

The Biotechnology and Biomedical Cluster: ***Companies, Workforce, and Education in the San Fernando Valley***

A Project of The Training Alliance
a consortium of the California Community Colleges
of the San Fernando Valley
and the Economic Alliance of the San Fernando Valley

Funded by the Chancellor's Office – California Community Colleges
Through the Los Angeles/Orange County Regional Consortium

E-Book Revision 1.00, June 2001

Edited and Compiled by: Robert L. Scott

For best results, use the latest version of Adobe Acrobat Reader
to view this publication. Click below for free download.



For Information, Contact: Economic Alliance of the San Fernando Valley
5121 Van Nuys Blvd. 2nd Flr.
Sherman Oaks, CA 91403-1497
818-379-7000 Fax: 818-379-7077
Internet: biotech@valleyofthestars.net

Please Direct Comments to: Biotech@valleyofthestars.net

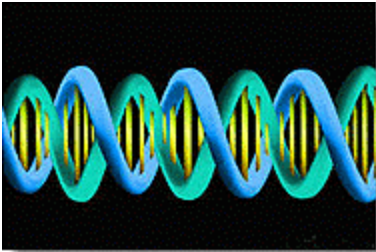
A project of the CivicCenter Group, Calabasas California – projects@civiccenter.com

© Copyright 2001, Economic Alliance of the San Fernando Valley and The Training Alliance

THE BIOTECHNOLOGY AND BIOMEDICAL CLUSTER:

Companies, Workforce, and Education in the San Fernando Valley

The biotechnology industry in the United States has doubled in size between 1993 and 1999. Huge capital investments have been made, and the development pipeline is now brimming with innovative drugs, agricultural enhancements and environmental improvements. These products have the potential to generate tremendous opportunities for society by improving the quality of health care, increasing agricultural production and producing a cleaner environment. The industry is also providing important stimulation to its host communities along with high-end employment. In 1999, the biotechnology industry generated 150,800 direct jobs and biotechnology companies produced revenues of \$20 billion. Yet, the industry as a whole has deferred profitability¹ by reinvesting over \$11 billion in research & development.



The biotechnology and biomedical industry in the County of Los Angeles is still considered to be an emerging industry.² In addition to an impressive body of private commercial research, there is substantial research being conducted at local universities and institutions, including: the City of Hope, Caltech, University of Southern California (USC), and the University of California, Los Angeles (UCLA).

The biotechnology industry is still defining itself in terms of products and geography. This report takes an expansive look at the types of companies that are reported by major business databases as being broadly defined as biotechnology and biomedical. The SIC codes and geographic selection criteria are set forth in detail in the notes at the end of the report. The primary focus is on firms clearly located in the San Fernando Valley—with a larger view to the San Fernando Valley Extended Area. This is the definition most commonly used by the media—one that involves considerable exchange of employees and resources. The extended area stretches from Camarillo on the west to Pasadena on the east, and from the Santa Monica Mountains on the south to the Los Angeles County line on the north.

LOCAL INDUSTRY LEADERS

Industry giant Amgen, located in Thousand Oaks, anchors the Highway 101 technology corridor, employing some 7,000 people in 1999—4,400 of which work at the company's Thousand Oaks home office. The headquarters occupies more than 3.8 million square feet of space and more than 39 buildings. Founded in 1980, Amgen is the world's largest independent biotechnology company, and is the world leader in discovering, developing and manufacturing cost-effective human therapeutics based on advances in cellular and molecular biology. Amgen had \$3 billion in revenue in 1999, and reinvested some \$823 million in research & development.³

In the fall of 2000, one of biomedical manufacturing's leaders, MiniMed, moved its worldwide headquarters to a 28 acre \$70 million center on the North Campus of California State University, Northridge (CSUN). The facility occupies 650,000 square feet of advanced biomedical facilities. In an unprecedented cooperative arrangement, MiniMed and CSUN are developing educational programs, including joint research, work-study programs and student internships.⁴ This is an important tie-in to the local educational support structure, in an industry where a highly skilled workforce is crucial to the development of intellectual assets.



MiniMed manufactures insulin pumps that employ a unique infusion system. In 1999, MiniMed introduced its revolutionary continuous glucose monitoring system for physician use, and the Company continues to develop its glucose sensor technology for the consumer market. They are planning to expand their product portfolio and introduce pre-filled insulin cartridges and a disposable pump for the treatment of Type 2 diabetes. MiniMed is also working on the creation of an artificial pancreas, integrating external and implantable insulin pumps and glucose monitoring systems.

MiniMed has recently acquired a site in Sylmar, California, where it will establish a cancer research and manufacturing plant under the name CTL ImmunoTherapies Corp. The facility will accommodate 800 employees, and will offer an internship program for nearby Los Angeles Mission Community College.

Another MiniMed affiliate, Advanced Bionics Corp., outgrew its existing facility in Sylmar and is in the process of relocating to the Santa Clarita Valley, a few miles to the north. Advanced Bionics' research is developing neurostimulation products and implantable devices that generate electrical pulses directed to nerves and muscles. These

are targeted to the treatment of such disabling conditions as deafness, blindness, tremor and spasticity, urinary incontinence, and chronic pain, as well as for the functional restoration of paralyzed limbs. The company has developed and received FDA approval for a cochlear implant to restore hearing to the deaf.

The Alfred E. Mann Institute for Biomedical Engineering at the University of Southern California was a gift from its namesake, who is also the founder of MiniMed. The institute is involved in pre-commercial development of promising new medical technologies. The center hosts conferences intended to promote broad discussion of the prospects among researchers, clinicians, and the public. The work is guided by the belief that “engineering is the future of medicine.”⁵

Baxter Hyland Immuno is also a major contributor to the local economy. With total annual sales at \$6.6 billion, Baxter has ever-increasing BioScience revenues, topping \$2.4 billion in 2000. Baxter is looking to relocate its corporate headquarters from Glendale to Thousand Oaks where it already has an operating facility. Baxter competes with such biotech leaders as Amgen, Genentech and Biogen.⁶ Baxter's BioScience business provides therapeutic proteins derived from human plasma or recombinant technology to treat hemophilia, immune deficiencies and other blood-related disorders. It provides vaccines for the prevention of certain infectious diseases, a line of biosurgery products, and also manufactures blood-collection containers and automated blood-cell separation and collection systems.⁷

Precision Dynamics Corporation has grown to approximately \$50 million in annual sales since its founding in 1956. The company currently employs about 550, and its headquarters complex occupies 78,250 square feet in San Fernando, California. Precision Dynamics is the market leader in patient identification wristbands. It offers an expansive line of products, which includes a radio frequency identification wristband that combines two technologies—bar coding and RFID—to identify and track hospital patients. They also produce labor and delivery products, patient comfort and support products, urology products, infection control products and a home healthcare line. PDC management is heavily involved in community development and education issues.

INDUSTRY CHALLENGES

Challenges come in many forms, from the pains associated with exponential growth, to the legal morass that swirls around intellectual property disputes. Amgen prevailed in a recent patent suit to protect European rights to its flagship anti-anemia drug, Epogen. This is expected to clear the way in the European market for a next generation successor drug, Aranesp, which reduces red blood cell impairment in kidney dialysis patients. Legal wrangling is an accepted fact of life in the intellectually grounded biotechnology industry.



Capital for research & development, operational carry, and production ramp-up can create a significant barrier to growth in most industries. By its nature, biotech development is extremely costly and time consuming. Recent growth in venture capital funding for biotech start-ups has been fueled in part by redirected dot-com capital, and by interest in human genome research with its long-term implications for the healthcare industry. According to PricewaterhouseCoopers/VentureOne, total VC funding in the year 2000 rose to \$1.75 billion.

REGIONAL TECHNOLOGY STRENGTH AND GROWTH

Today, there are approximately 133,000 technology/multimedia positions located in the City of Los Angeles, which is more than Silicon Valley and New York City combined. In addition, the Los Angeles metropolitan area has recently overtaken Chicago as the nation's largest manufacturing center with 663,400 manufacturing jobs. Los Angeles' biotechnology industry is expected to continue to expand and grow.⁸ Southern California is home to 37 percent of high-tech businesses in the state, and produces \$57 billion or 36.5 percent of California's high-tech goods and services. The region has become a center for information technology, multimedia, biotechnical and biomedical equipment.⁹

California exports 17 percent of U.S. high-tech goods, reflecting the state's dominance in high-tech. Exports of computers, electronics, industrial machinery, transportation equipment and chemicals accounted for \$82.1 billion or 76 percent of total California exports in 1999.¹⁰ California's high tech sector produces more than \$150 billion in goods and services, which is 13 percent of the Gross State Product and 17 percent of all high-tech goods and services produced in the U.S.¹¹

THE BENEFITS OF RESEARCH & INNOVATION IN CALIFORNIA

California also has some of the top research labs in the world, which performed a total of \$42 billion in research in 1997. This total also represented one-fifth of all research performed in the U.S., and was larger than the next three states combined. In 2000 California exports jumped to a record \$129.7 billion, surging 20.8 percent over 1999.¹²

California is by far the largest research and development state in the nation with nearly 80,000 scientists and engineers.¹³ As evidence of the state's innovation prowess, California institutions were issued more than 18,000 patents, or one-fifth of all U.S. patents issued in 1999. Some of the state's leading innovators include Hewlett Packard, Advance Micro Devices, Intel, Sun Microsystems, and the University of California.¹⁴

Between 1995 and 1999 California inventors secured 2657 patents for molecular biology and microbiology inventions. Of those 967 originated in Southern California, which alone exceeded the number issued in any other entire state.¹⁵



In 1998, California high-tech industries employed nearly 1.2 million people, with a combined annual payroll of \$77 billion and an average annual wage of \$65,000, compared to the state annual average of \$35,350 for all industries.¹⁶

California accounts for more than half of all US biotechnology employment, revenues (57%), and R&D (59%), and one-third of the nation's publicly traded biotech companies. In total, California biotech companies employ 55,000 people, generating \$8.4 billion in revenues and \$3.5 billion in R&D annually. The Bay Area, San Diego and Los Angeles all rank among the top six biotech centers in the nation.¹⁷

The United States has always held a leadership role in technology and medicine. Biotechnical and biomedical categories represent a fusion of these two dynamic areas. With a growing population and added emphasis on quality of life and longevity, the market for newer and more effective products is virtually unlimited. Thus, the future potential for employment growth in the industry seems very promising.



BIOTECHNOLOGY

The Biotechnology industry includes companies involved in the research, development and manufacture of materials, such as cell cultures, catalysts, genetic material, immune response materials, biochemicals, enzymes, proteins; and equipment used in biological and genetic research on humans, plants and animals. Also included are service organizations that perform consulting, testing, processing and storage of such products.¹⁸

BIOMEDICAL BIOTECHNOLOGY

The Biomedical industry sector includes companies that manufacture diagnostic equipment, dental equipment, medical prosthesis, monitors, surgical equipment, reproduction equipment, therapeutic devices, home health care products, handicap aids and rehabilitation devices. Also included are companies that provide services such as consulting, diagnosis, facility management, laboratory processing, custom manufacturing, research and development, and radiology services.¹⁹ An estimated 77% focus on R&D in medical devices and diagnostics, and 22% on biotechnology and pharmaceutical R&D.²⁰

FOOD & AGRICULTURAL BIOTECHNOLOGY

The core activities of Food and Agricultural Biotechnology include uses of advanced plant breeding techniques to introduce beneficial traits to the crops we grow for food and fiber.

Farmers and plant breeders have labored for centuries to improve the crops that produce our food. Traditional breeding methods include selecting and sowing the seeds from plants with beneficial characteristics, such as higher yield, better nutrition and resistance to disease. By breeding plants with these good characteristics, plant breeders combined the genetics of those plants, long before the science of genetics was understood.

The tools of biotechnology allow plant breeders to select genes that produce beneficial traits and move them from one plant to another. The process is far more precise and selective.



Biotechnology also removes the technical obstacles to moving genetic traits between plants and other organisms. This opens up a world of genetic traits to benefit food production. As an example, the Bt crops that are protected against insect damage contain a gene found in common soil bacteria, *Bacillus thuringiensis* (Bt). The gene contains information that the plant uses to produce a protein that is toxic to lepidopteran, or wormlike insects. When given that gene, the plant produces its own Bt protein that stops the insects from eating and destroying the plant. The Bt crops are less likely to require pesticide sprays by farmers to control insect damage.²¹

TRANSGENIC PRODUCTS ON THE MARKET

A transgenic organism is one formed by the insertion of foreign genetic material into its germ line cells. Recombinant DNA techniques are commonly used to produce such transgenic organisms.²²

An ever growing range of transgenic agricultural products have been developed, including: herbicide tolerant crops, disease-resistant crops, high-performance cooking oils, healthier cooking oils, delayed ripening fruits and vegetables, increased solids tomatoes, food enzymes, bovine hormones, and soon, nutritionally enhanced foods.²³

In 1996 the worldwide inventory of Biotechnology Crops was approximately 4.3 million acres. This increased to 27.5 million acres in 1997, 69.5 million acres in 1998 and approached 100 million acres in 1999. This included 81 million acres in the U.S. and Canada, 16 million acres in Argentina, one million acres in China and one million acres in Australia.²⁴

BIOINFORMATICS

Bioinformatics is one of the rising stars of the biotechnology industry. It is a process where the data derived from microbiology is analyzed and stored in supercomputers. The data is further refined and processed to develop a profile of the basic components of life. The primary goal of computational molecular biology, which originated at Caltech in Pasadena, is to understand the meaning of the genomic information and how this information is expressed in the human body.

One of Bioinformatics' main goals is to understand problems of predicting the biological function of genes and proteins from their primary sequence—predicting the structure of protein and DNA from its sequence, and understanding how and when genes are expressed.²⁵

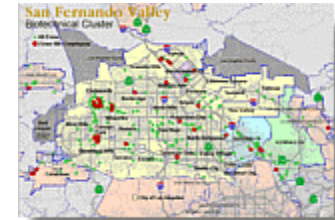
Area bioinformatics companies include: Bionomix, a Caltech spin-off, is designing computerized tools to determine the structure and function of proteins; GenBasix, which is a spin-off of City of Hope in Duarte—also engaged in bioinformatics; and the Canadian firm Inphogene, which is setting up a research facility in Pasadena.²⁶



THE BIOTECHNICAL INDUSTRY CLUSTER IN THE SAN FERNANDO VALLEY

INDUSTRY CLUSTER DEFINED

An industry cluster is a subset of industries in the regional economy connected by flows of goods and services stronger than those linking them to the rest of the economy. Individual firms in a cluster benefit from certain comparative advantages associated with geographical concentration such as access to a common pool of specialized labor, infrastructure, intellectual property, and lower transaction costs between firms.²⁷



IMPLICATIONS OF AN EMERGING INDUSTRY IN THE SAN FERNANDO VALLEY AREA

The San Fernando Valley Biotechnical-Biomedical Industry Cluster represents one of the most dynamic trading areas in the world. The area continues to grow and develop its supportive infrastructure. The key component is a ready, willing, and able workforce—one with the array of technical skills necessary to support the industry. The extended Valley area has a broad selection of cutting-edge educational institutions, including the world-renowned California Institute of Technology.

WORKFORCE DEVELOPMENT



More than most industries, the cornerstone of technological viability is the availability of a well-educated and well-trained workforce. Because of exponential growth, firms may find it difficult to attract and train the necessary pool of skilled technicians, researchers, and scientists. This is where The Training Alliance plays a crucial role. Aside from their core curriculum designed for generalized workforce education, the colleges of the Alliance also provide focused, industry-specific courses and customized training, tailored to the requests of local companies.²⁸

Thousand Oaks-based Amgen is well aware of the value of an educated workforce, and of the need to support the regional education system. Over the last ten years, Amgen has given more than \$750,000 in awards for teacher excellence, primarily at local schools. The company is very involved in supporting the community, and in addition to contributing a half-million dollars in support and services to education.²⁹ Amgen uses an innovative MBA Leadership Program that provides internships and career opportunities in Finance, Human Resources, and Marketing for MBA students.³⁰

THE COMMUNITY COLLEGE SYSTEM

Every year, more than 50,000 community college students transfer to the California State University and the University of California.³¹ Course-to-course articulation between two-year and four-year institutions is fundamental to academic planning and the transfer process. In 1983, concern over the complexities facing transfer students and the declining rate of transfer led to legislation creating the simplified California Articulation Numbering System (CAN), in order to promote transfers through a common method of course identification, and a network of articulation agreements.



As the workforce preparedness movement gains steam, it becomes more and more obvious that articulation must also include workplace factors—involving employers, educational institutions, and the workers themselves. Training and education need to provide a seamless complement to career development. This is especially true in business clusters that demand a constant supply of highly skilled workers, such as medical, technical, and research industries.

Community Colleges provide a critical link in the local educational system. Costs of attendance and matriculation are kept to a minimum, maximizing the number and diversity of the student population. From adult and vocational education to providing the bridge to a four-year institution, and advanced degrees, the Community Colleges in the San Fernando Valley are active on the cutting edge of workforce development.

Community College courses provide a flexible, convenient, and affordable way to build the quality and quantity of the local workforce—enhancing social equity and broadening the base of prosperity.

The Los Angeles Community College system is made up of nine separate campuses. Three of the LACC colleges located in the San Fernando Valley join with Glendale Community College in forming The Training Alliance—an innovative educational consortium.

Pierce College (Los Angeles) is grounded in a rich agricultural history, and still boasts one of the strongest agricultural programs in the area. Pierce is also one of the few institutions with a growing international business and trade component, and has the highest transfer rate to four-year institutions in Southern California.

Valley College (Los Angeles) has a strong nursing program, a fire academy, and an entertainment program. The school is evolving its relationships with local high schools, and is in the process of developing a biotech-biomedical academy. Valley College has an extensive inventory of technical equipment and substantial computer capacity. Another unique offering is a host of courses involving the repair and maintenance of highly technical medical equipment. In addition to Valley's extensive general education capacity, it offers a wide selection of specialty occupational certificates.

