

**Literature and links Goodbye academia?**

Dr. Karin Bodewits and Dr. Philipp Gramlich

NaturalScience.Careers

Rennbahnstraße 99

81929 München

Tel: +49 (0)89 99 016 971

Web: [www.naturalscience.careers](http://www.naturalscience.careers)

Email: [info@naturalscience.careers](mailto:info@naturalscience.careers)

**Table of contents**

**1 Non-academic career info ..... 2**

**2 International job ads/ general info ..... 4**

**3 German job ads ..... 7**

**4 Academic career info ..... 11**

**5 Women in Science ..... 15**

**6 Relevant labour market data for natural scientists ..... 17**

**7 Salary benchmarks ..... 19**

**8 CV resources ..... 22**

**9 Networking, competitions, workshops ..... 23**

**10 Introspection ..... 26**

**11 Netherlands ..... 30**

**12 Literature tips ..... 31**

## 1 Non-academic career info

### Medical science liaison

[www.fromsciencetopharma.com/](http://www.fromsciencetopharma.com/)

Information and training platform for science graduates interested to enter the field of Medical science liaison.

*As customer of NaturalScience.Careers, you use the discount voucher "Germany 123" to receive a 10% discount on their online course.*

### Science management associations

[www.earma.org](http://www.earma.org)

[www.netzwerk-wissenschaftsmanagement.de](http://www.netzwerk-wissenschaftsmanagement.de)

[www.Forschungsreferenten.de](http://www.Forschungsreferenten.de)

All around the field of science management, a database of experts, trainings, conferences., lobbying.

For jobs in science management, refer also to the websites of the individual organisations.

Here a small selection as inspiration: Scholarship-foundations

(<https://studieren.de/stipendien.0.html>), DLR Projektträger, Projektträger Jülich, Research executive agency, Avicenna Studienwerk, Alexander von Humboldt Stiftung, DFG, DAAD, Stiftung der Deutschen Wirtschaft, Volkswagenstiftung, Robert Bosch Stiftung, Gerda Henkel Stiftung, Fritz Thyssen Stiftung. See also [www.stiftungen.org](http://www.stiftungen.org)

### Scientific writing

[schreibdidaktik.de](http://schreibdidaktik.de)

Training, meetings and research on scientific writing.

[www.owl.tu-](http://www.owl.tu-)

[darmstadt.de/fortundweiterbildung/schreibberaterausbildung/schreibberaterausbildung.de.jsp](http://darmstadt.de/fortundweiterbildung/schreibberaterausbildung/schreibberaterausbildung.de.jsp)

University certificate for scientific writing training and coaching.

## Consulting

[www.bdu.de](http://www.bdu.de)

German association of consultants. Database of consultants and jobs as well as lots of info.

## Entrepreneurship

*Please note: even if you're not interested in becoming an entrepreneur yourself, but just want to browse through the scene of start-ups, these sources can be very helpful for you. It's also interesting to check for Venture Capital (VC)- companies: can you listen to a pitching event, can you check their portfolio of ventures that they support?*

<https://high-tech-gruenderfonds.de/de/>

Germany's biggest seed investor. Great list of recently funded companies to browse for potential jobs and collaborations. Please apply openly or just give them a call- in many cases they don't write out their positions.

[www.exist.de](http://www.exist.de)

Founding programme and consultations.

[www.ihk.de/existenzgruendung-und-unternehmensfoerderung](http://www.ihk.de/existenzgruendung-und-unternehmensfoerderung)

The local chapters of the German Chamber of Industry and Commerce offer training and consultation for founders.

[www.existenzgruender.de/DE/Home/inhalt.html](http://www.existenzgruender.de/DE/Home/inhalt.html)

Website of the Germany Ministry of Economics for all aspects around founding.

[www.gruenderlexikon.de](http://www.gruenderlexikon.de)

Step-by-step guide through the founding process with lots of info and links to commercial providers offering help at each step.

<https://start-green.net/>

Network of founders and investors in the green economy. Also give out an award.

<https://www.munich-startup.de/>

<https://www.nanoinitiative-bayern.de/cluster-nanotechnologie/>

## 2 International job ads/ general info

### **Naturejobs**

[www.nature.com/naturejobs/science/](http://www.nature.com/naturejobs/science/)

Large career blog and large collection of internationally relevant job postings from industry and academia.

### **Science Careers**

[www.sciencemag.org/careers](http://www.sciencemag.org/careers)

Like Naturejobs, lots of info and job postings for natural sciences. Is based on the US market, some info therefore needs to be adapted, job section more extensive for US market than for Europe.

### **Doctorat**

[www.doctorat.be/en/](http://www.doctorat.be/en/)

Belgian site with jobs and career-related info for PhD holders.

### **ABG**

[www.abg.asso.fr/en/](http://www.abg.asso.fr/en/)

German-French foundation for PhD holders. Recruitment and career development.

### **Find a PhD/Find a PostDoc**

[www.findapostdoc.com/](http://www.findapostdoc.com/)

[www.findaphd.com/](http://www.findaphd.com/)

[www.postdocjobs.com](http://www.postdocjobs.com)

International platforms for ... you guessed it.

### **Euroscience Jobs**

[www.eurosciencejobs.com](http://www.eurosciencejobs.com)

Focused on job ads for postdocs.

**Pharmiweb**

[www.pharmiweb.com](http://www.pharmiweb.com)

International jobs specifically for the pharma sector.

**Monster.com, stepstone.com, totaljobs.co.uk**

Large general job postings sites- international with local subsites. Some are “mere” aggregator sites for other sources you’ll have to filter more, but might stumble across unexpected finds. Always include sections for career tools like CV checks, blogs about career options etc.

