

Job-search basics: how to convert a CV into a resume

Derek Haseltine

For broad scientific careers, resumes serve as critical job-search tools. This Commentary provides a strategy for writing an effective resume for searching for a nonacademic job.

The present employment landscape, specifically in terms of career prospects for scientists trained in the biomedical field, is vastly different from what it was in decades past. The number of candidates with an advanced degree who are transitioning into tenure-track faculty positions continues to decrease, whereas science-related occupations that do not directly involve research are on the rise (Biomedical Research Workforce Working Group Draft Report, National Institutes of Health, June 2012; http://acd.od.nih.gov/bmw_report.pdf). These diverse career paths in the private, government, higher-education and nonprofit sectors provide scientists opportunities to apply various skills acquired through their academic training while making meaningful contributions to society (NIGMS Strategic Plan for Training, National Institute of General Medical Sciences, National Institutes of Health; www.nigms.nih.gov/Training/StrategicPlan.htm). Although a curriculum vitae (CV) works well in academic settings to communicate an applicant's scientific and professional merits for initial appointment and promotion, it is a less-effective marketing tool for highlighting essential skills and competencies for broad scientific careers.

Resume defined

Tackling the CV-to-resume conversion first requires an understanding of the utility of these two distinct documents. A CV offers a

complete career history with specific information on various professional activities, including education and training, employment, invited talks, teaching, academic honors, awards and commitments to professional service. Publications serve as the focal point of a CV and demonstrate a person's intellectual contributions and scholarly productivity. When used in a search for an academic job, a CV is typically supplemented with additional materials that may include such items as a research plan, teaching philosophy or portfolio and letters of recommendation. Assembled together as a package, these supporting documents provide a more in-depth analysis of previous accomplishments, future research plans and evaluation of performance that a CV, on its own, does not sufficiently address.

A resume, in contrast, offers an annotated and abridged career summary. For nonacademic positions, supporting documents such as those noted above typically do not accompany an application. Therefore, a resume must succinctly highlight and promote professional attributes, experience and skills that relate directly to a target employment opportunity. Thus, a resume is shorter than a CV (typically two to three pages for professionals with an advanced degree), and constructing one is an exercise in effective written communication, a skill valued in almost every career path.

Getting started: skills identification

When responding to vacancy announcements, it is important to thoroughly scan the posting to identify all job-specific, transferable and interpersonal skills the employer is seeking. Job-specific skills include those that

are necessary for the job. These may include, but are not limited to, expertise in laboratory techniques, software programs, statistical packages and various forms of writing such as grant, technical or regulatory. A quick scan of the resume should immediately reveal these skills, or keywords, to ensure a favorable initial screening (Fig. 1). Listing specific skills in a separate section and categorizing them into appropriate subheadings (such as Molecular Biology, Animal, Cell Biology and so on) is strongly advised. However, caution should be used, as everything listed on the resume is fair game for more in-depth exploration during the interview. Transferable or transportable skills include those that can be directly applied from one job to another. Organization, presentation, management and teaching are examples of common transferable skills. Interpersonal skills, often referred to as 'soft skills', relate to the ability to work effectively with others. Rather than simply listing the aforementioned skills on a resume, it is important to provide cited evidence to back up these claims. For example, "creative problem solving" is more effective if communicated as "creative problem solver, as demonstrated by the ability to turn stagnant projects into successful publications." Claiming proficiency in "working in a team environment" on a resume is less compelling than describing the composition of an interdisciplinary team that worked together to complete a project. As an employer reviews a resume, it should be readily apparent what skills and personal qualities the applicant has. A simple method for organizing this information is to conduct a basic self-assessment of skills and abilities (Box 1). First, identify all relevant skills; then, provide real-life examples in which each skill was used. The phrases

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Ima Scientist, PhD

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Qualifications

- Solutions-focused scientific manager with extensive experience planning, conducting, managing and documenting full-scale project lifecycles.
- Demonstrated success in consistently achieving technical, financial, productivity and quality goals.
- Strong team-building and leadership skills with daily client interfacing and cross-functional team management.

Areas of Expertise

Job-specific skills, or keywords.