In addition to courses in Microbiology, Valley College offers Associate In Science Degrees in Biology, which are transferable to all major colleges and universities. It also offers a Biomedical Equipment Technology Certificate, which leads to a Biomedical Equipment Technician (BMET) Field Service Engineer. The department consists of 12 full time biology faculty, six of whom hold Ph.D.s, with the remainder holding master's degrees in several specialized fields of biology. The offerings are also supported by a 45 station self-paced bio-tutorial laboratory.

Glendale Community College is a national leader in workforce and economic development, tailoring programs to the needs of business, industry and human resources through education and customized training. The school is heavily invested in new technology, and boasts the rare ability to deliver rapid prototyping. This 3D modeling capacity is one of the many innovative technologies that are on the cutting edge of industry workforce demand. Anything from a machine part to an animated character can be developed in a matter of hours. Glendale also offers certificate programs in robotics and software code development. Specialized courses include: Allied Health, Culinary Arts, AutoCAD, MS-Access 2000, MS-Office 2000, Shop Math & Blueprint Reading, Quality Systems & Leadership and Hazardous Materials & Safety Training.

Mission College (Los Angeles) features state-of-the-art computer facilities. It offers certified Cisco networking programs, which articulate to Big-C installation training. In addition a Cisco Academy will is being setup in Mission's growing computer facility in the near future. Other special offerings include: Administration of Justice, Food Service Management, Interior Design and Multimedia Studies. Mission College is strategically located in the northeast San Fernando Valley, and serves a large community of upwardly mobile, moderate income, constituents.

THE TRAINING ALLIANCE

Serving a common population and an industry clustered primarily along the Highway 101-134 technology corridor, the San Fernando Valley's four Community Colleges have created The Training Alliance—a cooperative educational coalition. The Alliance focuses on flexibility, so as to offer custom tailored industry-oriented training and educational programs. This is all accomplished within the cost-effective framework of the Community College system.



The Training Alliance is a unique collaborative among Glendale Community College, Los Angeles Mission College, Los Angeles Pierce College, and Los Angeles Valley College, working in concert with the Economic Alliance of the San Fernando Valley. Their innovative customized employee training programs focus on short-term, rapid turnaround and non-traditional training. Classes and programs are available at all levels—from customer service and communications to medical and technical research.

The Economic Alliance of the San Fernando Valley, as a partner and facilitator in The Training Alliance, is providing marketing and coordination services for the community colleges, as well as for the area's occupational centers. The Economic Alliance ensures the educational process, assuring that the employee and employer receive the necessary individual attention and the local economy is a major beneficiary of this enriching relationship.

The colleges offer a variety of classes, workshops, and seminars. Core curricula include such offerings as tailored math skills classes and communication for the workplace, which may include both native and non-native English speakers.

The process starts with a needs assessment. The Alliance assists in determining training needs, how the training fits into the client company's strategic plan, and a skills assessment of the employees. Alliance staff provides a turnkey process, professional outcomes, and unlimited flexibility at nominal expense to the client. Classes may be conducted on or off campus, though most clients prefer classes held at the employee site.

Training provided has included: Biotechnology, Manufacturing, Business and Professional Management, Fabricated Metal Products, Food Services, Health Services, Horticulture, International Trade, Technology, Telecommunications, Tourism, Math, English, Communications, Customer Services, and Computer Skills.³²

CAREER LADDERS

In working as The Training Alliance, the Community Colleges seek to educate the workforce, improve employment, and strengthen the local economy, through enhancement of productivity. Career Ladders are the cornerstone of the Alliance mission. The goal is to provide ongoing career development to students—from entry level to technical, professional and management, weaving a lifelong learning process into the fiber of the workforce community.

There are five separate school districts that service the San Fernando Valley, Los Angeles Unified (LAUSD), Burbank Unified, Glendale Unified, Las Virgenes Unified, and the Los Angeles County Office of Education. In an unprecedented initiative, the Alliance has initiated collaboration among the public school superintendents. The focus is development of programming to support marketable skills and knowledge—an employable workforce. And also to look at what business can do to support the effort by partnering with education. Consensus is forming around the need for more occupational programs for non-college bound students. This is a challenging area since trade facilities for auto, carpentry, and metal shop have many resource-based challenges.

The community colleges are developing a Biotech/Biomedical industry cluster academy targeting high school students interested in careers in the industry. Investments are also being made in intern and apprenticeship programs for seniors at K-12 as well as at the corresponding college articulation.

SELECTED OCCUPATIONS RELATED TO BIOTECHNICAL AND BIOMEDICAL CAREERS³³

Animal Handlers	Animal Technicians	Aseptic Fill Assistants
Aseptic Fill Research Associates	Aseptic Fill Technicians	Assay Analysts
Biochemical Development Engineers	Cell Culture & Fermentation Assistants	Cell Culture & Fermentation Research Associates
Cell Culture & Fermentation Technicians	Clinical Research Associates	Data Entry Clerks
Documentation Clerks	Greenhouse Assistants	Instrumentation/Calibration Technicians
Laboratory Assistants	Laboratory Support Workers	Library Assistants
Manufacturing Engineers	Manufacturing Research Associates	Manufacturing Technicians
Microbiologists	Plant Breeders	Process Development Associates
Process Development Engineers	Production Planners	Purification Assistants
Purification Manufacturing Associates	Purification Technicians	Quality Assurance Auditors
Quality Control Analysts	Quality Control Engineers	Quality Control Inspectors
Research Associates (R&D)	Safety Specialists	Scientific Programmer Analysts
Scientists	Statisticians	Technical Writers

CAREER CLASSIFICATIONS AND RELATED COURSES OF STUDY

In the Biotechnology and Biomedical categories, there is a current need and growing demand for biological scientists, including Microbiologists, Research Scientists, Biochemists, Engineers, Associates and Managers.³⁴



BIOMEDICAL SCIENTISTS AND RELATED CAREERS³⁵

ANATOMY. An instructional program that describes the scientific study of the structure and function of living organisms, tissues, organs, and systems. Includes instruction in gross anatomy, histology, ultrastructure, neuroanatomy, microscopy, dissection, electrical and atomic analytical methods, and quantification methods.

East Los Angeles College, Monterey Park, West Los Angeles College, Culver City, Ventura Community College District, Ventura

BIOLOGICAL IMMUNOLOGY. An instructional program that describes the scientific study of organismic responses to, and defenses against, invasive foreign substances and parasitical life forms. Includes instruction in the anatomy and physiology of immune systems, autoimmune responses, disease response mechanisms and triggers, antigen receptors, membrane transfer, the histocompatibility complex, immunogenetics, immunochemistry, and immune system regulation.

California State University, Sacramento, University of California, Davis

BIOLOGICAL TECHNOLOGY/TECHNICIAN. An instructional program that prepares individuals to apply scientific principles and technical skills in support of biologists in research and industrial settings. Includes instruction in field research and laboratory methods.

Whittier College, Whittier, Fullerton Community College, Fullerton, University of Judaism, Bel Air

BIOLOGY, GENERAL. An instructional program that generally describes the scientific study of the structure, function, reproduction, growth, heredity, evolution, behavior and distribution of living organisms, and their relations to their natural environments.

California Institute of Technology, California State University, Northridge, University of California, Los Angeles, Loyola Marymount University of Los Angeles

BIOMETRICS. An instructional program that describes quantitative measurement methods in the biological and related sciences; the development of biometrics solutions to specific research problems; and related computer applications. Includes instruction in algebraic analysis, matrix algebra, computer methods, and applications to specific biological subdisciplines.

University of California, Los Angeles, University of Southern California, Los Angeles

BIOPHYSICS. An instructional program that describes the application of physics principles to the study of living cells and organisms, including structures and fine structures, bioelectric phenomena, radiation effects, molecular behavior, photosynthesis, membranes, organic thermodynamics, and quantitative analysis and modelling.

University of California, Riverside, University of California, San Diego

BIOCHEMISTRY. An instructional program that describes the chemical processes of living organisms. Includes instruction in the chemical mechanisms of genetic information storage and transmission; the chemistry of cell components; blood chemistry; the chemistry of biological systems and biological products; and the chemistry of life processes such as respiration, digestion and reproduction.

California State University, Northridge, Loyola Marymount University of Los Angeles, University of Southern California

BOTANY, GENERAL. An instructional program that generally describes the scientific study of plants, related bacteria, fungi, and algae life forms. Includes instruction in the classification, structure, function, reproduction, growth, heredity, evolution, and the pathology of plant life, with particular attention to basic processes such as photosynthesis, plant biochemistry and plant ecosystems.

University of California, Los Angeles, Cal Poly Pomona

CELL BIOLOGY. An instructional program that describes the scientific study of the cell as a biological system in plants and animals. Includes instruction in cellular structure and function, biosynthesis, enzyme production, cell communication and nutrition, chromosome organization and function, cell life cycles, and cell pathology.

California State University, Northridge, University of California, Los Angeles

CELL AND MOLECULAR BIOLOGY, OTHER. Any instructional program in cell and molecular biology not described above.

Masters College and Seminary, Santa Clarita, University of California, Santa Barbara

ECOLOGY. An instructional program that describes the scientific study of ecological systems and the physical interactions among system components. Includes instruction in population biology, large and small ecosystems, environmental factors affecting organisms, evolution and extinction, and symbiotic relationships.

California State University Northridge, Cal Poly, San Luis Obispo

ENVIRONMENTAL HEALTH. An instructional program that prepares public health specialists to monitor and evaluate potential and confirmed environmental health hazards, and to plan and manage environmental health programs. Includes instruction in environmental toxicology, genetic toxicology, biohazard research, test and evaluation procedures, measurement instrumentation and equipment operation, environmental and health law and regulations, and applications to specific environmental health problems.

University of California, Los Angeles, California State University, Los Angeles

EPIDEMIOLOGY. An instructional program that describes the scientific study, by public health scientists and other medical researchers, of the distribution of disease in human populations; patterns in the life cycles of infectious diseases; and methods of preventing disease outbreaks and promoting population health.

Loma Linda University Medical Center, Loma Linda, University of California, Davis

MARINE/AQUATIC BIOLOGY. An instructional program that describes the scientific study of marine organisms and their environments. Includes instruction in freshwater and saltwater organisms, physiological and anatomical marine adaptations, ocean and freshwater ecologies, marine microbiology, marine mammalogy, ichthyology, marine botany, and biochemical products of marine life used by humans.

California State University, Long Beach, Oxnard College, Marymount College

MEDICAL GENETICS. An instructional program that describes advanced research, by medical graduates and others, on the relationship between inherited traits and characteristics and human health conditions, including inherited metabolic diseases, environmental damage to genetic material, human genetic engineering, and cloning.

San Francisco State University, San Francisco, University of California, San Francisco

MICROBIOLOGY/BACTERIOLOGY. An instructional program that describes the scientific study of microorganisms, including bacteria and viruses, as distinguished from the cellular components of larger organisms. Includes instruction in the ecological behavior of microorganisms, their anatomy and physiology, pathogenesis, and microbe evolution and mutation.

California State University, Northridge, University of California, Los Angeles, Ventura Community College District, Ventura

MOLECULAR BIOLOGY. An instructional program that describes the scientific study of the molecular structures and processes that underlay the storage and transmission of genetic information, of energy storage and transfer, of hormone generation, and of basic life process such as development, growth and aging.

University of California, Los Angeles, University of California, Irvine.

NEUROSCIENCE. An instructional program that describes the scientific study of the anatomy, physiology, biophysics, biochemistry, molecular biology and behavior roles of neuron cells and biological nervous systems. Includes instruction in neurological signalling, neuroanatomy and brain research, neuropharmacology, and neuropsychological research.

University of California, Los Angeles, University of California, Irvine

NUTRITIONAL SCIENCES. An instructional program that describes the scientific study of the biological processes by which organisms ingest, digest and use the chemical compounds vital to survival, and which cannot be synthesized by the organism itself. Includes instruction in nutritional biochemistry and biophysics, anatomy and physiology of digestive systems, environmental and behavioral aspects of nutrition, and studies of the nutritional problems of specific organisms.

Moorpark College, Moorpark, Santa Ana College, Santa Ana, Irvine Valley College, Irvine, Gardena Community Adult School, Long Beach USD School for Adults, South Gate Community Adult School

ORGANIC CHEMISTRY. An instructional program that describes the scientific study of the properties and behavior of hydrocarbon compounds and their derivatives. Includes instruction in molecular conversion and synthesis, the molecular structure of living cells and systems, the mutual reactivity of organic and inorganic compounds in combination, the spectroscopic analysis of hydrocarbon compounds, and applications to specific problems in research, industry, and health.

California State University, Sacramento, Sonoma State University

PHARMACOLOGY. Human and Animal. An instructional program that describes the scientific study of the therapeutic and toxic effects of drugs on living tissues and entire organisms. Includes instruction in pharmacodynamic behavior, drug metabolism, chemical pharmacology, the physiological effects of chemical substances on human beings and animals, therapeutic applications, chemical profile analysis, and rational drug design.

University of California, Los Angeles, University of California, Irvine

TOXICOLOGY. An instructional program that describes the scientific study of the nature, source, effects, identification and characteristics of poisons, toxic substances, and exogenous chemical agents and their effect on biological organisms. Includes instruction in environmental biology, chemico-physiological mechanisms, genetic toxicology, studies of specific organisms and habitats, and the development of toxic defenses and antidotes.

University of California, Riverside, University of California, Irvine

VIROLOGY. An instructional program that describes the scientific study of viruses, a group of parasitical subcellular biologic entities. Includes instruction in viral classification, genetic effects of viral infestations, viral genome and phonemes, viruses as cancer agents, viral applications in genetic research and engineering, and the development of antiviral drugs and other therapies.

California State University, Sacramento, Sonoma State University, Rohnert Park

Source: COICC – California Occupational Information Coordinating Committee³⁶

BIOTECHNICAL FOOD AND AGRICULTURAL SCIENTISTS AND RELATED CAREERS

AGRICULTURAL ANIMAL BREEDING AND GENETICS. An instructional program that describes the application of genetics to the improvement of agricultural animal health, the development of new animal breeds, and the selective improvement of animal populations.

Antelope Valley College, Lancaster, Santa Rosa Junior College

AGRICULTURAL ANIMAL HUSBANDRY AND PRODUCTION MANAGEMENT. An instructional program that prepares individuals to select, breed, care for and market livestock and small farm animals. Includes instruction in the operation of animal production enterprises.

Los Angeles Pierce College, Woodland Hills, Antelope Valley Regional Occupation Program, Lancaster, Hart District Regional Occupation Program, Santa Clarita

AGRICULTURAL PLANT PATHOLOGY. An instructional program that describes the scientific principles associated with recognizing diseased plants, identifying causal agents, the development of disease response mechanisms and treatments, and the prevention or reduction of economic loss.

Antelope Valley College, Lancaster, California State University, Sacramento

AGRICULTURAL PLANT PHYSIOLOGY. An instructional program that describes the scientific principles involved in the life processes of plants and plant responses to the elements of the physical environment, including nutrition, respiration, growth, photosynthesis, and reproduction.

Antelope Valley College, Lancaster, California State University, Sacramento

AGRONOMY AND CROP SCIENCE. An instructional program that describes the chemical, physical and biological relationships of crops and the soils nurturing them. Includes instruction in the growth and behavior of agricultural crops, the breeding of improved and new crop varieties, and the scientific management of soils for maximum plant nutrition and health.

Cal Poly Pomona, Cal Poly, San Luis Obispo

BIOTECHNOLOGY RESEARCH. An instructional program that describes the application of the biological sciences to the development of medical and industrial products and processes, and the methods and equipment used in these procedures. Includes instruction in genetic engineering, cell technology, protein synthesis, applied biology, artificial enzyme production, biomaterial development, and drug therapy mechanisms.

Cal Poly, Pomona, Moorpark College

BIOLOGICAL SCIENCES/LIFE SCIENCES, OTHER. Any instructional program in biological sciences not described above.

University of California, Los Angeles, College of the Canyons, Santa Clarita, Moorpark College, Moorpark, Pasadena City College, Pasadena

BIOLOGICAL TECHNOLOGY/TECHNICIAN. An instructional program that prepares individuals to apply scientific principles and technical skills in support of biologists in research and industrial settings. Includes instruction in field research and laboratory methods.

Whittier College, Whittier, Fullerton Community College, Fullerton, University of Judaism, Bel Air

FOOD SCIENCES AND TECHNOLOGY. An instructional program that describes the biological, chemical, physical and engineering principles and practices involved in converting agriculture products to forms suitable for direct human consumption or for storage, and the solution of problems relating to product transportation, storage and marketing.

Pasadena City College

VETERINARIAN ASSISTANT/ANIMAL HEALTH TECHNICIAN. An instructional program that prepares individuals to support veterinarians by providing assistance during animal examinations, treatment administration, and monitoring; by keeping animal and related health record information; and by performing a wide range of practice-related duties.

Los Angeles Pierce College, Technology Development Center – Division of Ventura Adult Education

BIOTECHNICAL SUPPORT AND RELATED CAREERS

BIOMEDICAL ENGINEERING-RELATED TECHNOLOGY/TECHNICIAN. An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing biological or medical systems and products. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installation procedures, and report preparation.

Saddleback College, Mission Viejo, Cal State University, Sacramento

ELECTROMECHANICAL AND INSTRUMENTATION AND MAINTENANCE TECHNOLOGIES/TECHNICIANS, OTHER. Any instructional program in electromechanical instrumentation and maintenance technologies not described above.