**Brightowl**

<https://brightowl.pro/search/project>

Specialised platform for life science and clinical research experts. It’s not just a passive platform, but can act as a filter- for the applicants as well as for the companies. The first selection round might be done via them (phone interviews) if the employer wishes to do so, you as applicant can let their machine learning algorithm filter postings for you. Don’t allow postings from headhunters so that every job comes directly from the eventual employer.

**euraxess**

<http://ec.europa.eu/euraxess/>

Platform of the European Commission for academic positions.

**European patent office**

[www.epo.org/about-us/jobs/vacancies.html](http://www.epo.org/about-us/jobs/vacancies.html)

**Local platforms of technology parks**

Leiden: <https://leidenbiosciencepark.nl/careers-education/jobs-internships>

[www.cambridgesciencepark.co.uk/](http://www.cambridgesciencepark.co.uk/)

These are just a couple of examples. They often also print a book (you normally can get it for free) and/ or list all companies in the area online (great for open applications!). Examples:

### **Jobs at research institutes**

[www.mpg.de/jobboard](http://www.mpg.de/jobboard)

[www.helmholtz.de/karriere\\_talente/stellenangebote/](http://www.helmholtz.de/karriere_talente/stellenangebote/)

<https://recruiting.fraunhofer.de/Jobs/All>

[www.cnr.it/en/career-opportunities](http://www.cnr.it/en/career-opportunities)

[www.pasteur.fr/en/institut-pasteur/join-us/apply-contact-us](http://www.pasteur.fr/en/institut-pasteur/join-us/apply-contact-us)

### **Regulatory affairs**

[www.raps.org/](http://www.raps.org/)

Regulatory affairs professional society, offering job ads and certifications.

[www.topra.org/](http://www.topra.org/)

Specialised site for job seekers in the field of regulatory affairs.

### **Recruiters**

<https://ckscience.co.uk>

British recruiter for life science and clinical trial professionals.

[www.kellyservices.de/de/](http://www.kellyservices.de/de/)

International recruiter for life sciences.

[www.hays.de](http://www.hays.de)

International recruiter for lots of specialisations.

### 3 German job ads

#### **jobvector.de**

Mainly industry jobs in Germany. For this segment it is becoming a pretty established “standard”.

#### **National newspapers**

<https://stellenmarkt.faz.net/>

<http://stellenmarkt.sueddeutsche.de/>

Large job ads section with good filtering function. As high-class daily newspaper, it naturally caters well for the highly educated job sectors.

#### **kandidatentreff.de**

THE platform for all jobs and info around patent law. Please note that many patent law offices specifically mention on their homepage that they welcome open applications.

#### **Berufenet**

<https://berufenet.arbeitsagentur.de/berufenet/faces/index?path=null>

It's from the German „Arbeitsagentur“ and contains an extremely large collection of job postings due to the central tasks of the Agentur.

#### **Aggregator sites**

[opportuno.de](http://opportuno.de), [jobrobot.de](http://jobrobot.de)

Large general job postings sites for Germany. As they are aggregator sites for other sources, you'll have to filter more, but might also stumble across unexpected finds.

#### **academics.de**

THE portal (info and jobs) for academic jobs in Germany. Lots of very insightful texts for career starters, not only in the academic world.

#### **German patent office**

[www.dpma.de/amt/stellenanzeigen/index.html](http://www.dpma.de/amt/stellenanzeigen/index.html)

### **Pharmajobs.com**

Aggregator site for jobs which are somehow related to pharma industry in a broad sense.

### **Listserv Uni Heidelberg**

<http://listserv.uni-heidelberg.de/science-jobs-de/alle-index.html>

List of mostly PhD and postdoc positions plus a few administrative positions in academia, mostly from Germany.

### **SciTec career**

[www.scitec-career.com/scitec/main.view](http://www.scitec-career.com/scitec/main.view)

Science and engineering job posts in German-speaking countries, mostly industry. Geographical filter function only at country level.

### **Chemie.de**

[www.chemie.de/jobs/](http://www.chemie.de/jobs/)

Relatively short list with jobs in chemistry, but therefore with excellent filtering function.

### **Bionity.com**

[www.bionity.com/de/jobs/alle.html](http://www.bionity.com/de/jobs/alle.html)

Part of Chemie.de with identical structure. A short list of jobs in biomedical fields, but again with excellent filtering function.

### **Local platforms of technology parks**

Munich: [www.bio-m.org/stellenboerse.html](http://www.bio-m.org/stellenboerse.html)

Regensburg: <http://biopark-regensburg.de/de/stellenmarkt.html>

They often also print a book (you normally can get it for free) and/ or list all companies in the area online (great for open applications!). Examples:

Hessen: [www.hessen-biotech.de/dynasite.cfm?dsmid=13852](http://www.hessen-biotech.de/dynasite.cfm?dsmid=13852)

Biotech Bavaria [www.biotech-bavaria.de/fileadmin/user\\_upload/Publikationen/2013\\_14\\_Bavarian\\_Biotech\\_Report\\_web\\_v5.pdf](http://www.biotech-bavaria.de/fileadmin/user_upload/Publikationen/2013_14_Bavarian_Biotech_Report_web_v5.pdf)

STERN region (southwestern Germany): [www.bioregio-stern.de/de/angebot/unternehmensdatenbank](http://www.bioregio-stern.de/de/angebot/unternehmensdatenbank)

Baden-Württemberg: here's a useful and searchable database of the clusters of Baden-Württemberg: [www.clusterportal-bw.de/clusterdaten/clusterdatenbank/clusterdb/Cluster/list/](http://www.clusterportal-bw.de/clusterdaten/clusterdatenbank/clusterdb/Cluster/list/)

### German Public Services

[www.bund.de](http://www.bund.de)

[www.interamt.de](http://www.interamt.de)

Consult also the websites of the ministries of education (e.g. [www.bmbf.de](http://www.bmbf.de) or the regional ministries).

