences or meetings, as well as write journal articles.

Qualifications and key skills

A PhD in a related discipline or BSc plus research experience is usually required for the role. Specific to the role will also be the required technical skills and/or research experience in the relevant field. Senior positions may require project management and/or leadership skills. General key skills include an ability to work independently and a self-driven approach to working, a flexible and adaptable attitude and good problem-solving skills. Good oral and written scientific communication skills are required for writing scientific documents and presenting at conferences.

Salary and career development

Salaries for Senior Scientists can depend heavily on their qualifications, experience and location, ranging from £29,000 to above £40,000. Career progression can be towards the managerial side or a Principal Scientist role.



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