Coastline Community College, Costa Mesa, Fresno City College, Fresno

Information supplied courtesy of COICC – California Occupational Information Coordinating Committee³⁷

SCHOOLS SERVING THE SAN FERNANDO VALLEY

COMMUNITY COLLEGES

Glendale Community College
1500 North Verdugo Road
Glendale, CA. 91208
(818) 240-1000 Fax (818) 551-5255

Mission College
13356 Eldridge Avenue
Sylmar, CA 91342
818-364-7600

Pierce College, Los Angeles
6201 Winnetka Avenue
Woodland Hills, CA. 91371
(818) 347-0551 Fax (818) 710-9844

Valley College, Los Angeles
Los Angeles Valley College
5800 Fulton Ave.
Van Nuys, CA 91401
(818) 947-2553 Fax (818) 947-2610

UNIVERSITIES AND FOUR-YEAR INSTITUTIONS

Cal State University Northridge
18111 Nordhoff Street
Northridge, CA. 91330
(818) 677-1200 Fax (818) 677-3766
College of Science and Math
18111 Nordhoff St. 91330
818-677-2004 Fax 818-677-2044

California Institute of Technology
1200 East California Boulevard
Pasadena, CA. 91125
(626) 395-6811 Fax (626) 449-9374
Office of Technology Transfer
1201 E. California Blvd. Mail Code 315-6
Pasadena, CA 91125
626-395-3288 Fax 626-356-2486

California Lutheran University
60 W. Olsen Rd.
Thousand Oaks, CA 91360
805-493-3385

Harbor/UCLA Research and Educational Institute

1124 W. Carson St.
Torrance, CA 90815
310-222-3601 Fax 310-320-6515

University Of California, Los Angeles

405 Hilgard Avenue
Los Angeles, CA. 90095
(310) 825-3101 Fax (310) 206-2337

University Of Southern California

University Park, Room 800
Los Angeles, CA. 90089
(213) 740-7939 Fax (213) 746-9433

REGIONAL AND EXTENDED AREA INSTITUTIONS**Antelope Valley College**

3041 West Avenue K
Lancaster, CA. 93536
(661) 722-6300 Fax (661) 722-6351

Cal-State University

Program of Education and Research in Biotechnology
5500 Campanile Dr.
San Diego, CA 92182
619-594-5578 Fax 619-594-6381

College of the Canyons

26455 Rockwell Canyon Road
Santa Clarita, CA. 91355
(661) 259-7800 Fax (661) 259-8302

Los Angeles ORT Technical Institute

15130 Ventura Boulevard
Sherman Oaks, CA. 91403
(818) 382-6005 Fax (818) 788-3997

Moorpark College

7075 Campus Road
Moorpark, CA. 93021
(805) 378-1405 Fax (805) 378-1499

Pasadena City College

1570 East Colorado Boulevard
Pasadena, CA. 91106
(626) 585-7123 Fax (626) 585-7915

Santa Monica College

1900 Pico Boulevard
Santa Monica, CA. 90405
(310) 434-4000 Fax (310) 434-3709

Soka University Of America

26800 West Mulholland Highway
Calabasas, CA. 91302
(818) 880-6400 Fax (818) 880-9326

C S U Channel Islands

One University Drive, Administration Bldg
Camarillo, CA. 93012
(805) 437-8451 Fax (805) 437-8424

C S U Northridge At Channel Islands

One University Drive, Bell Tower Bldg.
Camarillo, CA.93012

California National University For Advanced Studies

16909 Parthenia Street
North Hills, CA. 91343
(818) 830-2411 Fax (818) 830-2418

**California State University, Northridge
at Edwards Air Force Base**

140 Methusa Rd Rm 107
Edwards Afb, CA. 93524
(661) 258-6955 Fax (661) 258-8430

Columbia College, Hollywood

18618 Oxnard Street
Tarzana, CA. 91356
(818) 345-8414 Fax (818) 345-9053

Consortium For Advanced & Technical Education

166 North Moorpark Road, Suite 101
Thousand Oaks, CA. 91360
(805) 496-9433 Fax (805) 496-8462

Kensington University

124 South Isabel Street
Glendale, CA. 91209
(818) 240-9166 Fax (818) 240-1707

Mount St. Mary's College

12001 Chalon Road
Los Angeles, CA. 90049
(310) 954-4000 Fax (310) 954-4259

Occidental College

1600 Campus Road
Los Angeles, CA. 90041
(800) 825-5262 Fax (323) 259-2907

Pepperdine University

24255 Pacific Coast Highway
Malibu, CA. 90263
(310) 456-4000 Fax (310) 456-4861

Pepperdine University - Ventura County Center

2829 Townsgate Road, Suite 180
Westlake Village, CA. 91362
(805) 449-1181 Fax (805) 496-8768

Southern Illinois University At Carbondale

140 Mehtusa Avenue95 Mss/Dpee
Edwards Afb, CA. 93524
(661) 258-7357 Fax (661) 258-8737

University Of Judaism

15600 Mulholland Drive

Bel Air, CA. 90077

(310) 476-9777 Fax (310) 471-3657

Woodbury University

7500 Glenoaks Boulevard

Burbank, CA. 91510

(800) 784-9663 Fax (818) 767-7520

Workforce Assistance Programs and Economic Development Agencies

Burbank Redevelopment Agency is committed to continuing and expanding Burbank's success through balanced and ongoing revitalization of the city's economy and maximization of resources for present and future businesses. There are currently a wide variety of development projects in proposal, planning, or construction phases. The Burbank Redevelopment Agency is committed to handling its projects quickly and efficiently.

California Community Colleges Work-Based Learning and Employment Services. The committee seeks to: 1) to enhance the relevance of education in the workplace, 2) encourage access for all segments of the population by avoiding gender bias and considering the needs of special populations in developing and implementing programs, and 3) provide the California Community Colleges with the necessary expertise and guidance in meeting industry standards and needs in work-based learning and employment service education programs.

Economic Alliance of the San Fernando Valley is a private, non-profit economic development and marketing collaborative made up of private and public investors organized for the purpose of growing and sustaining the economic base of the San Fernando Valley region, and improving the quality of life in the five-city region including Burbank, Calabasas, Glendale, Los Angeles and San Fernando.

The Alliance provides regional marketing, economic development, education and training support, as well as development of information and data on the region. Working with the leadership of the Valley cities, the Alliance manages community indicators and maintains an ongoing program of community dialogues on such topics as quality of life and sustainability.

Genesis L.A. was launched in March 1999 as an economic development initiative. It focused on revitalizing underutilized and blighted industrial and retail sites in disadvantaged communities. Such sites include South and East Los Angeles, the Harbor Area and the San Fernando Valley. Genesis L.A. invigorates the business environment through public/private partnerships that both catalyze economic growth and improve the quality of life for citizens in surrounding communities. Currently, 21 sites have been targeted for development.

Glendale International Trade Development Center. A new resource for Glendale manufacturers and service companies who are pursuing import or export business. The center is designed to help evaluate businesses and assist with entering or expanding in the global marketplace. Professional international trade consultants are ready to assist with growth opportunities and international expansion. Services and information include: business plan analysis, foreign market studies, overseas contacts and connections, export financing packages, state-of-the-art on-line databases for market research and foreign trade leads, and marketing and logistics assistance for businesses.

Glendale Redevelopment Agency provides assistance and guidance to development, and provides assurance that new projects comply with regulations and plans. The Agency is highly successful in its partnership with investors, developers and business, creating the physical, intellectual and cultural environment necessary for the community's long-term prosperity.

Glendale provides a number of other free services to business, including a variety of job training programs, employer incentives, job tax credits and certification, labor market information, employment, occupation and planning statistics. The City also provides placement, recruitment, screening and referral by a professional staff. Jobs are matched through the statewide network for listing job openings and identifying qualified job seekers. Available logistic support includes temporary space, interview facilities, appointment setting, telephone and reception service, as well as a special fidelity bonding program.

The L.A. Business Team, created by Mayor Richard Riordan, promotes development in key growth industries throughout the City by working to attract, expand and retain quality job-creating businesses. The Business Team's 13 development representatives provide businesses with one-on-one assistance in nearly all aspects of business management.

The Business Team has assisted numerous major developments, including the Harbor Gateway (former Boeing site), E! Entertainment, Howard Hughes Center, St. Vibiana's Cathedral, STAPLES Center, and the Grand Avenue Master Plan.

The Mayor's Los Angeles Minority Business Opportunity Committee (LA MBOC), which was declared a "national model" program, promotes and disseminates contract and procurement opportunities for minority and women-owned

business enterprises (M/W/OBEs) in the greater Los Angeles region. Since its inception in January 1994, LA MBOC has identified more than \$5.62 billion in minority contract awards through its public and private partners.

In light of its success, the LA MBOC has added four programs that assist M/W/OBEs: the Alameda Corridor Business Outreach Program, Los Angeles Opportunity for Procurement and Services, the Los Angeles to Pasadena Business Outreach Program and the Los Angeles One-Stop Capital Shop.

The Port of Los Angeles offers extended customer services. It is one of the world's largest trade gateways and the scope of its economic contributions to the regional economy is far-reaching. The Port is connected directly and indirectly with tens of billions of dollars in industry sales each year in the Southern California region. Those sales translate into thousands of local jobs and billions of dollars in wages, salaries, and state and local taxes.

The Port features 29 major cargo terminals, including facilities to handle automobiles, containers, dry bulk products and liquid bulk products. Combined, these terminals handle more than 80 million metric revenue tons of cargo representing some \$80 billion. Its six modern container facilities together handle in excess of four million units of cargo containers annually, making the Port one of the top 10 busiest ports in the world.

Small Manufacturers Association (SMA) of California was established in 1991 to champion the interests of the manufacturing businesses that make up California's industrial backbone. SMA is committed to improving regulation, vocational priorities, profitability, and public pride in a strong manufacturing base. Services include: development of the public's understanding of small manufacturers' importance to the economy, public policy representation, and support for education and vocational training programs.

Valley Economic Development Center (VEDC) is a community based private non-profit corporation offering training, consulting, technical assistance and financing to small and medium sized businesses for over 20 years. VEDC provides business services in the San Fernando Valley and the City of Los Angeles. Offerings include consulting, training, financing and other types of related services to small businesses to help them grow and succeed.

Valley International Trade Association (VITA) provides assistance and programming for international trade. VITA produces and facilitates one of the premiere annual import/export events "Going Global."

Valley Leadership Institute, through its nine-month program, which runs from October to June, enriches participants' leadership skills by spending one day each month in an all-day training session with experts in various fields. Topics covered include local and state governance, education, environment, crime and justice, transportation, human needs, and

economic engines.

Each year, classes are customized to address current issues and trends, as well as fundamental perennial issues. Through field exercises and real-time lectures, participants are exposed to various venues throughout the Los Angeles area. Since its inception, VLI has graduated some 250 alumni.

Verdugo Workforce Investment Board (Formerly Verdugo Private Industry Council) is a non-profit institution formed in 1983 originally through the federal Job Training Partnership Act (JTPA). It provides employment and training services throughout the cities of Burbank, Glendale, and La Cañada-Flintridge, as well as adjacent communities.

The professional staff provides area employees with a trained workforce, while providing quality employment opportunities to the economically disadvantaged. Services to employers are free. VPIC provides training, employment services and job placement through the one-stop Verdugo Jobs Center.

Workforce Investment Board of the City of Los Angeles, provides services to employers, including: placement, pre-screening and applicant referral; Customized Employment Services; Loans and Financial Assistance Information or Referral, Business Assistance Center Referral, Entrepreneurial Training Programs Referral, Tax Incentive Program Information and Certification, Incentive Zone Information, and Labor Market Information

Workforce Investment Board of the County of Los Angeles. By combining funds and services of many programs, the Workforce Investment Act (WIA) establishes a new model for workforce and economic development with a greater emphasis on universal access to services, lifelong learning, customer choice and flexibility. The goal is to improve the quality of the workforce, encourage career mobility, and improve business competitiveness through increased workforce productivity.

The Workforce Investment Act is funding employment, literacy, education and self-sufficiency services to approximately 40,000 individuals annually. This helps businesses save time and money through a variety of no-cost employment, training and information services, including training and placement, tax credit certification and information services. WIA brings together many separate federal and state employment, education and training programs under a single umbrella. WIA programs in Southern California alone will total over \$300,000,000 per year.

Workforce Investment Act (WIA) Workforce Goals

Workforce Investment Boards seek to create a high performance workplace, facilitate knowledge and skill attainment, establish a link between labor market supply and demand, promote employment, encourage career mobility and self-sufficiency, to the satisfaction of their customers and clients. Their One-Stops have state-of-the-art self-directed services to help with job searches, including resource centers with phones, faxes and computers, job search workshops and information referral, all offered at no cost.