### Consulting jobs

[www.consulting-jobs.de/](http://www.consulting-jobs.de/)

[www.consulting-stellen.de](http://www.consulting-stellen.de)

[www.jobconsult.de/jobconsultde/jobsuche/](http://www.jobconsult.de/jobconsultde/jobsuche/)

### Individual Employers

#### Large industry for biologists & chemists

Please note that some of the big players prefer to use their own company job platforms for applications instead of job ads to platforms. In this case you'll have to search their individual sites. Of course this list is just an appetizer and does not attempt to be a complete one.

<https://karriere.novartis.de/jobboerse/> (Novartis group)

[www.roche.com/de/careers/germany/de\\_your\\_job.htm](http://www.roche.com/de/careers/germany/de_your_job.htm) (Roche)

[www.qiagen.com/de/careers/](http://www.qiagen.com/de/careers/) (Qiagen)

<https://jobs.boehringer-ingenelheim.com/stellenmarkt/stellensuche> (Boehringer Ingelheim)

<https://pg.taleo.net/careersection/10000/jobsearch.ftl> (Procter & Gamble)

[www.basf.com/de/de/company/career/jobs.html](http://www.basf.com/de/de/company/career/jobs.html) (BASF)

[www.karriere.bayer.de/de/](http://www.karriere.bayer.de/de/) (Bayer)

[www.bio-rad.com/de-de/corporate/careers](http://www.bio-rad.com/de-de/corporate/careers) (Bio- Rad)

[www.clariant.com/de/Careers/Jobs-Application/Job-Openings/Global-Job-Openings](http://www.clariant.com/de/Careers/Jobs-Application/Job-Openings/Global-Job-Openings)  
(Clariant)

<http://perspektiven.eppendorf.com/jobboerse-bewerbung/jobboerse/> (Eppendorf)

[www.merck.de/de/karriere/karriere.html](http://www.merck.de/de/karriere/karriere.html) (Merck)

[www.sanofi.de/l/de/de/layout.jsp?scat=CF143496-AB12-4984-A41B-A9FA7D8C37D9](http://www.sanofi.de/l/de/de/layout.jsp?scat=CF143496-AB12-4984-A41B-A9FA7D8C37D9)  
(Sanofi)

### **Technical & management consultancy**

Most consultancy companies welcome open applications. Here a few ideas of companies to look into.

#### Large management consultant firms

[www.mckinsey.de/](http://www.mckinsey.de/) (McKinsey)

<http://karriere.bcg.de/bewerben/jetzt-bewerben-consulting.aspx> (BCG)

<http://join.rolandberger.com/de/jobs/> (Roland Berger)

<https://home.kpmg.com/de/de/home/karriere.html> (KPMG)

[www.accenture.com/de-de/careers](http://www.accenture.com/de-de/careers) (accenture)

#### Technical consultants

[www.basycon.de/de/web/basycon/karr\\_karr](http://www.basycon.de/de/web/basycon/karr_karr) (Basycon)

[www.parexel.com/company/careers](http://www.parexel.com/company/careers) (Parexel)

### **Testing labs**

[www.vup.de/](http://www.vup.de/)

German association of testing labs, more than 1000 registered companies, which you can search in a database. Also provides lots of background info about the sector in general.

## 4 Academic career info

### International

#### **European University Institute**

[www.eui.eu/Home.aspx](http://www.eui.eu/Home.aspx)

Huge collection of data on all aspects of university life in all European countries. A must-read before moving countries.

#### **European Funding Guide**

[www.european-funding-guide.eu/](http://www.european-funding-guide.eu/)

Listing of all European funding for all disciplines and experience levels from BSc. to PhD studies.

#### **EMBO Funding and Awards**

[www.embo.org/funding-awards](http://www.embo.org/funding-awards)

Lists a wide variety of funding opportunities via EMBO (European Molecular Biology Organisation).

### German

#### **DFG Research Explorer**

[www.research-explorer.de/research\\_explorer.de.html](http://www.research-explorer.de/research_explorer.de.html)

List of all research institutes in Germany. Good filter functions to the relevant links.

#### **Kisswin**

[www.kisswin.de](http://www.kisswin.de)

Seminars and funding info for academic careers in Germany. Site doesn't seem to be fully updated, unfortunately.

#### **Research in Germany**

[www.research-in-germany.org/en](http://www.research-in-germany.org/en)

Information platform of the Federal Ministry of Education and Research. Links to all relevant funding platforms.

**Deutscher Hochschullehrerbund**

<https://hlb.de/startseite/>

The association for professors at Universities of Applied Science (Fachhochschule). Lobby group for existing professors. Info and seminars for people interested in entering this job.

**Hochschulrektorenkonferenz**

[www.hrk.de/mitglieder/stellenanzeigen-der-hochschulen/](http://www.hrk.de/mitglieder/stellenanzeigen-der-hochschulen/)

List of all academic positions written out in Germany. No search function.

**DAAD scholarship database**

[www.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-database/?status=&origin=&subjectGrps=&daad=&q=&page=1&back=1](http://www.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-database/?status=&origin=&subjectGrps=&daad=&q=&page=1&back=1)

You can refine for eligibility depending on your level, subject and country of origin.