- Cell and Molecular Biology
- Protein Purification
- Biologics Safety Testing
- Biochemistry
- Musculoskeletal System
- FDA, EMEA, ICH Regulation
- Retrovirology
- Study Director
- Assay Development

Professional & Research Experience

XYZ Biotech, Los Angeles, CA

2010–present

Senior Manager and Study Director, Retrovirology Testing

- Provide technical and managerial oversight for day-to-day operations of cell-based end-point assay testing laboratory for biologics safety testing.
- Design projects, analyze data for regulatory submissions and assist sponsors in safety testing and validation studies.
- Spearhead and direct project costing analysis, department budget (>\$1.2M) and revenue goals, compliance and regulatory targets.
- Advise clients in cGMP compliance and regulatory policies for clearance evaluation (FDA, EMEA, CPMP/ICH).

Outstanding University School of Medicine, Seattle, WA

2005–2010

Senior Research Specialist, Mass Spectrometry/Proteomics Facility, High-Throughput Center

- Developed new proteomics methods to address client needs in identifying proteins/biomarkers.
- Assisted clients in designing, performing and interpreting 2D gel experiments.
- **Postdoctoral Fellow**, Department of Molecular Biology, Laboratory of Nobel Prize, PhD
- Conducted independent research to examine the role of nuclear proteins in muscular dystrophies (published 3 peer-reviewed publications, delivered 10 oral/poster presentations at national meetings).
- Studied protein-protein interactions among nuclear proteins, *in vitro* and in molecular signaling pathways in mammalian cells.
- Elucidated how nuclear proteins regulate the myogenic differentiation program in response to growth factor treatment in myoblast cells.

Springfield University Health Sciences Center, Springfield, CA

2000–2005

Graduate Research Assistant, Department of Cell Biology and Biochemistry, Laboratory of Kim King, PhD

- Conducted independent research for an NIH-funded project to clone and characterize a glycosylated protein and study its hormonal regulation, in order to determine the molecular events in pregnancy.
- Demonstrated a novel, direct interaction between a nuclear membrane protein and chromatin remodeling proteins.
- Studied the effects of hormones in regulating gene expression of this novel protein and its interactions with transcription factors.

Education

PhD, Biomedical Sciences, Springfield University, City, State, 2005

B.S., Biology, Springfield University, City, State, 1999

Description of research experience. Information is limited to the project overview, scope of work and key findings, or 'deliverables'.

information, the more likely it is that they will reject the candidate altogether. Information must be logically organized into clearly labeled sections and must be presented in a way that allows easy scanning.

What to include

Deciding on the particular career activities and achievements to include in a resume, as well as the level of specificity for each item, are common challenges to novice resume writers. When those two concerns are compounded with the high likelihood that initial resume reviews may be done by people outside the writer's immediate field, the need for clear and persuasive communication becomes even more important. In fact, the first resume screener may have very little technical expertise or may lack formal scientific training altogether.

Although job descriptions help shape a resume's content, networking with professionals in the target employment sector before a job search is a necessity in today's competitive market. Networking provides job seekers with useful insight into how candidates are evaluated and how hiring decisions are made. During a resume review, what specific information appeals to potential employers, and what are some common resume mistakes? Asking such basic questions, and perhaps obtaining a real-life resume or two, will generate practical advice that can be directly applied to writing an effective resume.

For scientists early in their careers, education and research experience are two prominent areas to highlight on a resume. Although these two items are not mutually exclusive, they can be organized into two separate sections: "Education" and "Research Experience." The former should simply list the terminal degrees, awarding institutions and dates obtained. Optional information that may accompany the degree includes both the names of faculty advisors (this is strongly encouraged if it is a notable name in the field) and thesis titles. Some people may have additional work experience before or beyond mentored training. This experience can be combined with research into an all-inclusive section entitled "Experience" or "Professional Experience." Regardless of which title is used, this section provides resume writers an opportunity to summarize their work and expand on relevant projects and key accomplishments at each academic stage of their career from undergraduate to postdoctoral training, if applicable (Fig. 1). There is no guarantee that an employer will read any of the publications listed by the resume writer to generate a window on

Figure 1 Sample resume.

produced by this exercise can be easily incorporated throughout the resume. As a bottom line, if specific skills or competencies do not appear in the resume, employers are free to assume the candidate lacks abilities in these critical areas.