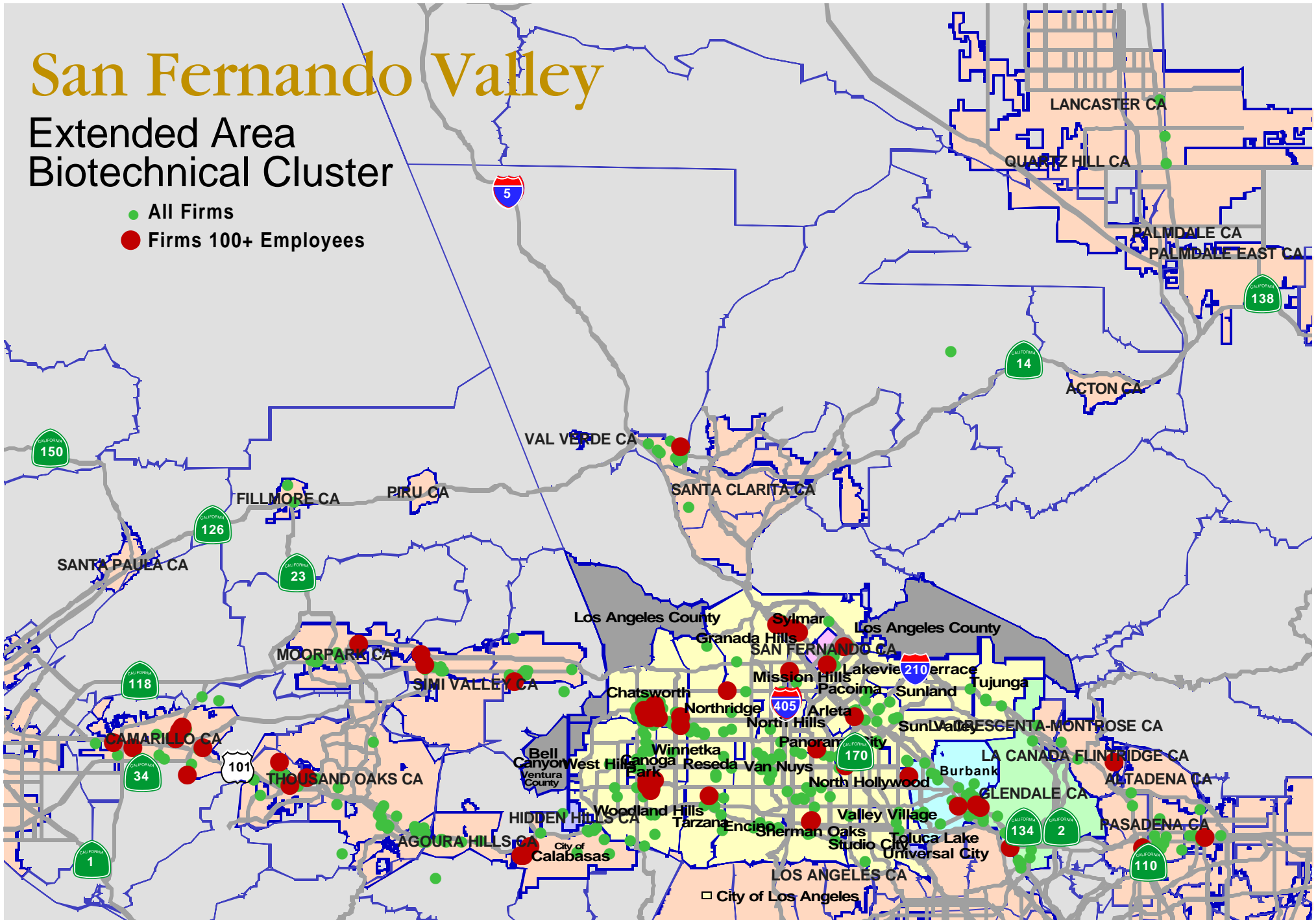


**BIOTECHNICAL CLUSTERS
IN THE
SAN FERNANDO VALLEY**

San Fernando Valley

Extended Area Biotechnical Cluster

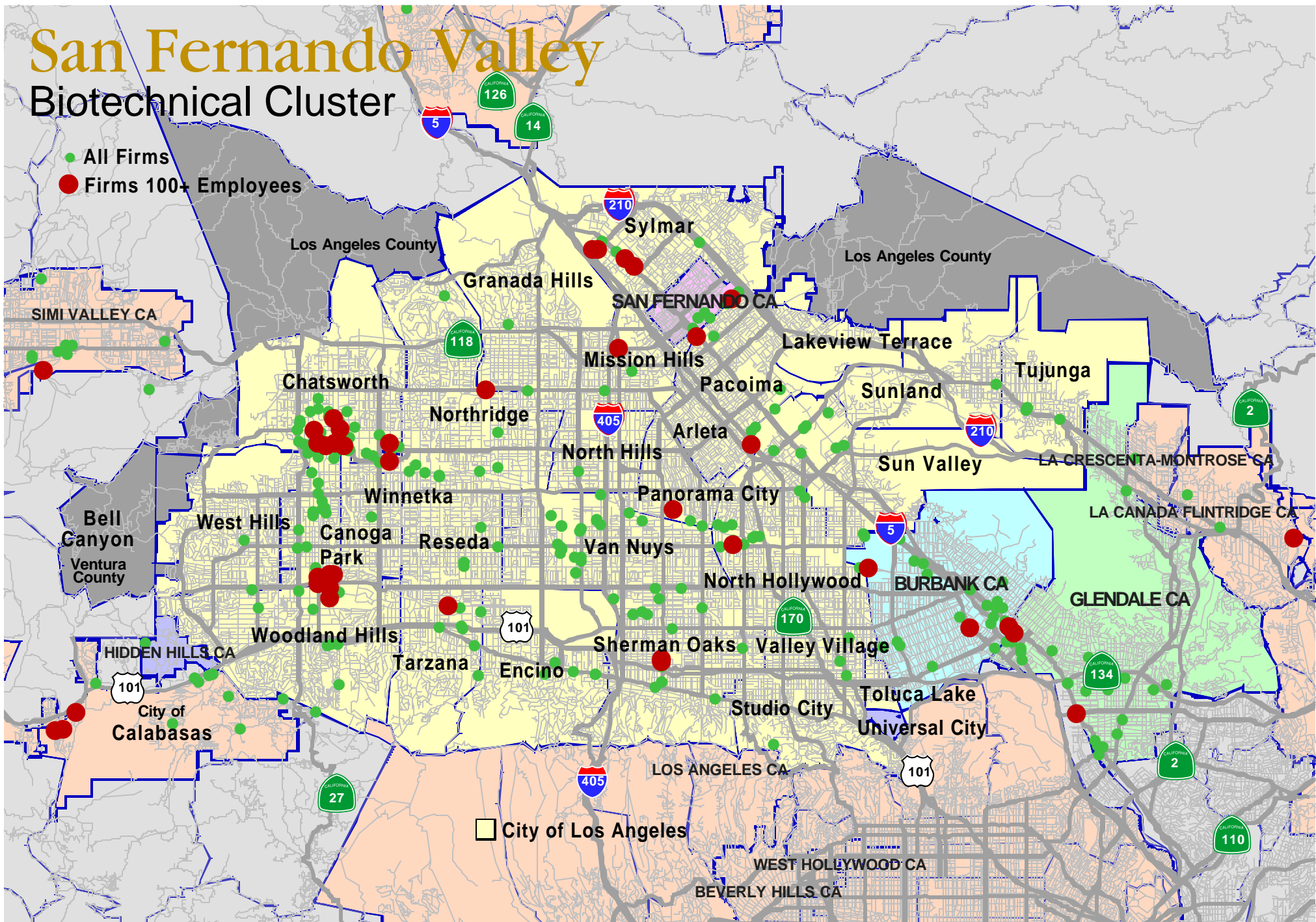
- All Firms
- Firms 100+ Employees

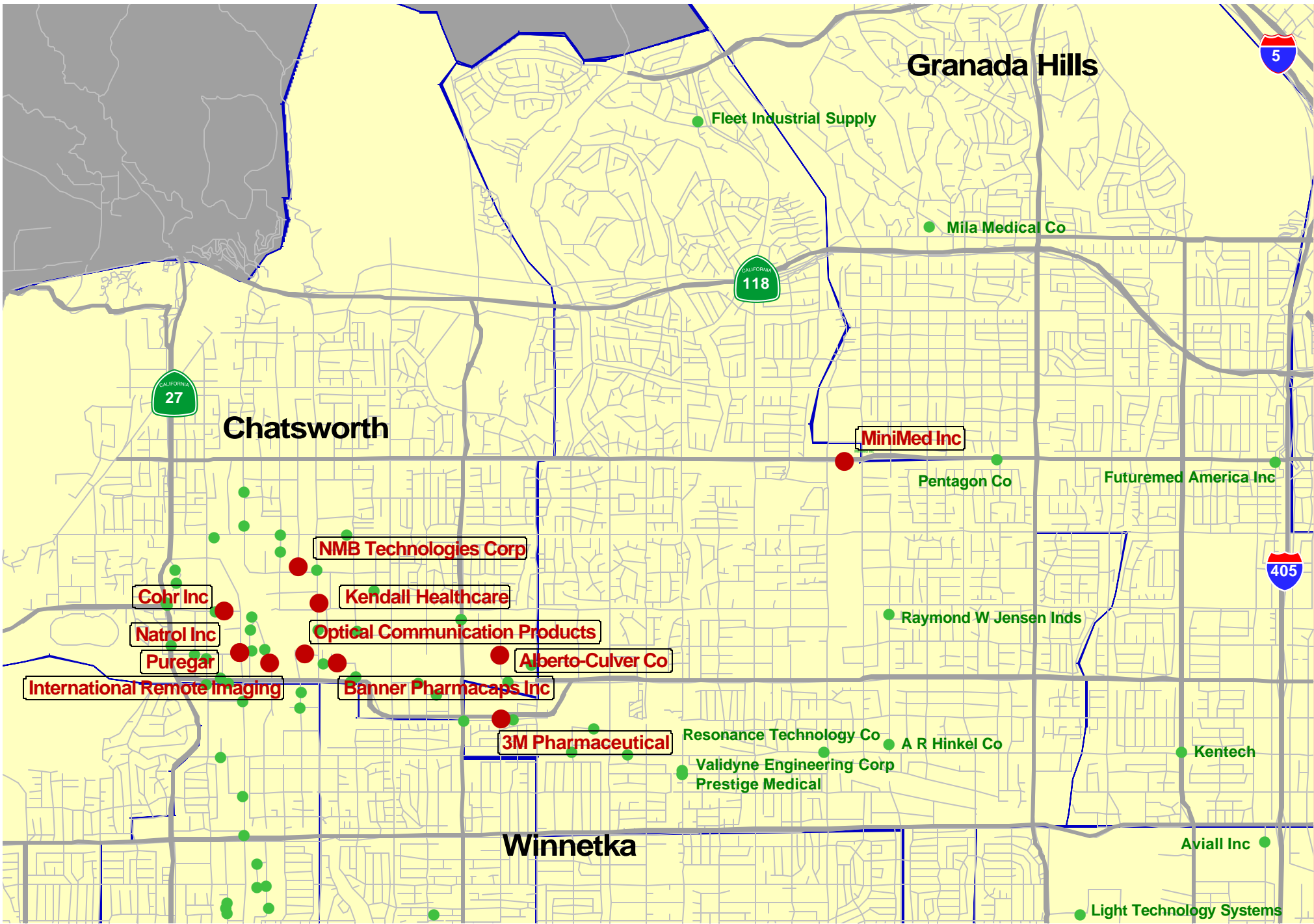


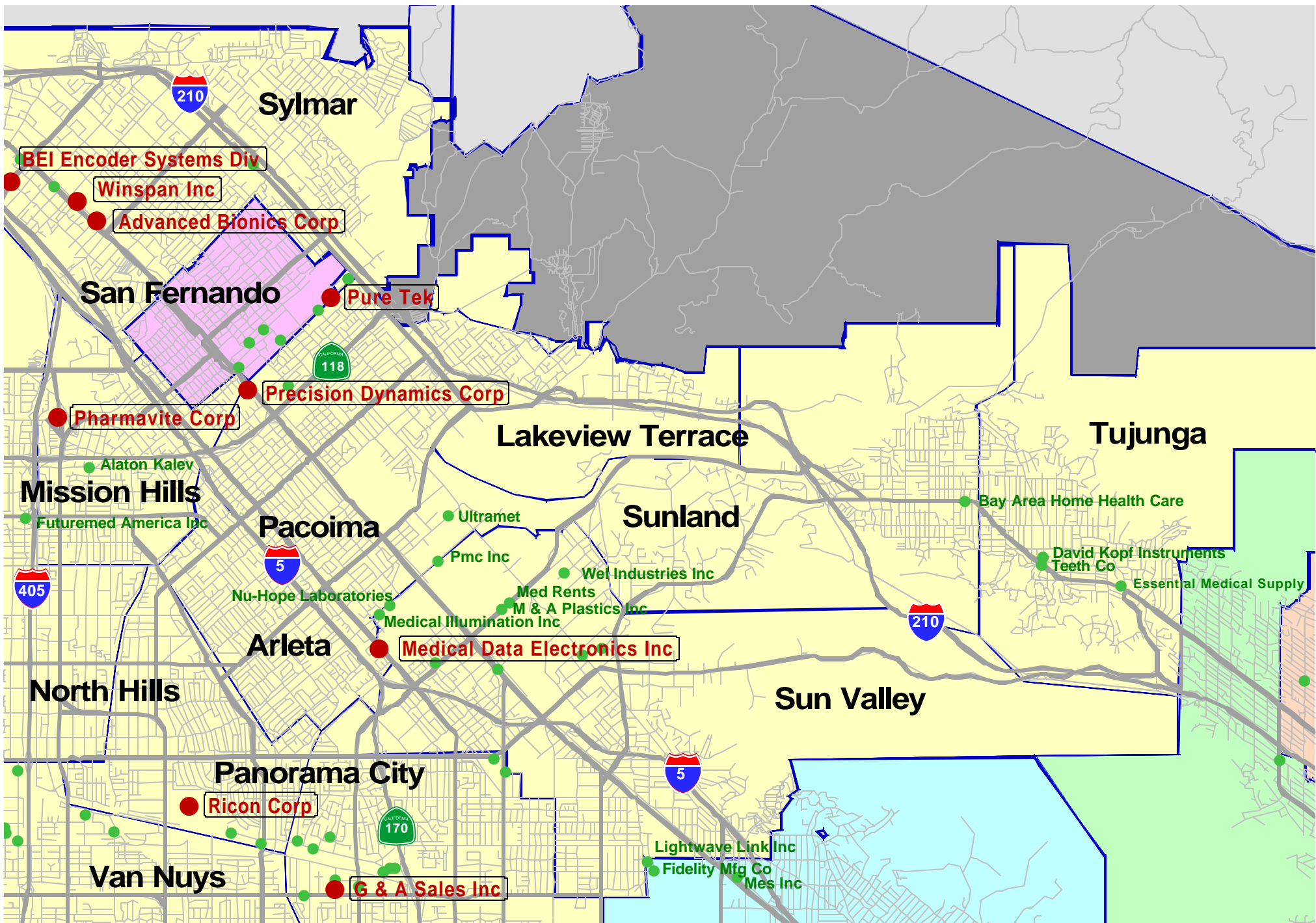
San Fernando Valley

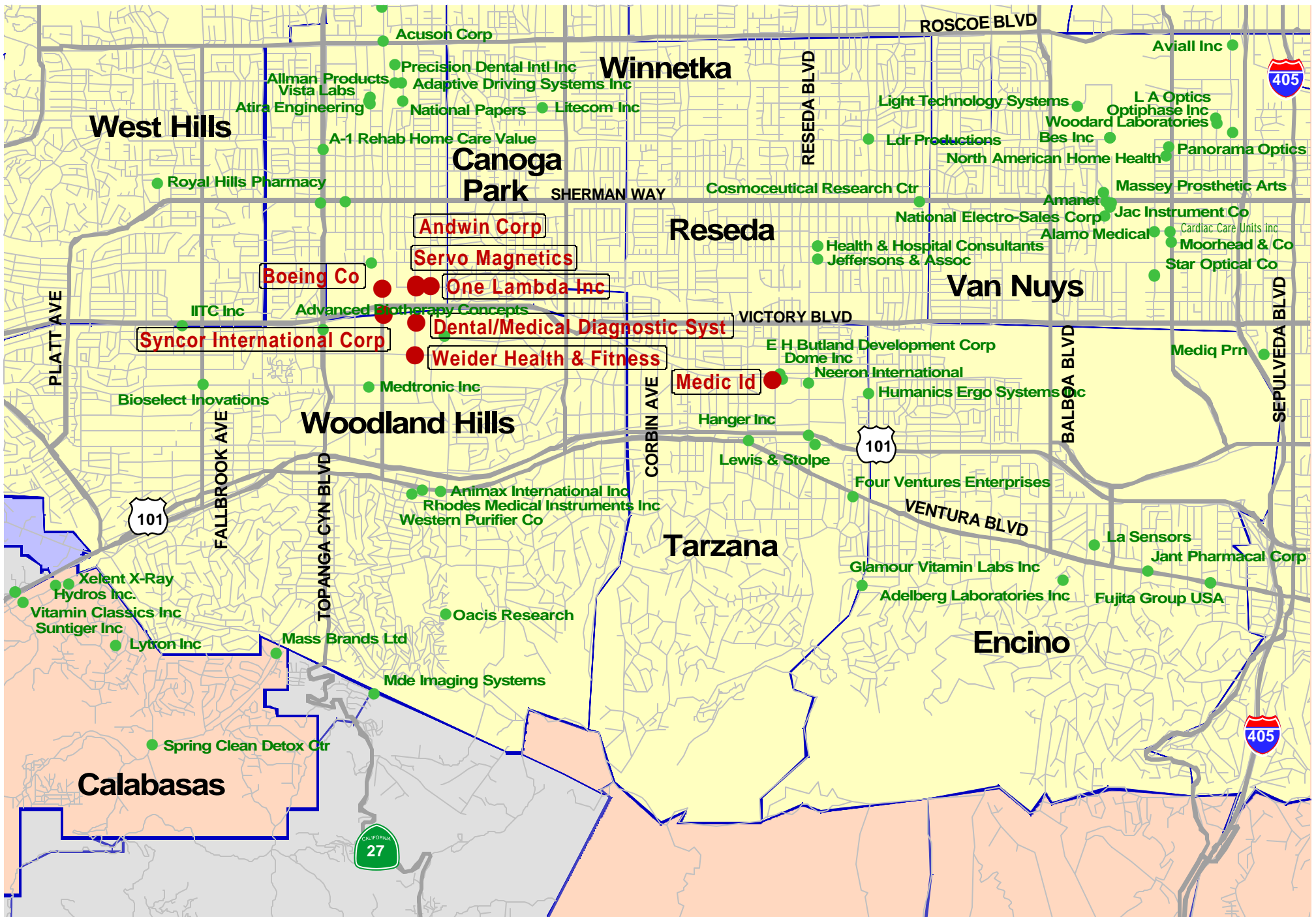
Biotechnical Cluster

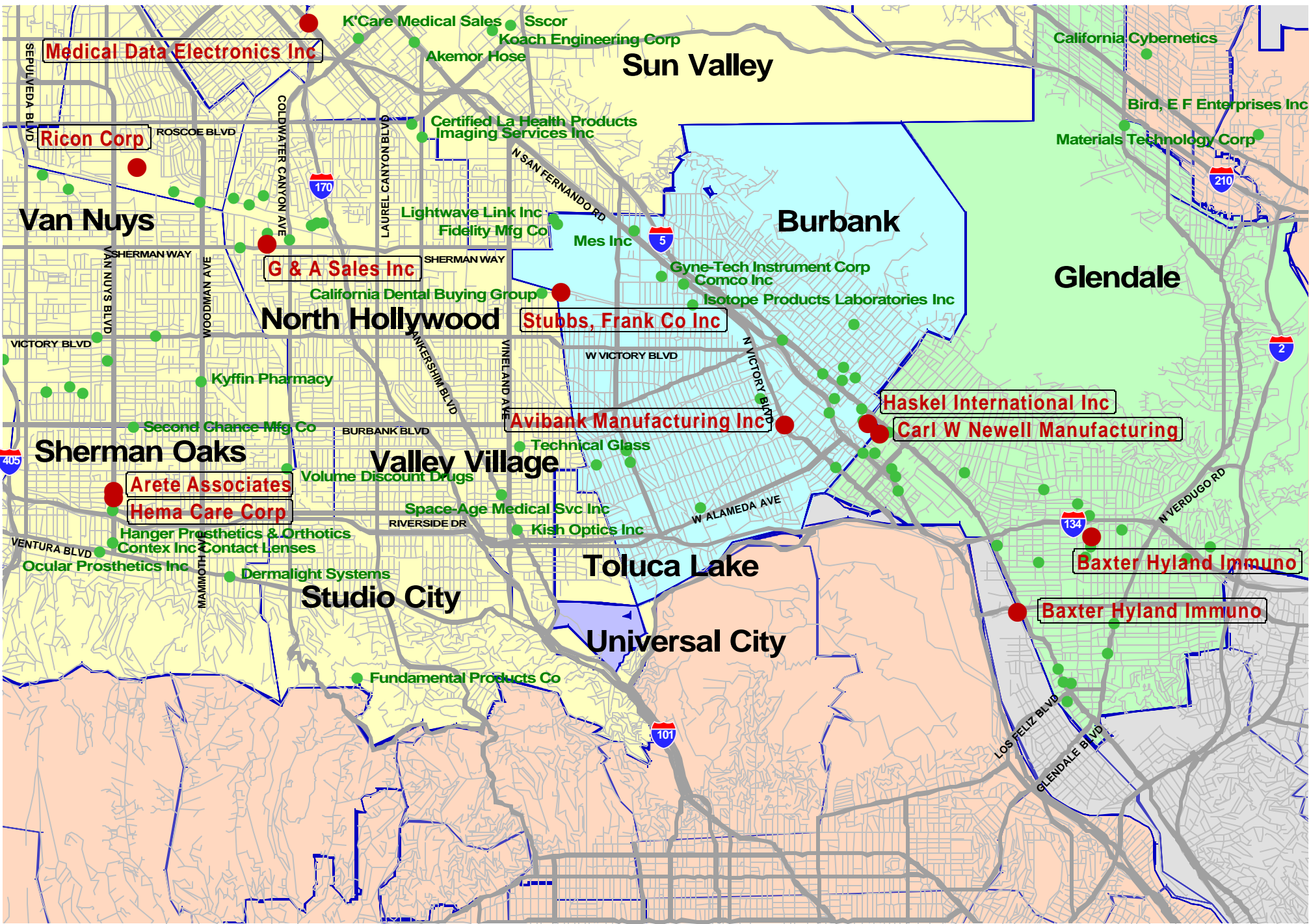
- All Firms
- Firms 100+ Employees

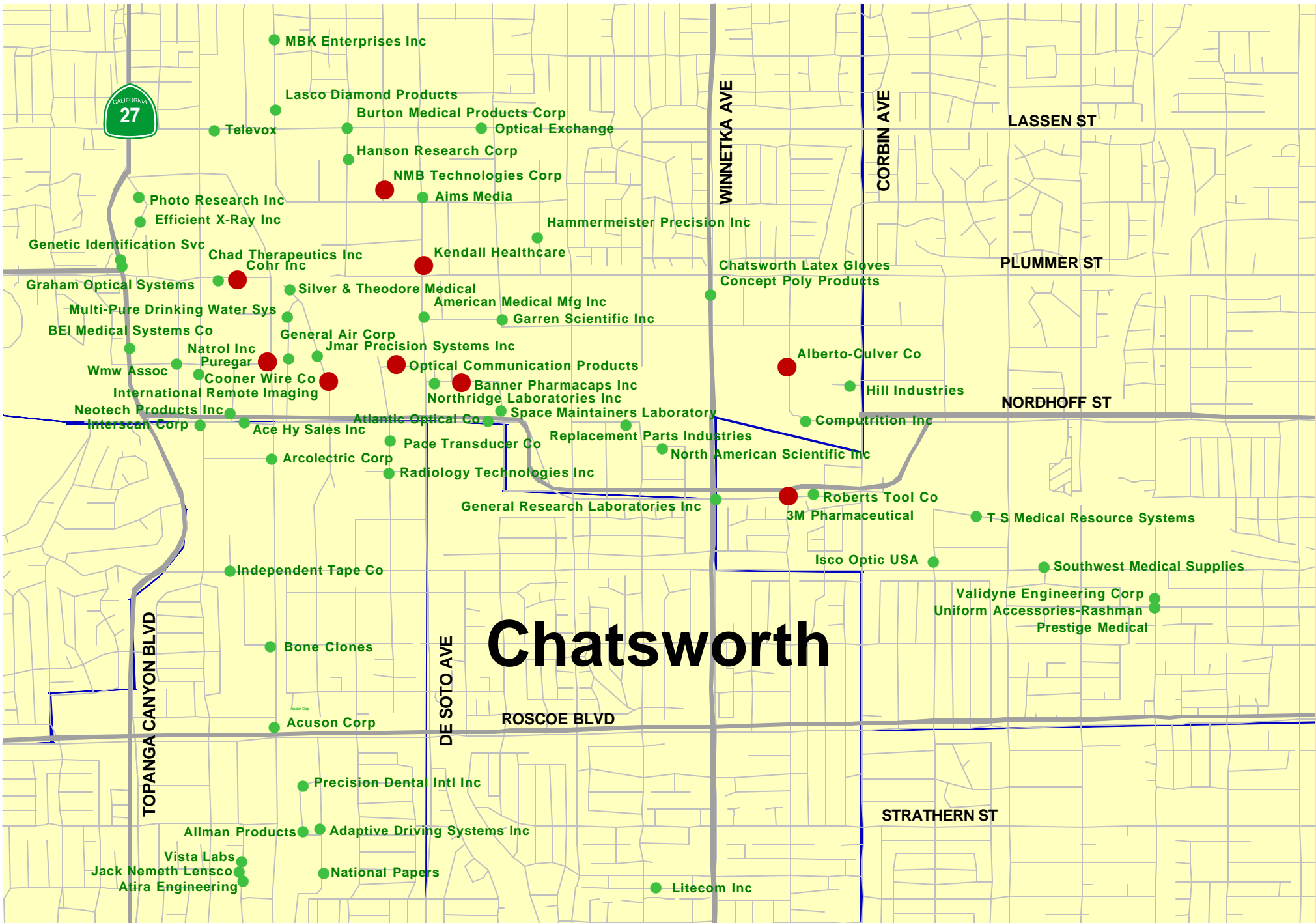












Chatsworth



TOPANGA CANYON BLVD

DE SOTO AVE

WINNETKA AVE

CORBIN AVE

LASSEN ST

PLUMMER ST

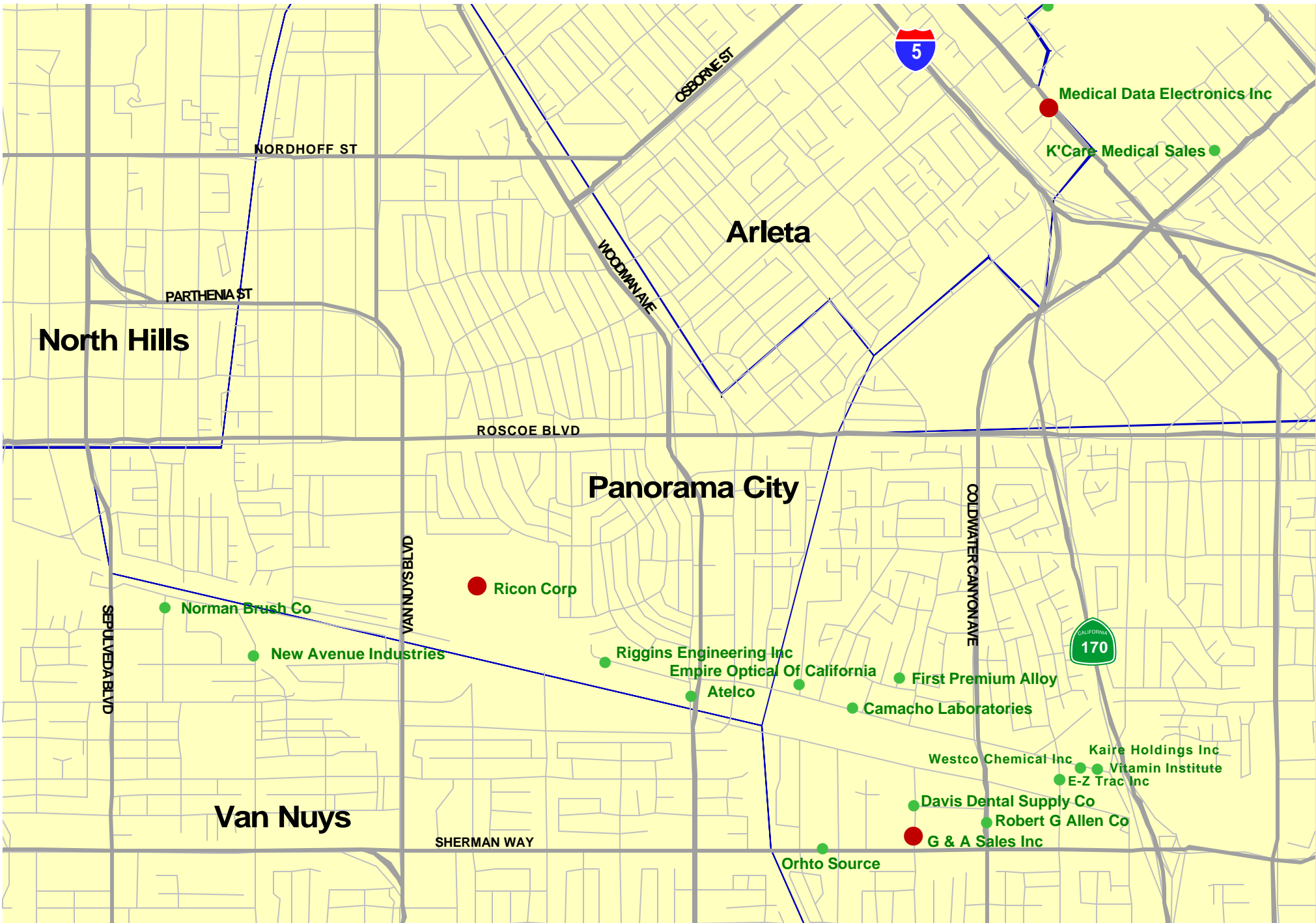
NORDHOFF ST

ROSCOE BLVD

STRATHERN ST

- MBK Enterprises Inc
- Lasco Diamond Products
- Televox
- Burton Medical Products Corp
- Optical Exchange
- Hanson Research Corp
- NMB Technologies Corp
- Aims Media
- Photo Research Inc
- Efficient X-Ray Inc
- Genetic Identification Svc
- Chad Therapeutics Inc
- Cohr Inc
- Kendall Healthcare
- Hammermeister Precision Inc
- Graham Optical Systems
- Silver & Theodore Medical