**Stipendienlotse**

[www.stipendienlotse.de/](http://www.stipendienlotse.de/)

Database of scholarships, only up to the level of PhD scholarships. Run by the German Federal Ministry of Education and Research. Filter functions for target country and special target groups (e.g. for people with disability or for orphans).

**Elfi**

[www.elfi.info/index.php](http://www.elfi.info/index.php)

Database of potential third party funding. You need to be part of an institution which is a member of this network to use this database.

**Kooperationsstelle EU der Wissenschaftsorganisationen**

[www.KoWi.de](http://www.KoWi.de)

Part of the DFG. Offers training and consultation regarding EU-funded projects.

**Deutsches Forschungshandbuch**

[www.lehmanns.de/shop/sozialwissenschaften/34872512-9783981527117-deutsches-forschungshandbuch-2016-2017](http://www.lehmanns.de/shop/sozialwissenschaften/34872512-9783981527117-deutsches-forschungshandbuch-2016-2017)

A standard reference book on individual and project funding (Germany, EU), prizes and foundations.

**Drittmittel für die Forschung, Stefanie Preuß**

[www.springer.com/de/book/9783658164515](http://www.springer.com/de/book/9783658164515)

Practical guide to third party funding.

**Coachingnetz Wissenschaft**

[www.coachingnetz-wissenschaft.de/](http://www.coachingnetz-wissenschaft.de/)

A network of coaches specifically for scientists.

**Good scientific practice****DFG: Sicherung guter wissenschaftlicher Praxis (German/English)**

[http://www.dfg.de/foerderung/grundlagen\\_rahmenbedingungen/gwp/](http://www.dfg.de/foerderung/grundlagen_rahmenbedingungen/gwp/)

Most authoritative source for GSP in Germany, others refer to this

**European Science Foundation: Forum on research integrity**

<http://archives.esf.org/coordinating-research/mo-fora/research-integrity.html>

Report and meetings on research integrity

**ORI Office of research integrity (USA)**

<https://ori.hhs.gov/>

Very detailed information from the US Department of Health and Human Services. Among other sources, you can download the extensive handbook:

<https://ori.hhs.gov/sites/default/files/rcrintro.pdf>

**Doing global science**

<http://www.interacademies.net/File.aspx?id=29738>

A handbook originating from the World Conference on Research Integrity. This conference has also led to the:

**Singapore Statement**

<http://www.singaporestatement.org/>

**NIH: Research Cases for Use by the NIH Community**

<https://oir.nih.gov/sourcebook/ethical-conduct/responsible-conduct-research-training/annual-review-ethics-case-studies/research-cases-use-nih-community#theme15>

Online Ethics Center for Engineering and Science

<http://www.onlineethics.org/>

Case studies with questions related to GSP

## 5 Women in Science

### **Margarete von Wrangell**

<http://margarete-von-wrangell.de/>

Habilitation programme Baden Württemberg for women in science.

### **Rein in die Hörsäle**

[www.frauen-fh.de/frauenprogramme/rein-in-die-hoersaele.html](http://www.frauen-fh.de/frauenprogramme/rein-in-die-hoersaele.html)

Bavarian programme for women interested in a professorship at a University of Applied Science

### **Minerva Programme**

[www.mpg.de/86162/minerva\\_programm](http://www.mpg.de/86162/minerva_programm)

Max Planck society: W2 positions for female scientists

### **Elisabeth Schiemann Kolleg**

[www.mpg.de/8009591/Elisabeth-Schiemann-Kolleg](http://www.mpg.de/8009591/Elisabeth-Schiemann-Kolleg)

A mentoring and networking programme for female junior group leaders, in order to bring them into positions of directors or full professors.

### **W2/W3 Programme of the Helmholtz society**

[www.helmholtz.de/karriere\\_talente/foerderprogramme/w2w3\\_programm/](http://www.helmholtz.de/karriere_talente/foerderprogramme/w2w3_programm/)

Well-equipped W2/W3 professorships for female scientists.

### **Talenta**

[www.iaf.fraunhofer.de/en/press/newsarchive/talenta.html](http://www.iaf.fraunhofer.de/en/press/newsarchive/talenta.html)

Two-year programmes to give female scientists working at Fraunhofer a career boost. In this time they get support to take time to work on their careers and can attend workshops and mentoring activities.

**Projekt PROFessur**

<http://professur.fh-hannover.de/index.html>

For women working in industry, who are interested in a professorship at a University of Applied Science (Fachhochschule).

**Datenbank Fachhochschulprofessur**

[www.lakof-bw.de/fuer-hochschulen/datenbank-professorin-hawdhbw/](http://www.lakof-bw.de/fuer-hochschulen/datenbank-professorin-hawdhbw/)

Contact- and information exchange for women in professorship at Universities of Applied Science.

## 6 Relevant labour market data for natural scientists

In Germany in 2014, 82% of the MSc graduates started a PhD, which was below the long-term average of 90%. The labour market was again more difficult for job starters than the year before, which can be seen when looking at the numbers of job seekers (13%) and the numbers of those who begin to work on a temporary contract (23%).<sup>1</sup>

73% of BSc students in chemistry continue to study. The number of PhDs has increased by 34% to 1758 in the last ten years.<sup>2</sup>

Following their graduation, 40% of chemists go directly into industry.<sup>3</sup>

6% of MSc graduates were unemployed. 31% of all graduates started into the chemical or pharmaceutical industry, 9% into other industries. 15% go abroad.<sup>4</sup>

Between 2002 and 2012 the number of working academics has increased from 5.5 to 8.0 mio in Germany (+44%). Unemployment 2.2% for chemists, 2.5% overall average for academics and 4.6% for biology/biochemistry/biotechnology. Number of natural science graduates grew from 18900 in 2003 to 42000 in 2012.<sup>5</sup>

Number of co-workers in the biotech industry stagnated at around 17900. Lab instrumentation: Increase in the number of co-workers from 35000 to 41700. Reason for this is the strong domestic demand in Germany as well as growing regulatory requirements.<sup>6</sup>

Since 2007, the researcher population went up by 20% globally.

