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Industrial Pharmacy Forum

# A Career Guide to a Future in the Pharmaceutical Industry

## **INTRODUCTION**

This booklet has been produced jointly by the Academy of Pharmaceutical Sciences (APS) and the Industrial Pharmacy Forum (IPF) of the Royal Pharmaceutical Society (RPS).

The purpose of the booklet is to provide information that has been requested by students at previous career fairs to support their interest in the pharmaceutical industry as a career choice.

The booklet contains frequently raised questions and career profiles of many people at different stages of their careers.

The authors would like to thank all who have contributed to this booklet to provide an invaluable additional resource for any student considering a career in the pharmaceutical industry

## **Q&A'S TO HELP YOU EXPLORE A CAREER IN THE PHARMACEUTICAL INDUSTRY**

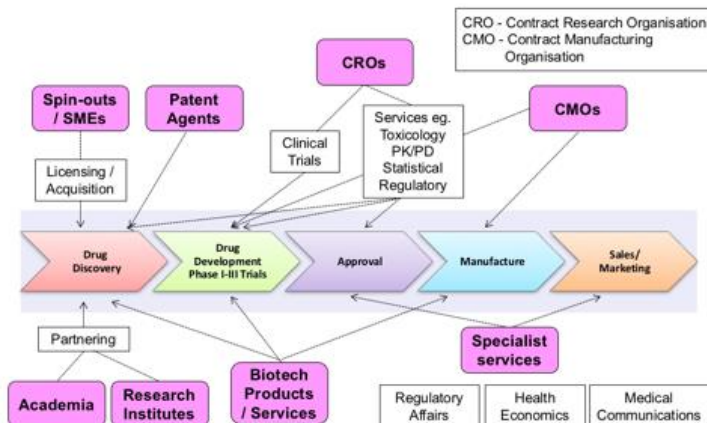
### ***Where are the opportunities now and in the future?***

Who were the top 5 recruiters of all graduates in the UK pharmaceutical sector in 2016?

1. GSK (238) *Pharmaceutical company*
2. Covance (192) *Contract Research Organisation*
3. Quintiles (133) *Contract Research Organisation*
4. AstraZeneca (84) *Pharmaceutical company*
5. ENVIGO (81) *Contract Research Organisation*

The 2016 recruitment figures show a changing situation with an increase in Contract Research Organisations and Biotechnology Companies.

### **The Pharmaceutical Sector Today**



**Hint - Apply broadly not only to the major Pharmaceutical Companies but also contract research organisations and small to medium sized biotechnology/drug delivery/device companies.**

## ***How do I find the opportunities?***

70-80% are not advertised externally and when they are this may be in several places. You will have to leverage all your networking skills: a family member or a friend in the industry? ; via your teaching Faculty? Is there a member of staff here or at another University doing research into something that really interests you? Follow up careers websites and get your name on the radar - even if you draw a blank first time, you can always revisit and let them know that you were in contact with them before.

Useful websites to get you started

- Academy of Pharmaceutical Sciences
  - <http://www.apsgb.co.uk?>
- Association of the British Pharmaceutical Industry (ABPI) - Careers
  - <http://www.abpi.org.uk/our-work/careers/Pages/default.aspx>
- Pharmiweb - Pharma portal
  - [http://www.pharmiweb.com/about/about\\_us.asp?channel=2](http://www.pharmiweb.com/about/about_us.asp?channel=2)

Careers fairs e.g.:

- Life Sciences Careers Conference - Society of Biology (SOB)
  - <http://www.societyofbiology.org/careers-and-cpd/careers/life-sciences-careers-conferences>
  - Bionet for 16-19 year olds:  
<https://www.societyofbiology.org/membership/individual-membership/bionet>

- ChemCareers – Royal Society of Chemistry (RSC)
  - <http://my.rsc.org/chemcareers>
- Career Expo – Nature
  - <http://www.nature.com/naturejobs/career-expo/>
- ResearchGate – Social networking site for scientists and researchers
  - <http://www.researchgate.net/>
- Kickstart your career – LinkedIn
  - <http://www.slideshare.net/CharlesHardy1/linkedin-helping-you-kickstart-your-career-in-the-right-direction>
- Cogent Skills
  - <http://www.cogentskills.com/>
- Bioscience regional organisations e.g.:
  - Bionow (Northern England) - <http://www.bionow.co.uk/home.aspx>
  - One Nucleus (London / Cambridge) - <http://www.onenucleus.com/contact-us>
  - Biocity (Nottingham) - <https://www.biocity.co.uk/>
  - Stevenage Bioscience Catalyst - <http://www.stevenagecatalyst.com/>
  - SEHTA (South East) - <http://www.sehta.co.uk/>