- American Medical Mfg Inc
- Garren Scientific Inc
- Multi-Pure Drinking Water Sys
- BEI Medical Systems Co
- General Air Corp
- Jmar Precision Systems Inc
- Natrol Inc
- Puregar
- Wmw Assoc
- Cooner Wire Co
- International Remote Imaging
- Optical Communication Products
- Banner Pharmacaps Inc
- Northridge Laboratories Inc
- Neotech Products Inc
- Intersean Corp
- Ace Hy Sales Inc
- Atlantic Optical Co
- Space Maintainers Laboratory
- Pace Transducer Co
- Replacement Parts Industries
- North American Scientific Inc
- Arcoelectric Corp
- Radiology Technologies Inc
- General Research Laboratories Inc
- Roberts Tool Co
- 3M Pharmaceutical
- Independent Tape Co
- Isco Optic USA
- Bone Clones
- Acuson Corp
- Precision Dental Intl Inc
- Allman Products
- Adaptive Driving Systems Inc
- Vista Labs
- Jack Nemeth Lensco
- Atira Engineering
- National Papers
- Litecom Inc

- Alberto-Culver Co
- Hill Industries
- Computation Inc
- T S Medical Resource Systems
- Southwest Medical Supplies
- Validyne Engineering Corp
- Uniform Accessories-Rashman
- Prestige Medical