2015: 7319 First year chemistry students, 40% women, 10% foreigners. In total and including PhD students there were 37000 chemistry students in Germany (8900 PhD students)- a new record. Duration PhD: Average: 4.35 years, median 4 years. 17% changed city for the PhD, 11% started into the labour market without PhD. 19% start with a temporary contract at a uni or research institute in Germany after their PhD, which is taken as a sign of a "parking position" or secondary employment market (down from 23% the year before). The number of job-seekers after graduation increased from 13 to 15%.<sup>7</sup>

Open positions decreased by 14% in the year to 2013 for chemistry and by 9% for biology.<sup>8</sup>

<sup>1</sup> *Nachrichten aus der Chemie* 2015, 832

<sup>2</sup> *Nachrichten aus der Chemie* 2016, 365

<sup>3</sup> [www.gdch.de/fileadmin/downloads/Ausbildung\\_und\\_Karriere/Karriere/PDF/GDCh-BerufseinstiegWeb.pdf](http://www.gdch.de/fileadmin/downloads/Ausbildung_und_Karriere/Karriere/PDF/GDCh-BerufseinstiegWeb.pdf)

<sup>4</sup> [www.gdch.de/fileadmin/downloads/Ausbildung\\_und\\_Karriere/Karriere/PDF/GDCh-Statistik2014-webV2.pdf](http://www.gdch.de/fileadmin/downloads/Ausbildung_und_Karriere/Karriere/PDF/GDCh-Statistik2014-webV2.pdf)

<sup>5</sup> [www.arbeitsagentur.de/web/wcm/idc/groups/public/documents/webdatei/mdaw/mjmw/~edisp/l6019022dstbai659616.pdf](http://www.arbeitsagentur.de/web/wcm/idc/groups/public/documents/webdatei/mdaw/mjmw/~edisp/l6019022dstbai659616.pdf)

<sup>6</sup> *Nachrichten aus der Chemie*, 2016, 625 and 633.

<sup>7</sup> *Nachrichten aus der Chemie*, 2016, 799.

<sup>8</sup> [www.wila-arbeitsmarkt.de/blog/2014/11/26/mythos-mint-fachkr%C3%A4ftemangel/](http://www.wila-arbeitsmarkt.de/blog/2014/11/26/mythos-mint-fachkr%C3%A4ftemangel/)

You can get more info about employers at:

[www.glassdoor.com](http://www.glassdoor.com)

[www.kununu.com](http://www.kununu.com)

Watch out: In many cases, these sites are used to vent frustration, so don't get put off by a single, very negative comment.

## 7 Salary benchmarks

### General remarks

The following pages refer to the German labour market, many general trends can be useful for an understanding of the situation in international settings.

If you have to name a salary benchmark, then include expected bonuses and extras and clearly state that this is the case, e.g.: “My salary expectation is 62 000€ gross annual salary including bonuses.” That way you make sure that both sides talk about the same thing.

When you research salary benchmarks for yourself, then try to find out whether they include bonuses or not, otherwise you’ll have a factor of uncertainty of 5-20%. Where possible, we have mentioned which of these sources include the bonus or not. Question all sources regarding how well they fit your situation: region, qualification level, field of study.

Finding your own salary benchmark requires more than just one piece of information, you’ll need to get a feeling of how all individual influencing factors will play together in your situation.

### Jobvector

[www.jobvector.de/karriere-ratgeber/bewerbung/verguetung-der-industrie/](http://www.jobvector.de/karriere-ratgeber/bewerbung/verguetung-der-industrie/)

A very large collection of salary benchmarks for natural scientists and engineers. You can get an idea of the influence of education level, job field, company size, employer type and many more. It is not stated whether bonuses are included in the benchmarks, presumably they are not.

### Public services

<http://oeffentlicher-dienst.info/tv-l/west/>

This is an overview over the individual salary scales. Note that although it seems like all set in stone, you can negotiate an important part of your salary for jobs within the public sector: experience levels can either include your experience as PhD student or not, which makes several hundred € difference in your monthly salary.

**GDCh- German Chemical Society**

[www.gdch.de/ausbildung-karriere/karriere-und-beruf/gehaltsinformationen/einstiegsgehaelter.html](http://www.gdch.de/ausbildung-karriere/karriere-und-beruf/gehaltsinformationen/einstiegsgehaelter.html)

[www.gdch.de/fileadmin/downloads/Ausbildung\\_und\\_Karriere/Karriere/PDF/GDCh-BerufseinstiegWeb.pdf](http://www.gdch.de/fileadmin/downloads/Ausbildung_und_Karriere/Karriere/PDF/GDCh-BerufseinstiegWeb.pdf)

An informative booklet which includes a section on salaries. Here you'll get the figures for the union wages as well, which are (incl. all bonuses) 74 825€ for PhD chemists from the second year on (VAA Tarifvertrag).

The salaries mentioned by GDCh are "all inclusive", meaning they include all extra payments like bonuses, Christmas package etc.

All salaries mentioned by GDCh include all chemists, not only the ones working at employers following the unionised wages (which VAA is citing). For more precise info on the chemistry union wage, see also:

[www.boeckler.de/pdf/p\\_ta\\_tarife\\_chemische\\_industrie\\_2016.pdf](http://www.boeckler.de/pdf/p_ta_tarife_chemische_industrie_2016.pdf)

If you fill in the "Gehaltsumfrage" of the GDCh, which is done once a year, you'll get access to the exact data of this study.