- BioIndustry Association
  - <http://www.bioindustry.org/membership/member-directory/>
- Science Parks and ‘spin out’ centres around universities
  - <http://www.ukspa.org.uk/>
- The Recruitment and Employment Confederation (list of recruitment companies)
  - <https://www.rec.uk.com/>
- Clinical and Contract Research Association
  - [http://www.ccra.org.uk/MemberProfiles\\_New/default.asp](http://www.ccra.org.uk/MemberProfiles_New/default.asp)
- New Scientist
  - Jobs: <http://jobs.newscientist.com/en-gb/>
  - Careers Guide (24 pages): <http://edition.pagesuite-professional.co.uk/launch.aspx?eid=873e9286-5e83-4480-bf68-464cbbd3a92d>
- Naturejobs
  - <http://www.nature.com/naturejobs/science/>
- NHS
  - Jobs: <http://www.jobs.nhs.uk/>
  - Careers: <http://www.nhscareers.nhs.uk/>
- Royal Pharmaceutical Society (RPS)
  - <https://www.rpharms.com/resources/careers-information>

- Guide to University courses (University rankings in Pharmacy and Pharmacology)
  - <http://www.thecompleteuniversityguide.co.uk/league-tables/rankings?s=Pharmacology+%26+Pharmacy>

**Hint - you need to be proactive and network; use contacts and explore the above websites.**

## ***Are there any summer placements?***

There is no quick answer to this question: how can I get a summer placement in a company?

Again use some of the websites above. **The Industrial Pharmacy Forum (IPF)** posts some summer placements they receive.

<https://www.rpharms.com/resources/careers-information/career-options-in-pharmacy/industrial-pharmacy>

**The Academy of Pharmaceutical Sciences** holds events which give an insight into the Pharmaceutical Industry; there is **Industrial Insights**, an annual conference at a major pharmaceutical site to showcase the opportunities available to new scientists within the pharmaceutical sciences using eminent speakers chosen from across a range of disciplines.

*Charles Winter, a Pre-Registration Pharmacists said of Industrial Insights: "The industrial insights conference represents an exciting and unique opportunity for those wishing to begin a career in the Pharmaceutical Industry. The conference provides an insight into a variety of disciplines, and I found it engaging, relevant and informative. A particular highlight for me was the insight into diverse career opportunities available, many of which I had little prior experience of. Such an insight has been instrumental in guiding my current career ambitions"*

- A session organised by the APS New Scientist Focus Group at the annual **International APS PharmSci Conference** which showcases new talent alongside newly appointed leaders in the academic and industrial fields.
  - **APS Pharma Focus** industrial visits, providing an opportunity for Student APS members to get an insight into what happens at a pharmaceutical company.
- Visit [www.apsgb.co.uk/events](http://www.apsgb.co.uk/events) or email [info@apsgb.org](mailto:info@apsgb.org)





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## ***Where should I undertake my Pre-registration Year?***

Firstly it is important to remember that you can do your pre-registration year anywhere in hospital or retail and still look for a career within the pharmaceutical industry.

If you intend to register and to work in the industry, then you could consider a combined industry / hospital placement (the best match) for your pre-registration year. Again, you need to hunt these down but the PJ has advice:

[http://www.pjonline.com/tomorrows-pharmacist/placements/industry\\_prereg](http://www.pjonline.com/tomorrows-pharmacist/placements/industry_prereg)

... and there is information from the industry

[https://www.apsgb.co.uk/Resources/Flyers/Pre-registration%20Pharmacist%20Information%20Pack%20v3\\_4%20red.pdf](https://www.apsgb.co.uk/Resources/Flyers/Pre-registration%20Pharmacist%20Information%20Pack%20v3_4%20red.pdf)

This may need to be downloaded by a member of the Royal Pharmaceutical Society so ask your tutor if there is a problem. The number of places in Industry is small so you can consider other pre-registration positions.

***Hint - You need to be proactive for pre-registration positions in the industry but don't worry if you are not successful, as there are plenty of other routes into the industry.***

## ***Do I have to do my pre-registration year in industry to get a job?***

No, almost 60% of Pharmacists in the industry did not do their pre-registration in Industry. Many skills you learn in the pre-reg year are transferrable into different jobs in the industry.

## **Do I have to have a PhD for the Pharmaceutical Industry?**

No, 28% have a second degree, but 56% don't of those employed in the industry with degrees. For some roles in the industry the skills learnt as part of your PhD may help you.

## **Is it possible to move between different sectors of pharmacy – community – hospital – academia – industry?**

Yes, many skills are transferable, and many people make such moves in their career.

## **Career Paths**

### ***Jessica, 22 years old-Pre-registration Pharmacist***

#### **Academic background**

Pharmacy degree from School of Pharmacy, UCL, London.