Organization is crucial

The initial resume review may be completed in a minute or two or as little as a few seconds, so first impressions count. After excluding obvious errors such as spelling or grammatical mistakes, improper formatting is a common pitfall to avoid (Fig. 2). First and foremost, a resume must be visually appealing. If at first glance a resume seems unprofessional, the job-seeker is unlikely to garner much enthusiasm from potential employers. To combat this, 1-inch margins and a font size of at least 11 points are recommended.

Additionally, the use of bullets, underlining and bolded text can help direct the reader to specific information. However, such formatting tools are best used sparingly. Underlining section headings and the applicant's name in manuscript citations is sufficient. 'Fancy' symbols, double indentation and multiple font styles should be avoided.

A poorly organized resume, in terms of content, can be disastrous during a job search. Whether it is valid or not, a sloppy resume may lead the employer to the conclusion that the prospective candidate approaches their work with the same hasty and careless style. As a writing sample, a resume demonstrates the ability to distill and succinctly articulate relevant professional attributes in a way that presents value to a potential employer. The more time required for a potential employer to search through a resume to locate specific

Box 1 Identification of transferable skills

Transferable skill	Demonstrated use of skill
Project management	Managed research projects from initiation, design, execution and successful communication of results Developed and implemented lab standard operating procedure (SOP) for ordering chemical inventory Increased lab productivity by streamlining instrument workflow Successfully negotiated 20% price reduction in lab supplies from outside vendor
Writing	Published 3 peer-reviewed manuscripts and 1 book chapter Wrote and received funding for individual fellowship Provided editorial assistance on colleague's grant Wrote and administered animal use protocol
Communication	Presented work at 12 international meetings Delivered undergraduate commencement address Met with elected officials during professional society 'Hill Day' to articulate the need for increased funding for biomedical research
Leadership and teamwork	Served as president for campus association representing 1,000+ students Served as department representative for policy committee that worked to address various training issues Initiated and managed interdisciplinary journal club (~30 participants) Trained 5 junior lab members on various techniques and helped troubleshoot experiments

the writing must be in emphasizing transferable and interpersonal skills. The inclusion of a "Summary" section at the top of the resume can effectively communicate this information. This section, which should consist of several bulleted items, is probably the first portion of the resume a potential employer will read. It offers the writer an opportunity to thematically link previous experience to a potential job. James Gould, Director of the Office of Postdoctoral Fellows at Harvard Medical School, is proof of the positive results of such an approach. Gould transitioned directly from his postdoctoral appointment at the US National Institutes of Health to academic administration. During his job search, he crafted his resume in such a way that he promoted his prior leadership, policy, administrative, outreach and communications experience. In the summary section of his resume, Gould outlined his immediate career objective and successfully demonstrated a self-awareness of the essential skills and experience required for his targeted job in academic administration (Fig. 3). Furthermore, using enthusiastic and commanding language, he provided value propositions to further justify his candidacy.

Additional suggestions

The section above focused on constructing additional content for inclusion in the resume. However, the process of converting a CV into a resume requires a bit of text reduction, particularly for scientists at mid-career to senior career, with lengthy CVs. As space

his or her work. Although publications may be included as an appendix to the resume, it is crucial to include relevant background information on this work for the reader. At the most basic level, this should include the particular therapeutic area, or major public-health issue, that the research is designed to address. That is, in three sentences or less, the writer should be able to clearly describe what they are doing to solve a major health issue. For those engaged in basic research, this overview should address the potential effect on the field. Readers should be able to quickly assess the writer's fundamental research question, or main topic of exploration, the importance of this work and the tools used to address this research question. Rather than being communicated in paragraph form, with large blocks of text, each of the items above should be listed as a 'bullet point' to enhance readability. It is important to communicate this information in a way that is easily understood by a broad audience. Whoever is on the receiving end of a resume should not need to be an expert in the field to understand the research efforts being described. Therefore, technical jargon should be kept to a minimum and all acronyms should be spelled out.