North Hills

Arleta

Panorama City

Van Nuys

Medical Data Electronics Inc

K'Care Medical Sales

Ricon Corp

Norman Brush Co

New Avenue Industries

Riggins Engineering Inc

Empire Optical Of California

Atelco

First Premium Alloy

Camacho Laboratories

Westco Chemical Inc

Kaire Holdings Inc

Vitamin Institute

E-Z Trac Inc

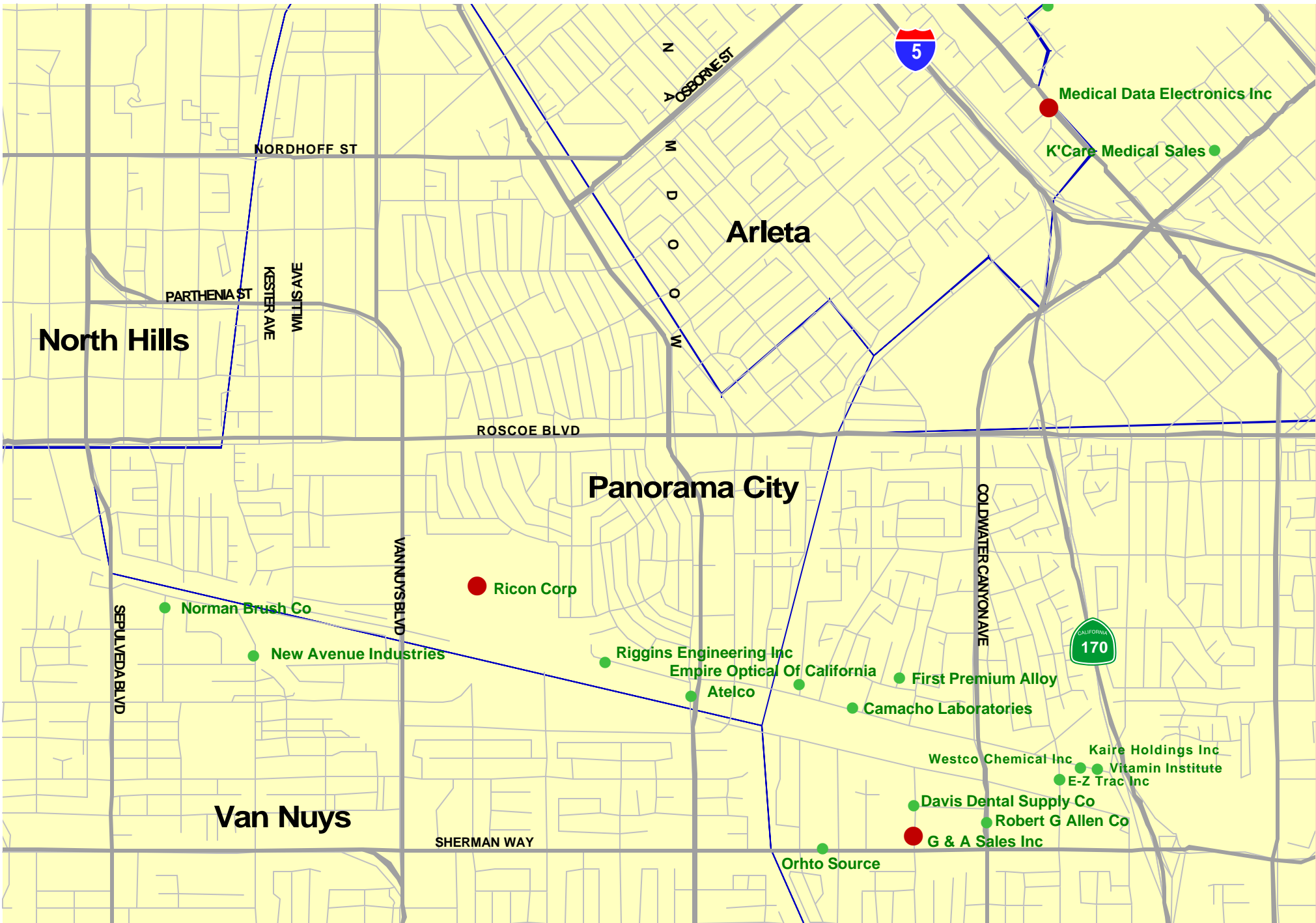
Davis Dental Supply Co

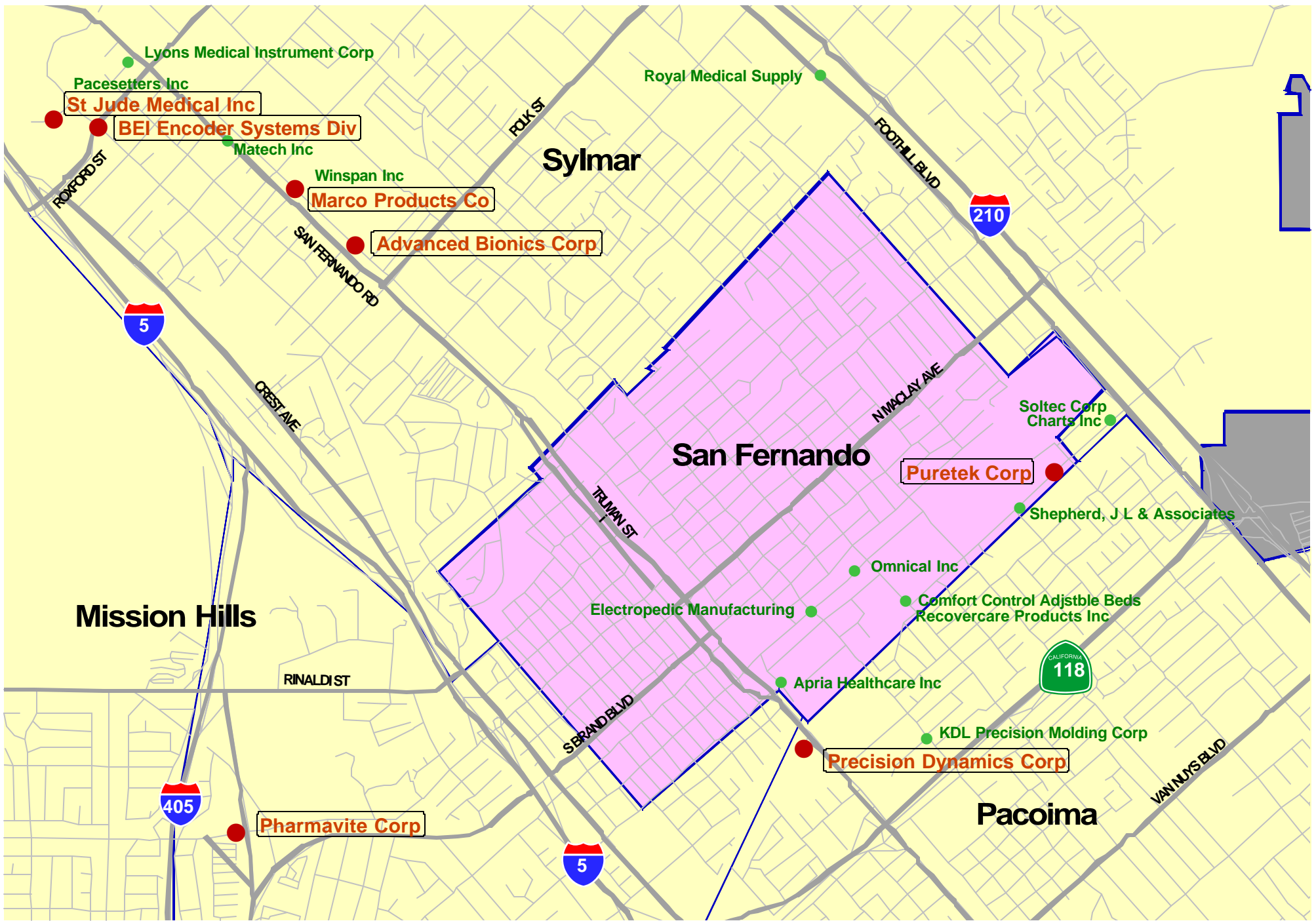
Robert G Allen Co

Orhto Source

G & A Sales Inc







Lyons Medical Instrument Corp

Pacesetters Inc

St Jude Medical Inc

BEI Encoder Systems Div

Matech Inc

Winspan Inc

Marco Products Co

Advanced Bionics Corp

Royal Medical Supply

Sylmar

San Fernando

Puretek Corp

Soltec Corp
Charts Inc

Shepherd, J L & Associates

Omnicl Inc

Electropedic Manufacturing

Comfort Control Adjustable Beds
Recovercare Products Inc

Apria Healthcare Inc

KDL Precision Molding Corp

Precision Dynamics Corp

Pacoima

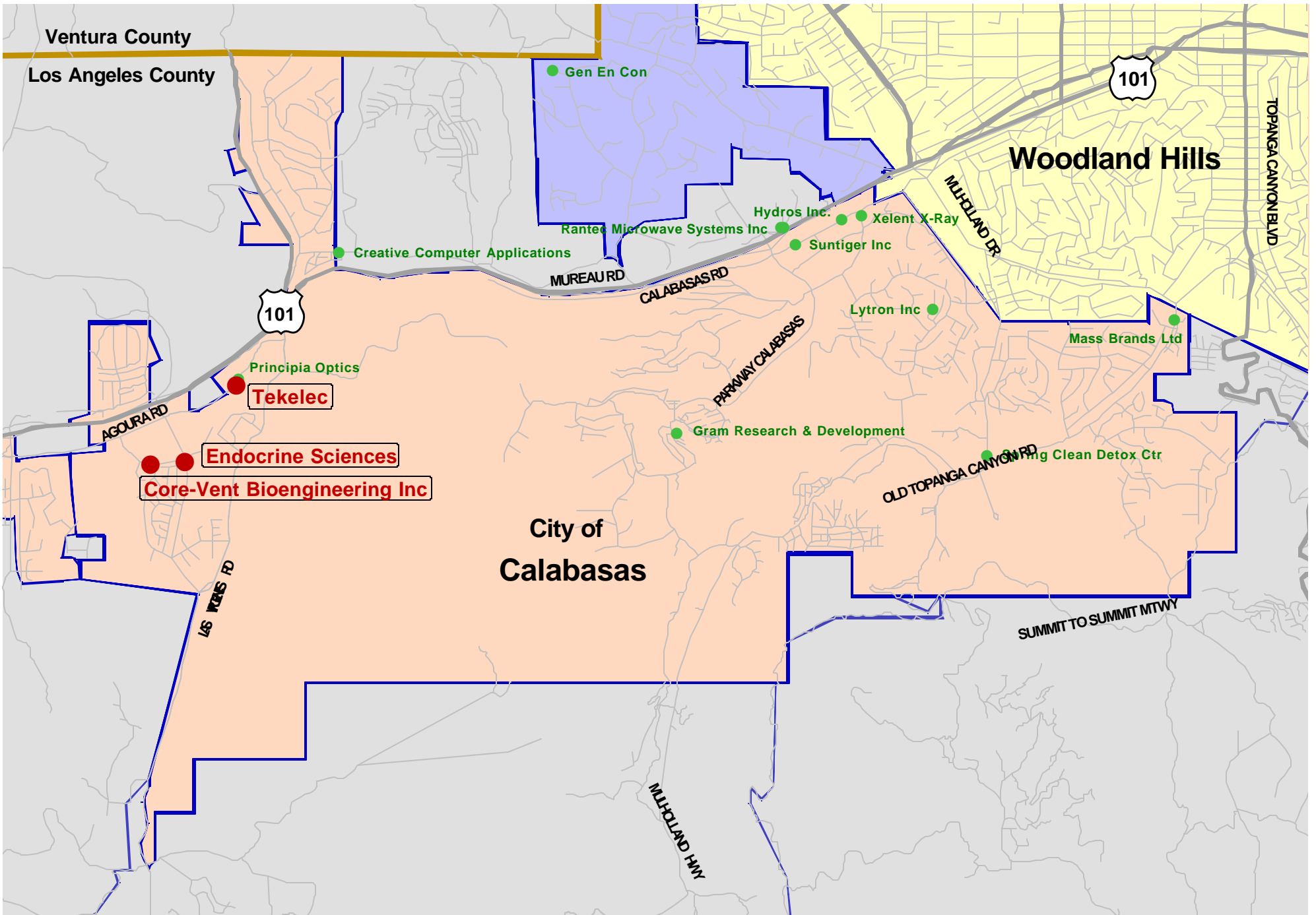
Pharmavite Corp

Mission Hills

RINALDIST

VAN NUYS BLVD





Ventura County

Los Angeles County

101

Woodland Hills

TOPANGA CANYON BLVD

MULHOLLAND DR

MUREAURD

CALABASAS RD

PARKWAY CALABASAS

Lytron Inc

Mass Brands Ltd

Principia Optics

Tekelec

Endocrine Sciences

Core-Vent Bioengineering Inc

Gram Research & Development

King Clean Detox Ctr

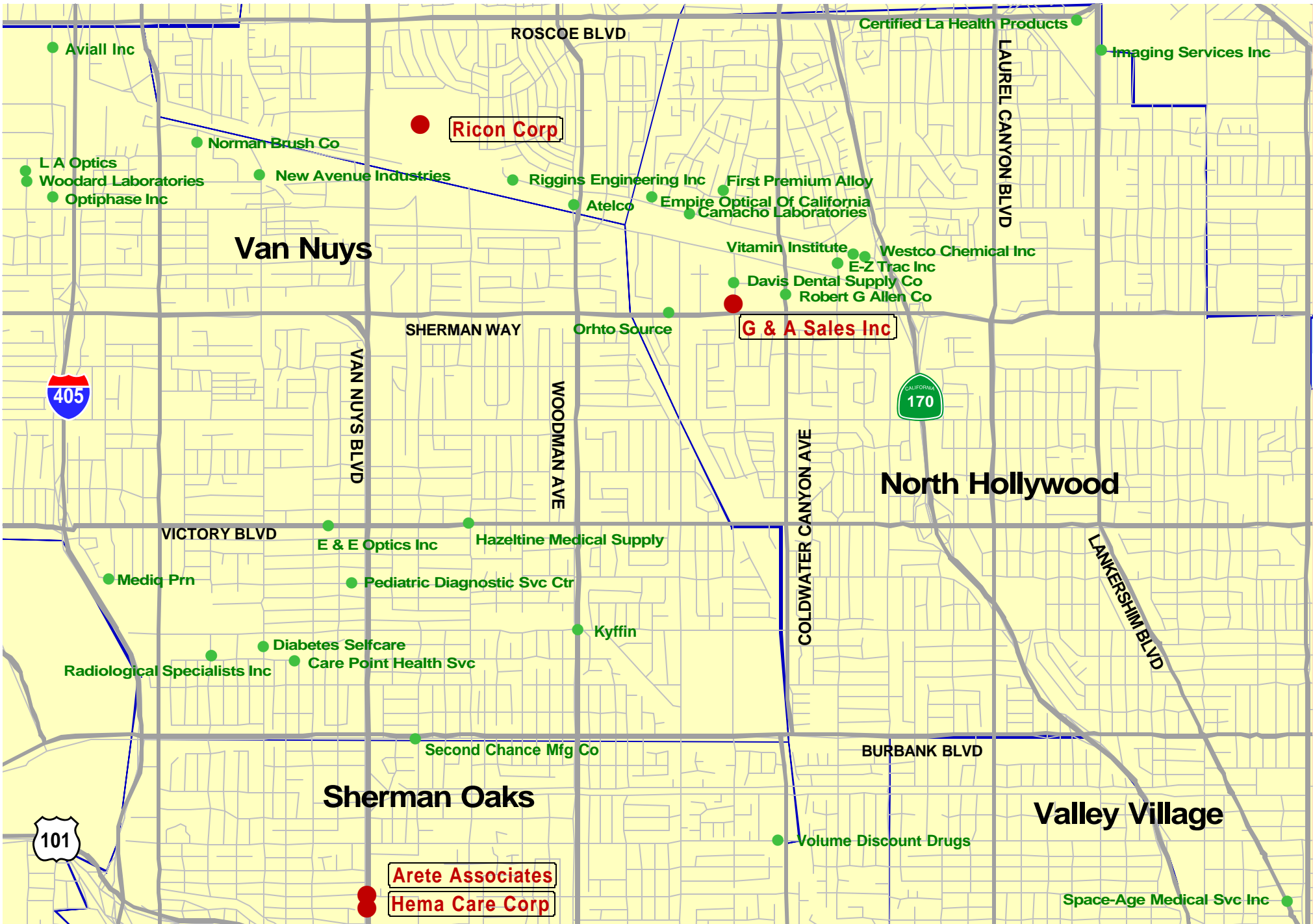
City of Calabasas

OLD TOPANGA CANYON RD

SUMMIT TO SUMMIT MTWY

LAS VIRAS RD

MULHOLLAND HWY

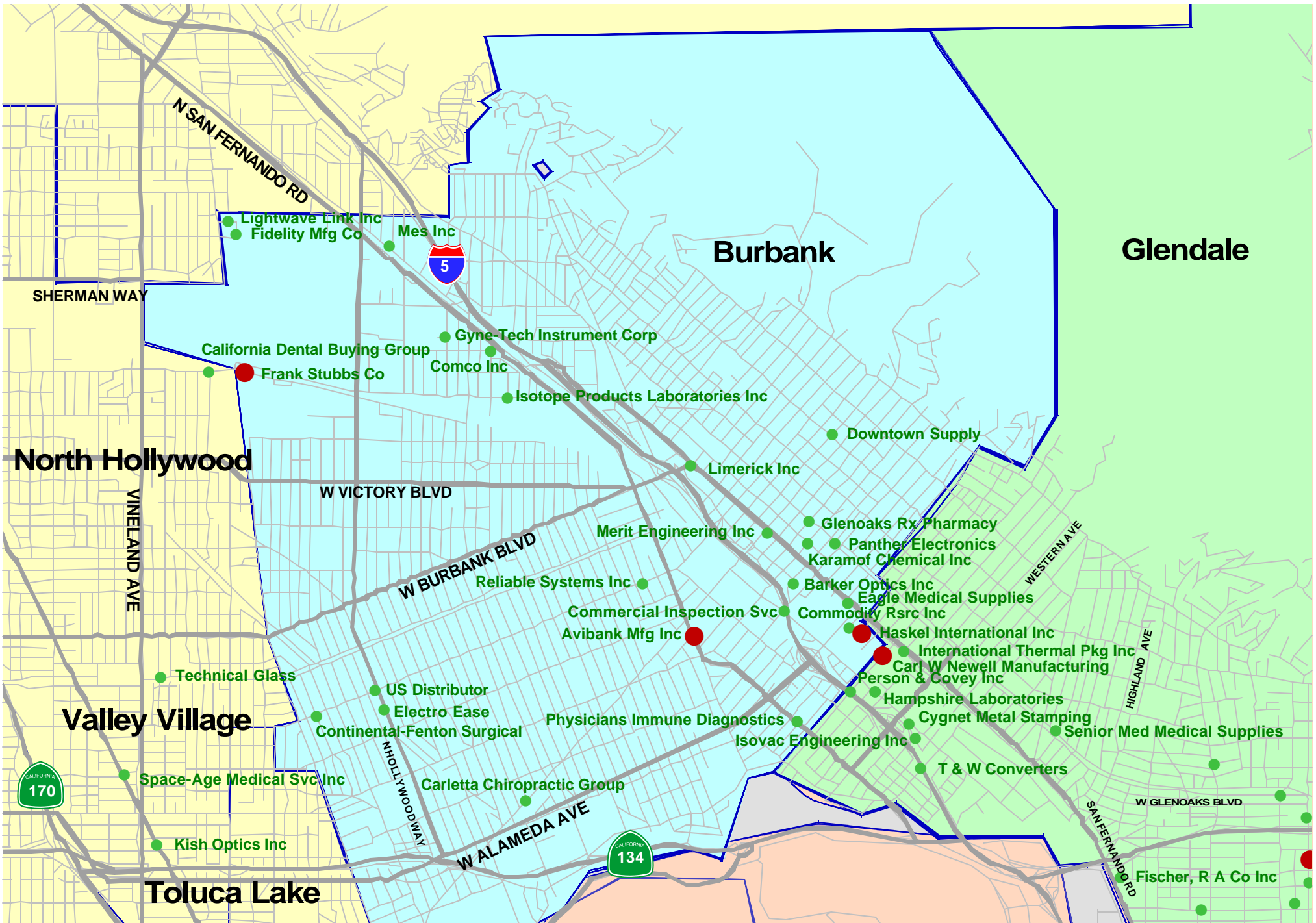


Ricon Corp

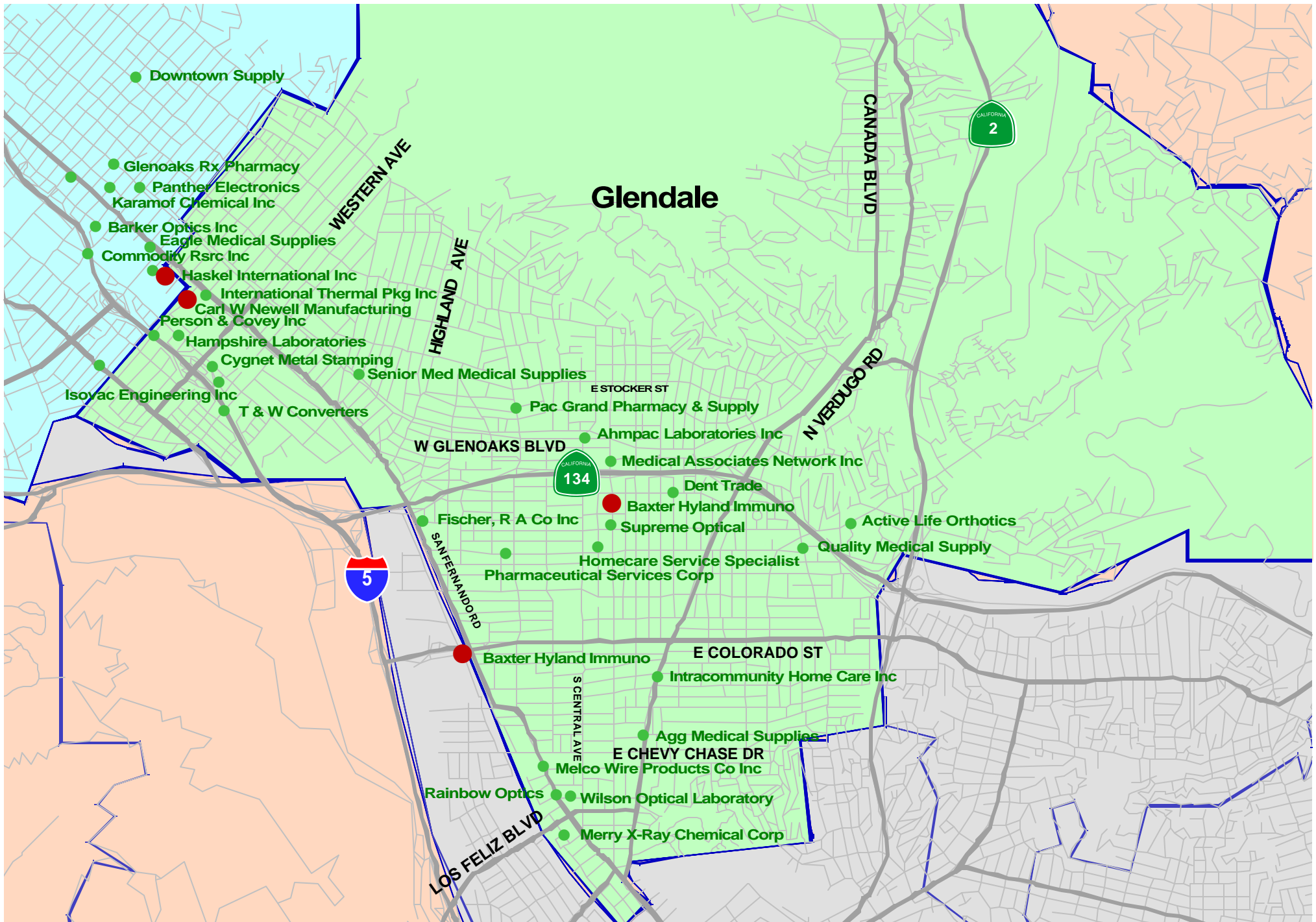
G & A Sales Inc

Arete Associates

Hema Care Corp



Glendale



Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
3M Pharmaceutical	19901 Nordhoff St	Northridge	CA	91324	818-341-1300	818-709-3044
3R Medical Research Inc	741 Lakefield Rd # G	Westlake Vlg	CA	91361	818-889-8826	
A Plus Precision Machining Inc	1390 Flynn Rd # G	Camarillo	CA	93012	805-482-1039	805-482-6771
A R Hinkel Co	8751 White Oak Ave	Northridge	CA	91325	818-775-2942	
A V Pulmonary Care	340 W Milling St	Lancaster	CA	93534	661-942-9995	661-949-1904
A-1 Rehab Home Care Value	7541 Topanga Canyon Blvd	Canoga Park	CA	91303	818-346-8448	818-346-8447
Ace Hy Sales Inc	21541 Nordhoff St # A	Chatsworth	CA	91311	818-700-0268	
Active Life Orthotics	1530 E Chevy Chase Dr # 2	Glendale	CA	91206	818-243-1700	
Acuson Corp	8357 Canoga Ave	Canoga Park	CA	91304	818-882-0606	818-882-0532
Adaptive Driving Systems Inc	7959 Deering Ave	Canoga Park	CA	91304	818-998-1026	818-998-4592
ADC	5145 Verdugo Way	Camarillo	CA	93012	805-484-1529	805-484-9347
Adelberg Laboratories Inc	16821 Oak View Dr	Encino	CA	91436	818-784-1141	818-986-9587
Advance Laser Technologies	40 W Easy St # 3	Simi Valley	CA	93065	805-578-2842	
Advanced Bionics Corp	12740 San Fernando Rd	Sylmar	CA	91342	818-362-7588	818-362-3072
Advanced Biotherapy Concepts	6355 Topanga Canyon Blvd	Woodland Hills	CA	91367	818-883-3956	
Advanced Photonix Inc	1240 Avenida Acaso	Camarillo	CA	93012	805-987-0146	805-484-9935
Advanced Surgical	31344 Via Colinas # 108	Westlake Village	CA	91362	818-597-1366	
Advanteq	749 Lakefield Rd # F	Westlake Village	CA	91361	805-446-6251	
AeroVironment Inc	4685 Industrial St # 3H	Simi Valley	CA	93063	805-581-2187	805-581-4512
Affiliated Research Institute	301 S Fair Oaks Ave # 207	Pasadena	CA	91105	909-625-1988	
Agg Medical Supplies	919 S Glendale Ave	Glendale	CA	91205	818-240-5493	
Ahmpac Laboratories Inc	300 W Glenoaks Blvd # 202	Glendale	CA	91202	818-547-1096	818-547-1346
Aims Media	9710 DE Soto Ave	Chatsworth	CA	91311	818-773-4300	818-341-6700
Air Care Medical Supply	7039 Hayvenhurst Ave	Van Nuys	CA	91406	818-782-3900	818-782-3992
Air Packaging Technologies Inc	25620 Rye Canyon Rd	Valencia	CA	91355	661-294-2222	661-294-0947
Akemor Hose	9127 San Fernando Rd	Sun Valley	CA	91352	818-768-1787	
Alamo Medical	7101 Valjean Ave	Van Nuys	CA	91406	818-787-6100	
Alaton Kalev	15145 Chatsworth St	Mission Hills	CA	91345	818-365-6904	
Alberto-Culver Co	9201 Oakdale Ave	Chatsworth	CA	91311	818-709-5500	818-349-9749
Alenia Marconi Systems Inc	5701 Lindero Canyon Rd # 4	Westlake Vlg	CA	91362	818-991-0300	818-991-4668
Alfigen-The Genetics Institute	11 W Del Mar Blvd # C	Pasadena	CA	91105	626-356-3400	
Allman Products	21251 Deering CT	Canoga Park	CA	91304	818-715-0093	818-715-2629
Alpine Solutions Inc	3222 Corte Malpaso # 205	Camarillo	CA	93012	805-388-1699	805-388-2373
Altair Instruments Inc	321 N Aviator St # 113	Camarillo	CA	93010	805-388-8503	805-388-9503
Amanet	16525 Sherman Way # C5	Van Nuys	CA	91406	818-786-1113	818-786-5736
Ambryx Biotechnology	2500 Townsgate Rd # C	Westlake Village	CA	91361	805-371-9951	
American GNC Corp	888 E Easy St	Simi Valley	CA	93065	818-407-0092	818-407-0093
American Latex Corp	2835 Sierra Grande St	Pasadena	CA	91107	626-304-2728	
American Medical Mfg Inc	9410 DE Soto Ave # J	Chatsworth	CA	91311	818-701-7171	
Amgen Inc	1 Amgen Center Dr	Newbury Park	CA	91320	805-447-1000	805-447-1010
Andwin Corp	6636 Variel Ave	Canoga Park	CA	91303	818-999-2828	818-999-0111