**BIO Deutschland**

[www.biodeutschland.org/files/content/medien/pressemitteilungen/2017/Gehaelter\\_Biotechnologie\\_2016.pdf](http://www.biodeutschland.org/files/content/medien/pressemitteilungen/2017/Gehaelter_Biotechnologie_2016.pdf)

Salary benchmarks for the biotech industry. The figures include bonuses and are differentiated with respect to job type (department) and years of experience.

**Academics**

[www.academics.de/wissenschaft/was\\_chemiker\\_verdienen\\_37377.html](http://www.academics.de/wissenschaft/was_chemiker_verdienen_37377.html)

[www.academics.de/wissenschaft/gehalt-biologe\\_58258.html](http://www.academics.de/wissenschaft/gehalt-biologe_58258.html)

Articles on the salaries of chemists and biologists, respectively. Influencing factors are explained and substantiated with statistical figures, which give good hints at the salary benchmark for your individual situation.

PhDs in biology can, in the long run, expect annual salaries of around 70 000€ when working for the private sector. The PhD title adds on average of 10% to the salary of a biologist.

Career starters in the chemical industry (incl TAs? Article does not state this) get starting salaries of 52 200€ on average. At research institutes, the average is 38 450€, the overall average is 43 700€. On average (not only career starters), MSc chemists get 57 000€, PhD chemists 63 000€

Those working for ten years as MSc chemistry earn 70 000€ on average. Leadership responsibility is acting as a big plus on the pay slip. MSc chemists with staff responsibility earn 92 800€ on average, those without 58 500€.

### **lohnspiegel.de**

Average salaries, generated through a long-term online survey. Are refined to Germany East/West and Men/Women for hundreds of job types.

### **Arbeitsagentur**

Median starting salary of chemists (2012, all job fields) 4140€.

*Last checked: December 12th, 2018*

## 8 CV resources

### **Europass**

[www.europass-info.de/dokumente/lebenslauf/](http://www.europass-info.de/dokumente/lebenslauf/)

Description of how a CV should look like in all European languages. Watch out, the very same document describing CVs is only translated but not adjusted to local customs.

Example: Picture, it says here that you should only include where you are asked for. This is wrong, in Germany it is not explicitly but implicitly asked from you, so in this case should be included. However, the description does indeed include some useful tips. Includes a tool to make a CV out of your data, but this will of course look incredibly static and even stupid, as it is clearly visible that you are just using a template and don't have the maturity to write a CV by yourself.

### **European CV**

[www.modelocurriculum.net/wp-content/eu-cv\\_en.pdf](http://www.modelocurriculum.net/wp-content/eu-cv_en.pdf)

A brief and clear description of the general CV structure in Europe.

## 9 Networking, competitions, workshops

### Networking events

#### UnternehmerTUM

[www.unternehmertum.de/enight.html](http://www.unternehmertum.de/enight.html)

Interested in founding a company, promoting it or to join an existing start-up? In this event ideas meet venture capital meet people eager to join. Strongly tech-based (IT, engineering).

#### Job fairs

List of German career fairs

[www.mariecuriealumni.eu/posts/career-fairs-germany](http://www.mariecuriealumni.eu/posts/career-fairs-germany)

Naturejobs career expo

[www.nature.com/naturejobs/career-expo/](http://www.nature.com/naturejobs/career-expo/)

PhD talent Career fair

[www.phdtalent.org/program.php](http://www.phdtalent.org/program.php)

ESOF: Euroscience Open Forum

[www.esof.eu/en/](http://www.esof.eu/en/)

European conference focused on career-related topics for researchers.

bcf career fairs

For life scientists.

[www.bfcareerevent.nl/](http://www.bfcareerevent.nl/)

jobvector career days

[www.jobvector.de/jobvector-career-day.html](http://www.jobvector.de/jobvector-career-day.html)

Biocontact (Heidelberg)

[www.biocontact.info/](http://www.biocontact.info/)

IKOM (TU München)

[www.ikom.tum.de/de/](http://www.ikom.tum.de/de/)

careers in...

[www.bshcon.com/recruiting-events/careers-in/](http://www.bshcon.com/recruiting-events/careers-in/)

T5 career fair

[www.t5-karriereportal.de/jobmesse/](http://www.t5-karriereportal.de/jobmesse/)

### Trade fairs

Trade fairs are great places to meet people, who are often quite happy to chat about their jobs or their companies in general.

Analytica

[www.analytica.de/index.html](http://www.analytica.de/index.html)

Biotechnica

[www.labvolution.de/de/biotechnica.xhtml](http://www.labvolution.de/de/biotechnica.xhtml)

Achema

[www.achema.de/de/home.html](http://www.achema.de/de/home.html)

### Networking organisations

#### **Thesis.de**

Organisation of PhD students and PhD holders, offering networking opportunities and workshops for fee-paying members (40€/a). Unclear from their homepage if they are still really active (e.g. last annual meeting 2014).

#### **GAIN: German academic international network**

[www.gain-network.org/home](http://www.gain-network.org/home)

Network offering meetings and workshops for German academics in North America.

### **Forum Mentoring**

[www.forum-mentoring.de/](http://www.forum-mentoring.de/)

Database of all mentoring programmes for women in science in Germany.

### **Biotechnology YES competition**

[www.yescompetitions.co.uk](http://www.yescompetitions.co.uk)

Join for three days of working out a business plan for a (fictitious) biotech company in a team, while learning directly and in workshops from experts in the field of entrepreneurship.