In addition to education and research experience, what other information should be included in the resume? The most effective resumes are written with a target audience in mind. In essence, deciding what to include and what level of detail should be

used to convey this information all boils down to what the writer feels they must emphasize to the reader. Resumes are strategic self-marketing documents. They offer the writer a bit more flexibility than CVs do and can be manipulated in various ways to paint the writer in the most positive way. The further removed a desired job opportunity is from research, the more compelling

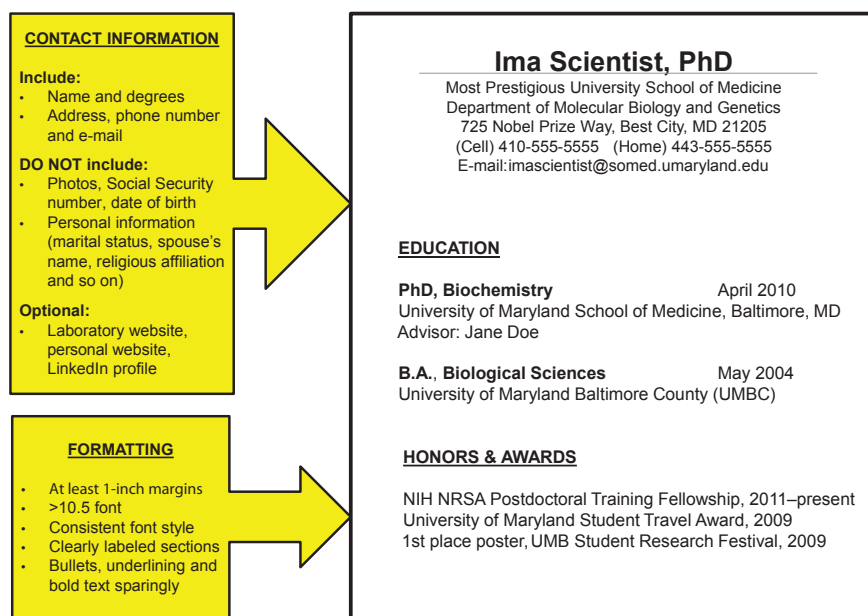


Figure 2 Formatting suggestions.

James C. Gould, PhD

PhD level scientist seeking transition from bench research into a career in Graduate and Postdoctoral Affairs

SUMMARY

- 9 years of biomedical research experience in various fields including kidney disease, signal transduction and cancer metabolism.
- Demonstrated leadership experience at every stage of career from undergraduate student to postdoctoral scholar.
- Passion for promoting graduate and postdoctoral training issues and working with committees to develop policy to improve the overall training experience.
- Highly organized, with previous experience building institutional partnership and delivering campus-wide events.
- Ability to set goals, meet deadlines and build consensus among peers and senior stakeholders.

Figure 3 Sample “Summary” section.

is at a premium on a resume, publications, as noted above, may be provided as an appendix or perhaps quantified somewhere on the resume. For those with research careers that span various fields, some publications may not be relevant to a targeted position. If so, a “Relevant Publications” section can help focus the reader’s attention on the most important manuscripts. The writer should also note somewhere in the section that these have been selected from a larger group of publications (with the total number provided) and include a hyperlink to his or her PubMed profile.

References, memberships to professional societies and general objective statements may also be omitted from a resume. References should be included only if required by the job announcement; they may also be listed as a separate document. If advisors or mentors have agreed to serve as a reference, their names should be included instead in the research section. The phrase “References available upon request” should be removed, as this is automatically assumed. Also, although professional affiliations are important, employers are less concerned with membership in such societies

than the member’s participation at meetings. Leadership roles in professional organizations are important and should be noted; however, simply listing memberships wastes space. Finally, general objectives such as “Seeking position at XYZ Company” should be avoided at all costs. If the resume is being submitted directly in response to a job announcement, inclusion of this statement is redundant.

Final thoughts

In contrast to a CV, in which predefined sections can be easily ‘populated’ with the relevant information, a resume requires careful planning and consideration. The Internet offers an abundance of valuable resources on how to write an effective resume. However, job seekers cannot afford to be passive in seeking advice and should solicit feedback directly from colleagues, mentors and career offices. Additionally, professionals working in the candidate’s target occupation should be consulted as a sounding board before a job search is undertaken.

COMPETING FINANCIAL INTERESTS

The author declares no competing financial interests.