#### **Current role**

Pre-reg pharmacist working six months in GSK at Ware as a Technologist in the solid oral dose department in Manufacturing. She is undertaking a pre-reg placement in both industry and hospital to get a wider view of how medicines are manufactured and used. Her second six months of pre-reg training will be in Princess Alexandra's Hospital in Harlow.

#### **What is it about Pharmaceutical Sciences that interests you?**

Enjoys troubleshooting manufacturing problems and how these relate to the drug's properties. As a pharmacist, she considers the patient and whether the product is suitable for them. Interesting and fast paced environment. Enjoys being independent and representing her department at various meetings. A career as a pharmaceutical scientist is very broad. 'It opens up loads of windows'. The pharmaceutical world is relatively small so it is easy to network and to get to know a lot of people. There are a wide number of possible roles. 'The possibilities are endless'.

**Advice:** Useful to get experience in lots of different companies or departments.

## ***Georgina, 25 years old - PhD student***

### **Academic background**

M. Pharm University of Nottingham.

Pre-reg year at Merck, Sharp and Dohme and Guys and St Thomas's Hospital, London.

### **Current role**

PhD student, University of Nottingham as part of the Centre for Doctoral Training (Targeted Therapeutics) group.

Project is on 3D printing and particle adhesion.

### **What is it about Pharmaceutical Sciences that interests you?**

Doing a PhD is challenging but she finds this a positive. 'You are constantly trying to push the boundaries'. It gives you freedom to investigate the areas in which you have an interest.

**Advice:**-A Career in the pharmaceutical science is very diverse and covers a broad range of topics. Advice: 'Grab any opportunity you get and go for it!'

## **David, 34 years old**

### **Academic path- Lecturer in Pharmaceutics**

University of Bradford studied Pharmacy and qualified as a Pharmacist (pre-reg year in a hospital), MPharm degree.

PhD (Bradford University). His thesis was entitled 'Pharmaceutical Co-crystals; Design, Discovery and Behaviour'.

### **Career**

Worked as a hospital pharmacist for 2 years between his MPharm and PhD studies. On completion of his PhD became a senior scientist in Astra Zeneca and then moved to become a lecturer in Durham in 2013.

### **Current role**

Lecturer in Pharmaceutics at the University of Durham. "Developing the pharmacy course as it is a new subject at the university" Also has administrative responsibilities and has a research group.

### **What is it about Pharmaceutical Sciences that interests you?**

Enjoys both the teaching and research parts of his role. Working in the pharmaceutical sciences means his research can have potential benefits to a large number of people. 'I enjoy doing science and to do more to help more people and to do something I love together is great and is why I got into the pharmaceutical sciences.'

## **Fang - Senior Lecturer in a pharmacy department**

### **Academic background**

Qualified as a pharmacist.

PhD at School of Pharmacy, UCL London.

### **Career**

Two years as a hospital pharmacist but then decided to work in the pharmaceutical industry. She really enjoyed developing formulations as a hospital pharmacist. However decided she wanted to increase her knowledge of the pharmaceutical sciences and went back to University to study for a PhD. Following this she did two years of post-doctoral training before taking up her current position.

### **Current role**

Senior Lecturer in the pharmacy department at the University of Hertfordshire.

**What is it about Pharmaceutical Sciences that interests you?** She enjoys teaching and interacting with students and gets real satisfaction when the students get good grades and enjoy what they are doing. She also has the freedom to conduct research in pharmaceuticals and formulation development. 'What I really like is to develop something which can be useful to patients'. There are a large number of different qualifications (pharmacy, chemistry, pharmacology etc.) which equip you for a career in the pharmaceutical sciences. Projects are very much interdisciplinary and require individuals with different backgrounds to work together.

## **Kieran - Sourcing Project Manager at Astra Zeneca**

### **Academic background**

Pharmacy Degree - University of Belfast.

Pre-reg- Boots the Chemists .

PhD-De Monfort University (studied after a time in industry).

### **Career**

Pharmaceutical Technologies - Abbot Laboratories.

Then after his PhD joined Astra Zeneca, undertaking various roles including Senior Scientist Preformulation and Biopharmaceutics and Senior Scientist Product Design, Secondment to Drug Product Sourcing Manager.

### **Current role**

Sourcing Project Manager at Astra Zeneca.

Role includes identification of Contract Research Organisations, and suppliers. Manages project throughout life cycle to ensure required internal technical resources is applied, deadlines are met, payments made at key milestones, internal communication, resolve issues.

## **Mridul - Director at a Contract Research Organisation**

### **Academic background**

MPharm.

MSc in drug delivery from School Pharmacy, UCL, London.

PhD in Pharmaceutics from the University of Reading.

### **Current role**

Director and leader of the physical properties group for a Contract Research Organisation.