### **Science festivals**

[www.big.uk.com/festivals/](http://www.big.uk.com/festivals/) (UK)

<https://sciencefestivals.org>

## 10 Introspection

These tools are designed to help you structure your career development. You assess your development, skills and interests, set goals for your own future and track your progress. You also receive lots of helpful links and resources to help you with each step. It is important to use it as a long-term companion, like a coach or mentor, and not just once like a questionnaire you fill in and hope for a definite answer for your future. These formats can also help you to describe your qualities to employers in your documents as well as during the interview.

An article about IDPs (individual development plans):

[www.nature.com/nature/journal/v531/n7594/full/nj7594-405a.html](http://www.nature.com/nature/journal/v531/n7594/full/nj7594-405a.html)

### myIDP by Science Careers

<http://myidp.sciencecareers.org/>

You fill in a questionnaire about your skills, interests and values, which is matched to various job fields giving you a ranking of where your skills and interests are best catered for. Job fields are clustered together into 20 categories, e.g. “Drug/device approval and production”. Biomedical research is the main but not exclusive focus. Large collection of useful links. Can help you to structure your skills development and other professional goals. No cost.

**Strength:** Takes lots of individual aspects of your strengths, interests and values into consideration and matches them in a smart way with a wide range of job types.

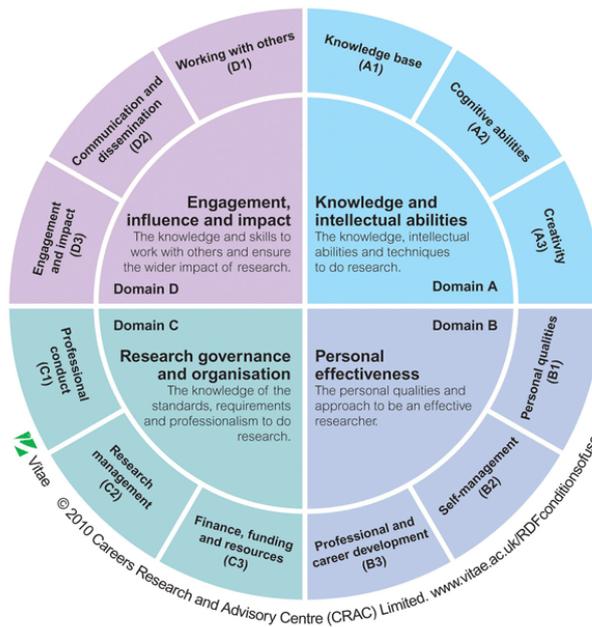
**Weakness:** Although it is supposed to be for all job types, you can feel the strongly academic background. For example customer contact, one of the most decisive factors in determining how your job will look like, is not part of the consideration. Also, your values are interrogated in the questionnaire but not integrated into the results.

### RDF by Vitae

[www.vitae.ac.uk](http://www.vitae.ac.uk)

Helps you structure and monitor your progress in a broad range of individual development fields listed in the table below. You enter evidence and action plans to each point you find relevant to your development. The RDF can be used to structure this development, for example by giving you overviews over the next steps you have to take. 24 GBP subscription fee per year.

Apart from the PDF, the Vitae website offers a plethora of info for researchers.



**Strength:** Huge collection of useful links and texts in each section.

**Weakness:** Does not give directions of job types you might go to professionally (alternative career options) or interrogate into you interests- it merely monitors your progress on the skills.

### Core competencies of the National Postdoc Association (NPA)

[www.nationalpostdoc.org/?CoreCompetencies](http://www.nationalpostdoc.org/?CoreCompetencies)

Info and self-assessment on the six core competencies

1. Discipline-specific conceptual knowledge
2. Research skill development
3. Communication skills
4. Professionalism
5. Leadership and management skills
6. Responsible conduct of research

Furthermore, the NPA offers a range of texts and events for postdocs.

### California CareerZone

<https://career.berkeley.edu/Plan/KnowYourself>

Tools to formulate your ideal job description (and discover many things on the way) based on your strengths, values, interests and personality. Works best in a peer-to-peer setting.

[www.cacareerzone.org/](http://www.cacareerzone.org/)

Self-assessment tools as well as an extensive collection of job fields with detailed descriptions with regards to requirements, perspectives and many more. US-centered, but a great inspiration for any job seeker.

### DocPro

[www.mydocpro.org/en](http://www.mydocpro.org/en)

PhD holders can fill in a profile consisting of 24 different skills and self-assess into three different levels. Employers post such profiles about various positions they try to fill, so that both sides can understand each other's expectations more clearly and can communicate more effectively with each other. In a second stage, applicants can fill in "proof" of their self-assessments, which will make it easier to communicate their skills during e.g. job interviews.

### Prospects planner

[www.prospects.ac.uk/career-planner/](http://www.prospects.ac.uk/career-planner/)

You enter info on four fields (general, skills, motivation and desires) and get matches with job types. Unfortunately you get many generic answers, although you enter your professional field in your profile before starting the test. I as a chemist got "Occupational Psychologist" as one of my top options. However, it can still give you unexpected inspiration. The job types are explained in detail.

### Competence and skill tool Radboud University, Netherlands

[www.rimls.nl/junior-researchers/phd-program/transferable-skills/](http://www.rimls.nl/junior-researchers/phd-program/transferable-skills/)

A relatively simple, excel-based tool for self-assessment of relevant skills for researchers.