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Animax International Inc	20929 Ventura Blvd # 47-60	Woodland Hills	CA	91364	818-882-1333	
Apguard Medical Inc	6325 De Soto Ave # H	Woodland Hills	CA	91367	818-713-0202	818-713-0879
Apria Healthcare Inc	555 1st St	San Fernando	CA	91340	818-546-1200	818-838-7700
Apria Healthcare Inc	43301 Division St # 312	Lancaster	CA	93535	661-949-3447	661-949-0247
Arcoelectric Corp	9001 Canoga Ave	Canoga Park	CA	91304	818-700-1933	
Arete Associates	5000 Van Nuys Blvd # 400	Sherman Oaks	CA	91403	818-501-2880	818-501-2905
Assembly & Manufacturing System	2222 Shasta Way	Simi Valley	CA	93065	805-583-8961	805-583-0442
Atelco	7618 Woodman Ave # 19	Van Nuys	CA	91402	818-901-1072	
Athenex Research Associates	381 S Meridith Ave	Pasadena	CA	91106	626-449-5867	626-449-5867
Atira Engineering	7832 Alabama Ave # 7	Canoga Park	CA	91304	818-884-7259	
Atlantic Optical Co	20801 Nordhoff St	Chatsworth	CA	91311	818-407-1890	818-407-1895
Aviall Inc	8210 Haskell Ave	Van Nuys	CA	91406	818-997-0242	818-997-0473
Avibank Manufacturing Inc	210 S Victory Blvd	Burbank	CA	91502	818-845-3609	818-846-1872
AvtekAir Inc	555 Airport Way # A	Camarillo	CA	93010	805-482-2700	805-987-0068
Axxiom Chromatography Inc	11968 Challenger Ct	Moorpark	CA	93021	805-523-8888	805-523-7900
Banner Pharmacaps Inc	20730 Dearborn St	Chatsworth	CA	91311	818-341-3060	818-341-1347
Barker Optics Inc	76 E Santa Anita Ave	Burbank	CA	91502	818-845-0457	
Baxter Healthcare Corp	1700 Rancho Conejo Blvd	Newbury Park	CA	91320	805-375-6700	805-375-6810
Baxter Hyland Immuno	4501 Colorado Blvd	Los Angeles	CA	90039	818-240-5600	818-546-2229
Baxter Hyland Immuno	550 N Brand Blvd # 1400	Glendale	CA	91203	818-956-3200	818-550-4422
Bay Area Home Health Care	7906 Foothill Blvd	Sunland	CA	91040	310-829-1778	310-951-5090
BEI Encoder Systems Div	13100 Telfair Ave	Sylmar	CA	91342	818-362-0300	818-362-1836
BEI Medical Systems Co	9430 Topanga Canyon Blvd	Chatsworth	CA	91311	818-734-1950	818-700-0575
Bemco Inc	2255 Union Pl	Simi Valley	CA	93065	805-583-4970	805-583-5033
Bes Inc	7625 Hayvenhurst Ave # 12	Van Nuys	CA	91406	818-997-6788	818-997-4495
Best Buy Uniforms	1040 E Walnut St	Pasadena	CA	91106	626-844-4642	
Biocatalytics	39 Congress St	Pasadena	CA	91105	626-229-0588	
Bio-Metics International	1170 Avenida Acaso	Camarillo	CA	93012	805-383-3535	805-383-3540
Bioselect Inovations	6016 Fallbrook Ave	Woodland Hills	CA	91367	818-883-8708	
BioSource International Inc	542 Flynn Rd	Camarillo	CA	93012	805-987-0086	805-987-3385
Bird, E F Enterprises Inc	3146 Montrose Ave	La Crescenta	CA	91214	818-957-0563	818-957-1413
Boeing Co	6633 Canoga Ave	Canoga Park	CA	91303	818-586-1000	
Boiron Borneman Inc	98 W Cochran St # C	Simi Valley	CA	93065	805-582-9091	805-527-3190
Bone Clones	21416 Chase St	Canoga Park	CA	91304	818-709-7991	
Boregyde	725 Lakefield Rd # B	Westlake Village	CA	91361	818-707-2250	818-495-1889
Brown & Welin Pharmacy	937 E Green St	Pasadena	CA	91106	626-795-5918	626-795-7320
Burton Medical Products Corp	21100 Lassen St	Chatsworth	CA	91311	818-701-8700	818-701-8725
C & R Medical	7625 Hayvenhurst Ave # 6	Van Nuys	CA	91406	818-781-5933	818-787-1537
C I Systems Inc	30961 Agoura Rd	Westlake Village	CA	91361	818-865-0402	
California Cybernetics	4814 Ramsdell Ave	Glendale	CA	91214	818-236-2647	
California Dental Buying Group	10702 Vanowen St	North Hollywood	CA	91605	818-761-7791	818-761-7888

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Camacho Laboratories	13253 Saticoy St	North Hollywood	CA	91605	818-764-2748	
Cardiac Care Units Inc	16108 Hart St	Van Nuys	CA	91406	818-988-7145	818-988-7160
Cardinal Health	27680 Avenue Mentry	Valencia	CA	91355	661-295-6100	661-294-8218
Care Point Health Svc	14735 Califa St	Van Nuys	CA	91411	818-778-1550	
Carl W Newell Manufacturing	940 Allen Ave	Glendale	CA	91201	818-240-9652	818-243-0982
Carletta Chiropractic Group	2811 W Olive Ave	Burbank	CA	91505	818-845-2604	818-842-0473
Centro Vision Inc	2088 Anchor CT	Newbury Park	CA	91320	805-499-5902	805-499-7770
Certified La Health Products	11760 Roscoe Blvd # G	Sun Valley	CA	91352	818-504-6066	
Chad Therapeutics Inc	21622 Plummer St	Chatsworth	CA	91311	818-882-0883	818-882-1809
Charts Inc	12977 Arroyo St	San Fernando	CA	91340	818-898-3707	818-361-3038
Chatsworth Latex Gloves	9421 Winnetka Ave # M	Chatsworth	CA	91311	818-773-6696	818-773-8002
Clinical Micro Sensors Inc	126 W Del Mar Blvd	Pasadena	CA	91105	626-584-5900	
Cohr Inc	21540 Plummer St	Chatsworth	CA	91311	818-773-2647	818-341-9820
Colorful Products/Cosmetic Dev	996 Lawrence Dr # 301	Newbury Park	CA	91320	805-498-2195	805-499-9759
Columbia Analytical Services	2665 Park Center Dr # D	Simi Valley	CA	93065	805-526-7161	805-526-7270
Comco Inc	2151 N Lincoln St	Burbank	CA	91504	818-841-5500	818-955-8365
Comfort Control Adjstble Beds	637 4th St	San Fernando	CA	91340	818-365-6616	818-365-3261
Commercial Inspection Svc	156 W Providencia Ave	Burbank	CA	91502	818-841-4750	818-841-4757
Commodity Resource Inc	116 E Prospect Ave	Burbank	CA	91502	818-843-2811	818-843-2862
Components For Automation Inc	4525 Industrial St # 4c	Simi Valley	CA	93063	805-582-0065	805-582-0210
Comprehensive Medical Imaging	3396 Willow Ln	Thousand Oaks	CA	91361	805-557-1301	
Computrition Inc	19808 Nordhoff Pl	Chatsworth	CA	91311	818-701-5544	818-701-1702
Concept Poly Products	9421 Winnetka Ave # G	Chatsworth	CA	91311	818-349-5856	
Contex Inc Contact Lenses	4505 Van Nuys Blvd	Sherman Oaks	CA	91403	818-788-5836	818-788-5078
Continental-Fenton Surgical	4400 W Magnolia Blvd	Burbank	CA	91505	818-845-5709	
Cooner Wire Co	9265 Owensmouth Ave	Chatsworth	CA	91311	818-882-8311	818-709-8281
Core-Vent Bioengineering Inc	27030 Malibu Hills Rd	Agoura Hills	CA	91301	818-878-7818	818-878-7828
Cosmoceutical Research Ctr	17751 Sherman Way	Reseda	CA	91335	818-609-8833	
Creations Garden Natrl Prod	24887 Avenue Rockefeller	Valencia	CA	91355	661-775-5933	661-775-5932
Creative Computer Applications	26115 Mureau Rd # A	Calabasas	CA	91302	818-880-6700	818-880-4397
Crystal Clear Technology	2301 Townsgate Rd	Westlake Vlg	CA	91361	805-495-9388	805-495-1550
CSP Inc	3075 E Thousand Oaks Blvd	Thousand Oaks	CA	91362	805-497-4550	805-497-4526
CSR Enterprises	560 N Moorpark Rd # 234	Thousand Oaks	CA	91360	805-492-0838	
Cygnat Metal Stamping	1630 Flower St	Glendale	CA	91201	818-240-7574	818-240-0492
David Kopf Instruments	7324 Elmo St	Tujunga	CA	91042	818-352-3274	818-352-3139
Davis Dental Supply Co	7347 Ethel Ave	North Hollywood	CA	91605	818-765-4994	818-765-5847
Delta Scientific Corp	24901 Avenue Stanford	Valencia	CA	91355	661-257-1800	661-257-0617
Den-Mat Corp	21515 Vanowen St # 200	Canoga Park	CA	91303	818-884-3805	818-884-6963
Dent Trade	610 N Isabel St # 3	Glendale	CA	91206	818-247-4803	
Dental/Medical Diagnostic Syst	6416 Variel Ave	Woodland Hills	CA	91367	818-932-2300	818-595-0226
Dermalight Systems	13425 Ventura Blvd # 101	Sherman Oaks	CA	91423	818-995-4274	818-995-3067

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Design Classics	380 S Lake Ave # 1	Pasadena	CA	91101	626-449-6789	626-449-6789
Diabetes Selfcare	5946 Kester Ave	Van Nuys	CA	91411	818-994-3294	818-994-8345
Diagnostic Imaging	7625 Hayvenhurst Ave # 40	Van Nuys	CA	91406	818-376-0150	818-376-0544
Dolphin Imaging Systems	6325 DE Soto Ave # A	Woodland Hills	CA	91367	818-888-0369	818-888-0370
Dome Inc	18668 Oxnard St	Tarzana	CA	91356	818-344-3404	
Downtown Supply	814 E Orange Grove Ave	Burbank	CA	91501	818-845-5839	
E & E Optics Inc	14640 Victory Blvd # 112	Van Nuys	CA	91411	818-908-0917	818-908-0673
E H Butland Development Corp	6100 Yolanda Ave	Reseda	CA	91335	818-996-7600	818-881-3047
Eagle Medical Supplies	922 1/2 S San Fernando Bl	Burbank	CA	91502	818-559-6390	818-559-2355
Efficient X-Ray Inc	9650 Topanga Canyon Pl #	Chatsworth	CA	91311	818-882-8897	
Electro Ease	907 N Hollywood Way	Burbank	CA	91505	818-953-7418	818-953-7421
Electro-Component Assembly Co	1107 Tourmaline Dr	Newbury Park	CA	91320	805-376-2509	805-376-2189
Electropedic Manufacturing	637 4th St	San Fernando	CA	91340	818-365-6616	818-365-3261
Eltron International Inc	1001 Flynn Rd	Camarillo	CA	93012	805-579-1800	805-579-1808
Empire Optical Of California	7633 Varna Ave # A	North Hollywood	CA	91605	818-997-6474	818-997-7816
Endocrine Sciences	4301 Lost Hills Rd	Agoura Hills	CA	91301	818-880-8040	818-880-8541
Essential Medical Supply	6653 Foothill Blvd	Tujunga	CA	91042	818-353-2444	
E-Z Trac Inc	7348 Bellaire Ave	North Hollywood	CA	91605	818-255-4996	818-255-4997
Fiberoptic Systems Inc	60 Moreland Rd # A	Simi Valley	CA	93065	805-583-2088	805-583-4018
Fidelity Mfg Co	3120 N Damon Way	Burbank	CA	91505	818-768-7720	818-846-5669
First Point Scientific Inc	5330 Derry Ave # J	Agoura Hills	CA	91301	818-707-1131	818-707-2352
First Premium Alloy	7640 Ampere Ave	North Hollywood	CA	91605	818-982-4025	
Fischer, R A Co Inc	517 Commercial St	Glendale	CA	91203	818-241-1178	
Fleet Industrial Supply	11958 Stewarton Dr	Northridge	CA	91326	818-993-7172	
Fluid Automation Systems	4525 Industrial St # 4c	Simi Valley	CA	93063	805-582-0065	805-582-0210
Focus Optics	18730 Oxnard St # 216	Tarzana	CA	91356	818-757-1007	
Four Ventures Enterprises	18226 Ventura Blvd # 200	Tarzana	CA	91356	818-345-8880	
Frank Stubbs Co	4518 W Vanowen St	Burbank	CA	91505	818-842-5137	818-842-1927
Freedom Designs Inc	2241 N Madera Rd	Simi Valley	CA	93065	805-582-0077	805-582-1509
Freestyle USA	161 Plaza La Vis	Camarillo	CA	93010	805-388-1001	805-388-3084
Fujita Group USA	15821 Ventura Blvd	Encino	CA	91436	818-981-2657	
Fundamental Products Co	12217 Iredell St	Studio City	CA	91604	760-414-3992	
Futuremed America Inc	15700 Devonshire St	Granada Hills	CA	91344	818-830-2500	818-891-4755
G & A Sales Inc	7241 Ethel Ave	North Hollywood	CA	91605	213-764-8272	213-765-5639
G & H Technology Inc	750 W Ventura Blvd	Camarillo	CA	93010	805-484-0543	805-987-5062
Garren Scientific Inc	9400 Lurline Ave # E	Chatsworth	CA	91311	818-882-6544	818-882-3229
Gen En Con	24977 Kit Carson Rd	Hidden Hills	CA	91302	818-340-5002	
General Air Corp	9252 Deering Ave	Chatsworth	CA	91311	818-718-8955	818-718-0359
General Optics Inc	5390 Kazuko Ct	Moorpark	CA	93021	805-529-3324	805-529-4298
General Research Laboratories Inc	8900 Winnetka Ave	Northridge	CA	91324	818-349-9911	818-407-8500
Genetic Identification Svc	9552 Topanga Canyon Blvd	Chatsworth	CA	91311	818-718-9600	

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Gingi-Pak	4825 Calle Alto	Camarillo	CA	93012	805-484-1051	805-484-5076
Glamour Vitamin Labs Inc	18098 Karen Dr	Encino	CA	91316	818-705-0899	
Glass Instruments Inc	2285 E Foothill Blvd	Pasadena	CA	91107	323-681-0011	323-792-7959
Glenoaks Rx Pharmacy	303 S Glenoaks Blvd	Burbank	CA	91502	818-846-9011	818-845-5342
Golden State Medical Supply	27644 Newhall Ranch Rd #	Valencia	CA	91355	661-295-8101	661-295-8269
Gordon Optical Supply	29360 Roadside Dr	Agoura Hills	CA	91301	818-735-6950	818-735-6955
Graham Optical Systems	9530 Topanga Canyon Blvd	Chatsworth	CA	91311	818-700-1263	818-700-1627
Gram Research & Development	24806 Alexandra CT	Calabasas	CA	91302	818-222-4832	
Green Pharmacy	160 Lower Lake Rd	Thousand Oaks	CA	91361	805-373-9955	
Gyne-Tech Instrument Corp	2819 Burton Ave	Burbank	CA	91504	818-842-0933	818-848-8067
Hammermeister Precision Inc	9601 Cozycroft Ave	Chatsworth	CA	91311	818-998-0404	
Hammer-Plane Inc	4025 Yuma Ave	Simi Valley	CA	93063	805-582-9511	
Hampshire Laboratories	1815 Flower St	Glendale	CA	91201	818-500-8718	818-240-2785
Hanger Inc	5620 Wilbur Ave # 102	Tarzana	CA	91356	818-609-9739	818-609-9732
Hanger Prosthetics & Orthotics	4835 Van Nuys Blvd # 109	Sherman Oaks	CA	91403	818-981-0422	818-981-9920
Hanger Prosthetics & Orthotics	1035 S Fair Oaks Ave # 102	Pasadena	CA	91105	626-403-8174	626-403-8175
Hanson Lab Furniture	814 Mitchell Rd	Newbury Park	CA	91320	805-498-3121	805-498-1855
Hanson Research Corp	9810 Variel Ave	Chatsworth	CA	91311	818-882-7266	818-882-9470
Haskel International Inc	100 E Graham Pl	Burbank	CA	91502	818-843-4000	818-556-2518
Hawaii Chemtect Intl	3452 E Foothill Blvd # 460	Pasadena	CA	91107	626-568-8606	626-795-6032
Hazeltine Medical Supply	14103 Victory Blvd # 10	Van Nuys	CA	91401	818-787-8338	
Health & Hospital Consultants	6914 Canby Ave # 105	Reseda	CA	91335	818-996-0600	818-996-0603
Hema Care Corp	4954 Van Nuys Blvd	Sherman Oaks	CA	91403	818-986-3883	818-986-1417
Hersh Acoustical Engrg Inc	780 Lakefield Rd # G	Westlake Vlg	CA	91361	805-373-8533	805-373-0733
High Fashion Optics	5548 Reseda Blvd	Tarzana	CA	91356	818-705-8533	
Hill Industries	19734 Dearborn St	Chatsworth	CA	91311	818-885-0300	818-885-5091
Hirose Electric	2688 W Hills CT	Simi Valley	CA	93065	805-522-7958	805-522-3217
Homecare Service Specialist	328 N Orange St	Glendale	CA	91203	818-265-0424	818-265-0420
Hoyle Products Inc	937 A St	Fillmore	CA	93015	805-524-1211	805-524-5496
Humanics Ergo Systems Inc	6021 Lindley Ave	Tarzana	CA	91356	818-345-3746	
Hydro Systems	50 Moreland Rd	Simi Valley	CA	93065	805-584-9990	805-584-8125
Hydros Inc.	23679 Calabasas Rd	Calabasas	CA	91302	818-346-4339	818-888-0356
Hyperbaric Chamber Systems	319 S Moorpark Rd	Thousand Oaks	CA	91361	805-446-4276	805-495-1804
IITC Inc	22934 Victory Blvd	Woodland Hills	CA	91367	818-710-1556	818-992-5185
Imaging Services Inc	8210 Lankershim Blvd # 1	North Hollywood	CA	91605	818-504-9926	818-504-0527
Impak Corp Of America	419 Del Monte St	Pasadena	CA	91103	626-398-7300	626-398-7400
Immuno-Biogene	22030 Sherman Way Ste 21	Canoga Park	CA	91303	818-346-7312	818-346-0334
Independent Tape Co	21601 Parthenia St	Canoga Park	CA	91304	818-700-8273	
Infab Corp	3651 Via Pescador	Camarillo	CA	93012	805-987-5255	805-482-8424
Interlink Electronics	546 Flynn Rd	Camarillo	CA	93012	805-484-8855	805-484-8989
International Hospital Supply	6914 Canby Ave # 105	Reseda	CA	91335	818-996-0600	818-996-0603