### **What is it about Pharmaceutical Sciences that interests you?**

Enjoys talking to clients and understanding their problems and then solving them. Material sciences and solid state properties particularly interest him. He would encourage anyone to have a career in the pharmaceutical industry and to help develop better and safer medicines for mankind.



## **Chris, 40 years old - Director of Business Development for a Contract Research Organisation**

### **Academic background**

BSc in Pharmacology from King's College, London.

Management Diploma from Reading University (studied after time in industry).

### **Career**

Worked as an analyst in industry testing physical properties and using microscopy. Roles in a range of contract research companies in the food, cosmetic and pharmaceutical industries. After Management Diploma moved into a Business Development role in a Contract Research Organisation (CRO). Then worked for a consulting group learning about market research doing a variety of different projects across a range of industries.

### **Current role**

Director of Business Development for a CRO supporting the pharmaceutical industry.

### **What is it about Pharmaceutical Sciences that interests you?**

Enjoys dealing with people in his current role. His current role is a different way of using his science knowledge. In the contract world you're always working on different projects, it is high pressure and a very satisfying area to be in. The contract world has been growing consistently over the past 20 years.

## **Maria - Academic at University of Nottingham**

### **Academic background**

Pharmacy degree from the University of Manchester and pre-registration placement at Abbott Laboratories.

PhD at Nottingham and post doc at Massachusetts Institute of Technology (MIT, Boston, US).

### **Career**

20 years' experience in industry working on drug delivery including time in early development with Astra Zeneca. In this role she both managed people and did science (an ideal combination!).

### **Current role**

Academic at University of Nottingham working on localised drug delivery for cancer therapeutics (low molecular weight chelators). Uses industrial experience to perform research that is patient centric and directed to unmet clinical needs (including basal cell carcinoma, oesophageal and pancreatic cancers) with the aim to get the therapeutic agent to the target most effectively.

### **What is it about Pharmaceutical Sciences that interests you?**

A person having a career in the pharmaceutical sciences should act as an ambassador for the science and it's important to do a job you enjoy (both for the science and the people elements).

## **Stephen - Head of Pharmaceutical Development**

### **Academic background**

Part-time BSc degree while working for Unilever. Then decided to take a PhD to get into pharmaceutical R&D.

### **Career**

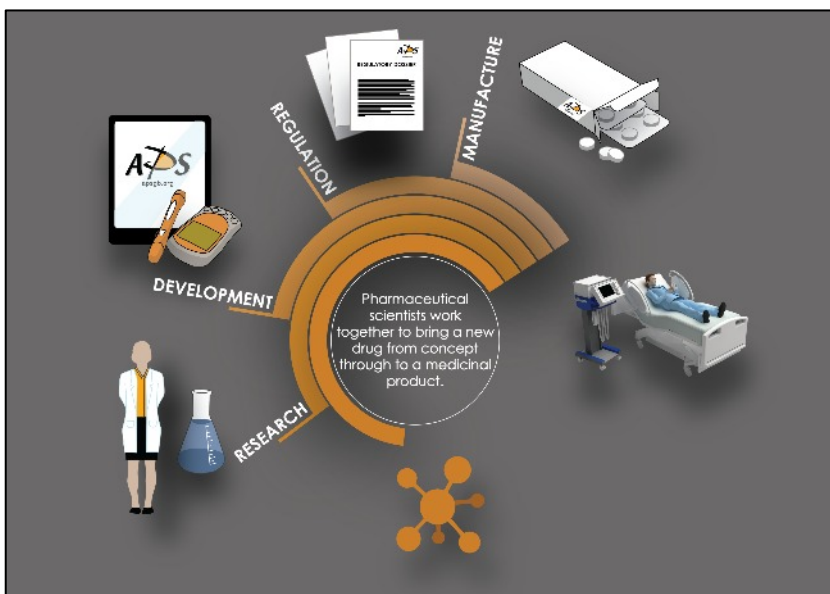
Unilever followed by a major pharmaceutical company after completing his PhD. Mainly an analytical role but had the opportunity to be part of multi-disciplinary groups and to lead CMC and project teams. Moved into a project and portfolio role which led him into his current role.

### **Current role**

Head of Pharmaceutical Development at the Drugs for Neglected Diseases Initiative (DNDI) based in Geneva, Switzerland. Develop drugs for neglected diseases typically in the poorest parts of the world. Projects are run virtually which means DNDI doesn't have laboratories itself but works with various contracting organisations. He enjoys the diversity of working with different partners and learning about the different practices they use to develop new drugs.

### **What is it about Pharmaceutical Sciences that interests you?**

Advice: Take every opportunity to work on different projects and make sure you're continually learning so you increase your career satisfaction and flexibility.



APS developing the scientists and multiple disciplines that combine to turn molecules into medicines