### Other methods

#### Pen-and paper method

<http://biosciencecareers.org/career-choice>

#### Cambridge life coaching introspection

Make chart with past experiences:

**Achievement Outcomes   Skills/   Qualifications Experience   Likes   Dislikes**

List your achievements and fill in the other fields for it. Then answer the following questions and follow the advice:

- Which of these would you like to bring into your career and how might you achieve this?

- To identify any gaps in your skills/achievements. Think about what you need that is missing, and how you might work to obtain these.
- To keep a journal of your skills and achievements. This can be useful when writing your CV or preparing for job interviews.
- What kind of future might you be creating for yourself, based upon how you are behaving today?

## 11 Netherlands

### **BioL Ned van studie naar beroep**

<http://home.kpn.nl/d.siebers1/biolned/framevac.html>

Large collection of articles on all relevant info for job starter from biological sciences in the Netherlands.

### **Academic transfer**

[www.academictransfer.com/](http://www.academictransfer.com/)

Dutch website for academic jobs.

## 12 Literature tips

### **Career Planning for Research Bioscientists- Sarah Blackford**

Insightful book for career planning specifically for life scientists. She takes a round from introspection, planning, decision making, job market, application to interviews and finishes by giving 20 career stories, which she comments through the glasses of a career consultant. The book is written in 2012, so some of the links should better be checked from her homepage directly: [www.biosciencecareers.org](http://www.biosciencecareers.org)

### **Jobvector Karrieretrends**

[www.jobvector.de/produkte.html?name=Karrieretrends](http://www.jobvector.de/produkte.html?name=Karrieretrends)

German

Can be bought for 10-15 € online or obtained for free when leaving your personal details at a career fair. Very broad information on various aspects of career planning, alternative career options, salary benchmarks, application tips etc.

### **Perspektiven-Berufsbilder von und für Biologen und Biowissenschaftler- vbio**

[www.vbio.de/der\\_vbio/presse\\_\\_publikationen/publikationen/perspektiven\\_\\_berufsinformationen/](http://www.vbio.de/der_vbio/presse__publikationen/publikationen/perspektiven__berufsinformationen/)

German

A broad range of (alternative) career options for biologists and other scientists are presented.

### **Promotion - Postdoc - Professur. Karriereplanung in der Wissenschaft- Mirjam Müller**

[www.campus.de/promotion\\_postdoc\\_professur-8559.html](http://www.campus.de/promotion_postdoc_professur-8559.html)

German

Very knowledgeable guide to a career in academia. Focused on how to tackle the various postdoc phases until you reach independence. Not specifically targeted to natural scientists, but general points are relevant to natural scientists as well. Very good collection of links and short descriptions on various third party funding bodies, scholarships etc.

**Auf dem Weg zur Professur. Die Postdoc Fibel 2016- Academics Verlag**

German

Compact overview over all the framework you need to know for an academic career in Germany.

**111 Arbeitgeberfragen im Vorstellungsgespräch- Elke Eßmann**

[www.amazon.de/111-Arbeitgeberfragen-Vorstellungsgespr%C3%A4ch-Pluspunkte-Stolpersteine/dp/3442164990](http://www.amazon.de/111-Arbeitgeberfragen-Vorstellungsgespr%C3%A4ch-Pluspunkte-Stolpersteine/dp/3442164990)

German

A brief preparation to tackle the most common interview questions and short discussions of their implications. Valuable regardless of whether you sit on the table as employer or future employee.

**TUM Career Guide (for international students)**

[www.together.tum.de/aktuelles/veroeffentlichungen/tum-career-guide/#](http://www.together.tum.de/aktuelles/veroeffentlichungen/tum-career-guide/#)

Very knowledgeable guides through all stages of the application process. Worthwhile read- also for German students. Try getting a free copy if somehow associated with TUM.

**Science Mag Career booklets**

[http://sciencecareers.sciencemag.org/tools\\_tips/outreach/booklets](http://sciencecareers.sciencemag.org/tools_tips/outreach/booklets)

Short and free booklets on a variety of topics. Some info needs to be adapted as it describes the situation in the US, but overall these booklets are a rich source of information.

**Networking for Nerds- Alaina G Levine**

<http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118663586.html>

You don't have to be a nerd to enjoy this book, it's written by a science graduate, but can be applied by any (non-) nerdy (non-) scientist interested in enhancing their opportunities through networking. Book gives many ideas but does not distinguish (it's all soooooo fantastic...).

**Per Netzwerk zum Job- Ute Blindert**

[www.campus.de/buecher-campus-verlag/karriere/beruf-erfolg/per\\_netzwerk\\_zum\\_job-9657.html](http://www.campus.de/buecher-campus-verlag/karriere/beruf-erfolg/per_netzwerk_zum_job-9657.html)

German

Book on networking, particularly for career starters with a university degree. Gives a broad perspective on many aspects of networking like social media, personal meetings and general information on the workings of the labour market.

**Getting to yes- Roger Fisher and William Ury**

[www.amazon.de/Getting-Yes-Negotiating-Successful-Negotiation/dp/1844131467](http://www.amazon.de/Getting-Yes-Negotiating-Successful-Negotiation/dp/1844131467)

A classical book on negotiations in general. The authors come from big-politics negotiations, but the book casts a broader view on negotiations in a very general sense, as the principles laid out are broadly applicable.

**biosciencecareers.org**

Extensive collection of links and info from Wiley author Sarah Blackford specifically for life scientists interested in all sorts of career-related info.

**NaturalScience.Careers**

Our Library with further book recommendations and resources:

<http://naturalscience.careers/sciencemums-for-female-scientists/sciencemums-library/>

and our list of alternative jobs, the detailed descriptions will be increased over the next weeks and months.

<http://naturalscience.careers/alternative-careers-for-natural-scientists/>