Science Jobs in Colorado and Utah Special Needs for Chemists

Over the last five years, the recession and world events have affected the states of Colorado and Utah similarly to the rest of the nation. Those who have made a career in the sciences feel this impact just like the rest of the nation. A look at employment data shows the total number of jobs in Colorado peaked in December 2000, but as of April 2006, employment numbers have rebounded and they are close to breaking this record. Be cautious though, as prognosticators do not see an acute shortage of labor in the near future because the state is still growing in population.[1] For the record, Colorado's current unemployment rate is 4.3% as opposed to the national average of 4.7%[2].

Just to the Northwest, data shows that the employment history of Utah over the last five years is reasonably similar to Colorado, although recent trends show a significantly tighter employment market with a current unemployment rate for Utah at 3.5%.[3] Demand for skilled personnel in Utah clearly makes it more of an employee's market. But as with any occasion, one must always have marketable skills.

So where are the opportunities? Many industries have a footprint in these two Mountain Sates, including environmental, mining, energy, chemicals, food, nutraceutical and bioscience. Bioscience is the most popular industry represented as Utah houses a strong presence of nutraceutical companies.

Regardless of where you are in your career, Colorado and Utah show potential opportunities now and promising trends in the future. This is due to initiatives in both states to encourage growth, and each has a business friendly environment that is fostered through cooperation from industry, state and local governments and academic institutions. The result is a growing infrastructure, which attracts technology companies to these states and creates a platform for technology transfer needed for local entrepreneurship. As thriving as the Mountain States are, they are still small in comparison to the East and West Coast bioscience clusters.

One can find more information on the Web regarding bioscience in Utah and Colorado, as well as the rest of the United States in the report called "*Growing*

[1] Denver Business Journal, April 7, 2006.
http://denver.bizjournals.com/denver/stories/2006/04/10/story1.html?t=printable

[2] Colorado Department of Labor and Employment, May 23, 2006.
http://www.coworkforce.com/

[3] Utah Department of Workforce Services, May 23, 2006,
http://jobs.utah.gov/jsp/wi/utalmis/countyprofile.do

the Nation's Bioscience Sector: State Bioscience Initiatives 2006" (http://www.bio.org/local/battelle2006/battelle2006.pdf.). Battelle Technology Partnership Practice and SSTI published this report in April 2006 for the Biotechnology Industry Organization (BIO)[4]. The report presents a national picture and specific information on each state, and provides information on the number of workers, the number of institutions, descriptions of state initiatives, and the available services and infrastructure.

In Battelle's report, Bioscience is divided into four sectors, which include: agricultural feedstock & chemicals, drugs & pharmaceuticals, medical devices & equipment and research, testing, & medical laboratories.

Bioscience Sector 2004 Employment Statistics	**Number Employed in Colorado**	**Number Employed in Utah**
Agricultural Feedstock & Chemicals	263	200
Drugs & Pharmaceuticals	2,794	4,401
Medical Devices & Equipment	8,492	9,305
Research, Testing, & Medical Laboratories	5,079	3,891
Totals	16,628	17,797

Source: Growing the Nation's Bioscience Sector: State Bioscience Initiatives 2006

These are substantial communities but not yet the size of a state like Massachusetts with about 52534 total employees as a comparison. With the state initiatives, both Colorado and Utah will continue to grow and continue to improve professional opportunities and long-term stability.

In Denver and Salt Lake, Kelly Scientific Resources (KSR) places a variety of personnel positions, including senior research chemists, R&D chemists, quality control, business development, instrumentation, biologists, microbiologists, medical technologists, regulatory affairs and clinical research.

You may be wondering what skill sets are in demand currently. From one day to the next, it can be any of the above. However, for the last several months, we are finding needs for chemists. According to Nan Milausnic, KSR's recruiting manager in Denver, recent chemistry graduates need to have a strong understanding of analytical instrumentation, especially HPLC. This includes the basic understanding of HPLC theory and hands on practical use. HPLC experience obtained through undergraduate research and from their instrumentation lab can help land a position. She also says that entry-level chemists should be able to discuss theory and some application of the method.

[4] Growing the Nation's Bioscience Sector: State Bioscience Initiatives 2006, Prepared for BIO – Biotechnology Industry Organization, Battelle Technology Partnership Practices and SSTI, April 2006, http://www.bio.org/local/battelle2006/battelle2006.pdf

She went on to say that companies in Colorado would like to see more chemists graduate with a BS ***and*** ACS certified degree. They view the BA degree too light in the technical and math areas. Many companies are requesting to see only BS chemist candidates and will wait for them to fill their job openings. Although it hasn't always been the case, more companies are opting away from training a biologist to do a chemistry jobs. Experience seems to show that a chemist's education is more compatible. Some of the jobs require one to five years of industry or institutional experience as well.

In further discussion with Mike Miller, KSR's account manager in Salt Lake City, chemists need a strong math background, good technical writing skills and should be able to have adequate presentations skills. In fact, many jobs require them to present their data/research to large groups of people. Naturally, experience is a plus that employers seek.

The following is a summary of skills for chemists in the Mountain West:

(1) Analytical - pharmaceutical w/ at least 2+ years of experience,
(2) Analytical - HPLC method development w/ 5+ years of experience
(3) Analytical - recent BS or MS graduates w/ some college or intern experience
(4) Process Chemists - BS and MS w/ analytical instrumentation and pilot plant experience.

In summary, a chemist in Colorado or Utah could have the luxury to entertain three to four job opportunities to consider at one time. Currently, both states need upper level BS/MS chemists with pharmaceutical method development experience. Both KSR branches have recruited chemists from out of state to meet clients hiring needs. Demand has simply exceeded the supply of graduates from the local universities both at the BS and advanced degrees levels. Another trend is that some of the graduates from these states, and particularly Colorado, simply leave the area after graduation and enter jobs or graduate school on the East Coast.

For those who desire to live in the Mountain West, there are some advantages for scientists who work in the biosciences. That includes more upward mobility in the smaller sized pharmaceutical and biotech companies. Many scientists are attracted to the idea that they can reach management, scientist, and/or upper-level non-lab positions much sooner in their career than what a larger pharmaceutical company.

As a final conclusion, if you are a scientist that is dedicated to the biosciences, consider Colorado and Utah. If you are a chemist (BS/MS/PhD), all the better!