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
International Remote Imaging	9162 Eton Ave	Chatsworth	CA	91311	818-709-1244	818-700-9661
International Thermal Pkg Inc	6730 San Fernando Rd	Glendale	CA	91201	818-637-8572	
Interscan Corp	21700 Nordhoff St	Chatsworth	CA	91311	818-882-2331	818-341-0642
Intracommunity Home Care Inc	610 S Glendale Ave	Glendale	CA	91205	818-500-9014	
Isco Optic USA	8743 Shirley Ave	Northridge	CA	91324	818-709-3904	818-709-4002
Isi	708 Via Alondra	Camarillo	CA	93012	805-581-5626	805-482-8470
Isotope Products Laboratories Inc	1800 N Keystone St	Burbank	CA	91504	818-843-7000	818-843-6168
Isovac Engineering Inc	614 Justin Ave	Glendale	CA	91201	818-552-6200	
Jac Instrument Co	7037 Hayvenhurst Ave	Van Nuys	CA	91406	818-988-9579	
Jack Nemeth Lensco	7851 Alabama Ave # 8	Canoga Park	CA	91304	818-592-6825	
Jant Pharmacal Corp	16255 Ventura Blvd # 505	Encino	CA	91436	818-986-8530	818-986-0235
Jeffersons & Assoc	6860 Canby Ave # 104	Reseda	CA	91335	818-609-0840	818-996-8188
Jet Propulsion Laboratory	4800 Oak Grove Dr	Pasadena	CA	91109	818-354-4321	
Jmar Precision Systems Inc	9207 Eton Ave	Chatsworth	CA	91311	818-700-8977	818-700-8984
Kabot Design Engineering	108 Dena Dr	Newbury Park	CA	91320	805-498-7971	
Kaire Holdings Inc	7348 Bellaire Ave	North Hollywood	CA	91605	818-255-4996	818-255-4997
Karamof Chemical Inc	290 E Verdugo Ave # 203	Burbank	CA	91502	818-841-2275	818-841-2276
Kavlico Corp	14501 E Los Angeles Ave	Moorpark	CA	93021	805-523-2000	805-523-7125
K'Care Medical Sales	9144 Oneida Ave	Sun Valley	CA	91352	818-768-1422	818-504-9533
KDL Precision Molding Corp	11381 Bradley Ave	Pacoima	CA	91331	818-896-9899	818-896-8276
Keck-Craig Inc	695 S Raymond Ave	Pasadena	CA	91105	626-449-1414	626-449-1520
Keepsakes Inc	31200 LA Baya Dr	Westlake Village	CA	91362	818-707-0471	
Kendall Healthcare	9530 De Soto Ave	Chatsworth	CA	91311	818-709-6880	818-709-7059
Kentech	8720 Woodley Ave # 236	North Hills	CA	91343	818-830-5327	
Kinamed Inc	820 Flynn Rd	Camarillo	CA	93012	805-384-2748	805-384-2792
Kish Optics Inc	4653 Lankershim Blvd	North Hollywood	CA	91602	818-506-5800	818-506-5856
Knurr USA Inc	1890 Voyager Ave	Simi Valley	CA	93063	805-526-7733	805-584-8371
Koach Engineering Corp	9257 Glenoaks Blvd	Sun Valley	CA	91352	818-768-0222	818-768-7991
Konigsberg Instruments Inc	2000 E Foothill Blvd	Pasadena	CA	91107	626-449-0016	626-449-1086
Kopf, David Instruments	7324 Elmo St	Tujunga	CA	91042	818-352-3274	818-352-3139
Koros Surgical Instrument Corp	610 Flinn Ave	Moorpark	CA	93021	805-529-0825	805-529-2955
Kyffin Pharmacy	6000 Woodman Ave	Van Nuys	CA	91401	818-782-9541	818-782-2643
L A Optics	7751 Densmore Ave	Van Nuys	CA	91406	818-785-5834	
La Sensors	4927 Rubio Ave	Encino	CA	91436	818-995-2990	
Lasco Diamond Products	9950 Canoga Ave # A8	Chatsworth	CA	91311	818-882-2423	818-882-3550
Ldr Productions	7616 Lindley Ave	Reseda	CA	91335	818-757-0600	
Lewis & Stolpe	18455 Burbank Blvd # 202	Tarzana	CA	91356	818-758-1666	818-758-1666
Light Technology Systems	16760 Stagg St # 211	Van Nuys	CA	91406	818-786-9924	818-786-9926
Lightwave Link Inc	4545 W Chermak St	Burbank	CA	91505	818-843-2298	818-843-0456
Limerick Inc	903 N San Fernando Blvd #	Burbank	CA	91504	818-566-3060	
Line One Laboratories	2835 Sierra Grande St	Pasadena	CA	91107	626-577-3428	626-577-3429

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Litecom Inc	20249 Elkwood St	Winnetka	CA	91306	818-882-5061	818-718-2335
Lockheed Martin Corp	310 N Westlake Blvd # 200	Westlake Vlg	CA	91362	805-381-1412	805-381-1415
L-W Athena	2155 May CT	Simi Valley	CA	93063	805-522-3284	805-522-3316
Lyons Medical Instrument Corp	15723 Kadota St	Sylmar	CA	91342	818-367-4979	818-367-7725
Lytron Inc	23246 Park Ensenada	Calabasas	CA	91302	818-591-1911	
M & A Plastics Inc	11735 Sheldon St	Sun Valley	CA	91352	818-768-0479	818-768-4232
M K Medical	1034 E Avenue K	Lancaster	CA	93535	661-945-5544	
Marco Products Co	12860 San Fernando Rd	Sylmar	CA	91342	818-367-2227	818-367-5380
Mass Brands Ltd	22231 Mulholland Hwy # 11	Calabasas	CA	91302	818-222-9851	
Massey Prosthetic Arts	7247 Hayvenhurst Ave # A5	Van Nuys	CA	91406	818-780-3223	
Masunaga Group Inc	860 Calle Jon	Thousand Oaks	CA	91360	805-375-0192	
Matech Inc	13000 San Fernando Rd Frr	Sylmar	CA	91342	818-367-2472	818-367-7059
Materials Technology Corp	4749 Rosebank Dr	La Canada Flt	CA	91011	818-248-0313	
MBK Enterprises Inc	10138 Canoga Ave	Chatsworth	CA	91311	818-998-1477	818-998-6059
Mc Kesson General Medical Corp	30497 Canwood St # 201	Agoura Hills	CA	91301	818-879-0649	818-879-0768
McKay Enterprises	PO Box 3480	Camarillo	CA	93011	805-987-8013	
Mde Imaging Systems	21642 Ulmus Dr	Woodland Hills	CA	91364	818-884-3305	
Mds	PO Box 572152	Tarzana	CA	91357	818-344-2044	818-344-3476
Meclab Inc	2770 E Walnut St	Pasadena	CA	91107	626-793-9463	626-793-9491
Med Rents	11677 Sheldon St	Sun Valley	CA	91352	818-252-0700	818-252-0705
Medic Id	18730 Oxnard St # 210	Tarzana	CA	91356	818-705-0595	818-705-0773
Medical Analysis Systems Inc	5300 Adolfo Rd	Camarillo	CA	93012	805-987-7891	805-987-6498
Medical Associates Network Inc	801 N Brand Blvd # 690	Glendale	CA	91203	818-500-7711	818-500-7745
Medical Data Electronics Inc	12723 Wentworth St	Arleta	CA	91331	818-768-6411	818-768-0759
Medical Illumination Inc	12734 Branford St # 1	Arleta	CA	91331	818-838-3025	818-838-3725
Medical Packaging Corp	941 Avenida Acaso	Camarillo	CA	93012	805-388-2383	805-388-5531
Mediq Prn	15500 Erwin St # 1113	Van Nuys	CA	91411	818-503-9800	818-908-5333
Medtronic Inc	21550 Oxnard St # 400	Woodland Hills	CA	91367	818-716-1493	818-716-8143
Meissner Filtration Prdts Inc	4181 Calle Tesoro	Camarillo	CA	93012	805-388-9911	805-388-5948
Melco Wire Products Co Inc	4420 San Fernando Rd	Glendale	CA	91204	818-247-7500	818-247-7257
Mem Solutions	5706 Corsa Ave # 100	Thousand Oaks	CA	91362	818-991-7044	818-991-7069
Merit Engineering Inc	129 S. San Fernando Blvd	Burbank	CA	91502	818-842-2020	818-842-1419
Merlin Technologies Pharmacy	828 Arneill Rd	Camarillo	CA	93010	805-388-7669	805-389-8142
Merry X-Ray Chemical Corp	1422 Gardena Ave	Glendale	CA	91204	818-240-8370	818-241-5144
Mes Inc	3041 N California St	Burbank	CA	91504	818-846-4343	
Metacomp Technologies Inc	650 Hampshire Rd # 200	Westlake Village	CA	91361	818-991-5477	818-371-8751
Michael's Pharmacy	960 E Green St # 152	Pasadena	CA	91106	626-793-7131	626-793-8602
Micro Specialist	587 N Ventu Park Rd # 304	Newbury Park	CA	91320	805-498-3940	805-499-9475
Microrecording Systems Constt	981 N Hudson Ave	Pasadena	CA	91104	626-395-0884	
Mila Medical Co	11554 Encino Ave	Granada Hills	CA	91344	818-363-1908	818-366-0023
Milner, Bob & Associates Co	1000 Crown Hill Dr # A	Simi Valley	CA	93063	805-584-1811	805-584-1812

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
MiniMed Inc	18000 Devonshire St	Northridge	CA	91325	818-362-5958	818-364-1485
Montgomery Watson Laboratories	555 E Walnut St	Pasadena	CA	91101	626-568-6400	626-568-6324
Moorhead & Co	6923 Woodley Ave	Van Nuys	CA	91406	323-873-6640	323-787-2010
Multi-Pure Drinking Water Sys	9351 Deering Ave	Chatsworth	CA	91311	818-341-5275	818-341-5275
Nanostream	2275 Foothill Blvd	Pasadena	CA	91107	626-535-9036	626-535-9620
National Electro-Sales Corp	7110 Gerald Ave	Van Nuys	CA	91406	818-781-0505	818-786-2758
National Papers	7870 Deering Ave	Canoga Park	CA	91304	818-346-6979	818-346-7571
Natren Inc	3105 Willow Ln # 100	Westlake Village	CA	91361	805-371-4737	805-371-4742
Natrol Inc	21411 Prairie St	Chatsworth	CA	91311	818-739-6000	818-739-6001
Neeron International	5983 Reseda Blvd	Tarzana	CA	91356	818-767-2009	
Neotech Products Inc	9135 Alabama Ave # F	Chatsworth	CA	91311	818-700-2600	
New Avenue Industries	7731 Kester Ave	Van Nuys	CA	91405	818-997-1931	818-997-8004
NMB Technologies Corp	9730 Independence Ave	Chatsworth	CA	91311	818-341-3355	818-781-0435
Norman Brush Co	7862 Burnet Ave	Van Nuys	CA	91405	818-787-6650	
Nortel Networks	4100 Guardian St	Simi Valley	CA	93063	805-583-8600	805-583-1997
North American Home Health	16129 Cohasset St	Van Nuys	CA	91406	818-782-3757	
North American Scientific Inc	20200 Sunburst St	Chatsworth	CA	91311	818-734-8600	818-734-8606
Northern Magnetics Inc	25026 Anza Dr	Santa Clarita	CA	91355	661-257-0216	661-257-2037
Northridge Laboratories Inc	20832 Dearborn St	Chatsworth	CA	91311	818-882-5622	818-998-2815
Northrop Grumman PRB Systems	5161 Verdugo Way	Camarillo	CA	93012	805-987-9739	805-388-2424
Nova Care Hanger	4835 Van Nuys Blvd # 109	Sherman Oaks	CA	91403	818-981-0422	818-981-9920
Nu-Hope Laboratories	12640 Branford St	Pacoima	CA	91331	818-899-7711	818-899-2079
Nuoptix Associates Inc	31336 Via Colinas # 104	Westlake Vlg	CA	91362	818-706-0124	818-706-0125
Oacis Research	20905 Abalar St	Woodland Hills	CA	91364	818-883-3723	
Ocular Prosthetics Inc	14607 Ventura Blvd	Sherman Oaks	CA	91403	818-380-2820	
Odu-USA	451 Constitution Ave # A	Camarillo	CA	93012	805-484-0540	805-484-7458
Omnical Inc	557 Jessie St	San Fernando	CA	91340	818-837-7531	818-837-9871
One Lambda Inc	21001 Kittridge St	Canoga Park	CA	91303	818-702-0042	818-702-6904
Optical Communication Products	20961 Knapp St	Chatsworth	CA	91311	818-701-0164	818-701-1468
Optical Exchange	20732 Lassen St # B	Chatsworth	CA	91311	818-998-4460	818-882-5298
Optical Systems Corp	24927 Avenue Tibbitts # H	Valencia	CA	91355	661-257-2977	661-257-3035
Optics One	3050 E Hillcrest Dr # 100	Westlake Village	CA	91362	805-373-9340	805-373-8966
Optiline	6704 Valjean Ave	Van Nuys	CA	91406	818-909-9777	
Optimum Optical Systems Inc	4153 Calle Tesoro	Camarillo	CA	93012	805-445-6444	805-445-6447
Optiphase Inc	7652 Haskell Ave	Van Nuys	CA	91406	818-782-0997	818-782-0999
Orhto Source	13343 Sherman Way	North Hollywood	CA	91605	818-982-9445	
Orthomedics	180 N San Gabriel Blvd	Pasadena	CA	91107	626-796-8732	626-440-9533
P L Of California	4485 Runway St	Simi Valley	CA	93063	805-522-9030	805-527-1918
Pac Grand Pharmacy & Supply	1120 N Pacific Ave # 1	Glendale	CA	91202	818-500-1517	818-500-1519
Pace Transducer Co	9048 Independence Ave	Canoga Park	CA	91304	818-996-4131	818-700-8272
Pacesetters Inc	15900 Valley View CT	Sylmar	CA	91342	818-362-6822	818-362-8142

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Panorama Optics	16117 1/2 Covello St	Van Nuys	CA	91406	818-785-1174	
Panther Electronics	557 S Glenoaks Blvd	Burbank	CA	91502	818-846-1705	
Paragon Implant Co	15821 Ventura Blvd # 420	Encino	CA	91436	818-783-1517	818-789-3928
Parastor Inc	1185 Calle Suerte	Camarillo	CA	93012	805-389-0058	805-389-0036
Park Valley Pharmaceutical	5144 N Commerce Ave # E	Moorpark	CA	93021	805-529-1980	
Parks Optical Inc	730 E Easy St	Simi Valley	CA	93065	805-522-6722	805-522-0033
Pasadena Optical Co	643 E Colorado Blvd	Pasadena	CA	91101	626-449-0280	
Pdi Enterprises	26245 Technology Dr	Valencia	CA	91355	661-294-8200	661-294-8228
Pediatric Diagnostic Svc Ctr	14553 Delano St # 314	Van Nuys	CA	91411	818-779-3030	818-779-3033
Pentagon Co	17130 Devonshire St # 101	Northridge	CA	91325	818-831-5690	818-831-2380
Person & Covey Inc	616 Allen Ave	Glendale	CA	91201	818-240-1030	818-547-9821
Pharmaceutical Services Corp	525 W California Ave Ste10	Glendale	CA	91203	818-547-1226	818-547-1326
Pharmacia & Upjohn Inc	2674 W Hills Ct	Simi Valley	CA	93065	805-582-0072	
Pharmavite Corp	15451 San Fernando Missio	Mission Hills	CA	91345	818-837-3633	818-837-6108
Photo Research Inc	9731 Topanga Canyon Pl	Chatsworth	CA	91311	818-341-5151	818-341-7070
Physicians Immune Diagnostics	1212 S Victory Blvd	Burbank	CA	91502	818-955-8477	818-955-8311
Plexcom Inc	2255 Agate CT	Simi Valley	CA	93065	805-522-0058	805-583-4764
Plugged In Computer Inc	3537 Old Conejo Rd	Newbury Park	CA	91320	805-499-8676	805-499-9404
Pmc Inc	12243 Branford St	Sun Valley	CA	91352	818-896-1101	818-897-0180
Pollard Dental Products Inc	755 Lakefield Rd # K	Westlake Vlg	CA	91361	805-495-5222	805-379-3273
Precision Dental Intl Inc	21361 Deering CT	Canoga Park	CA	91304	818-992-1888	818-992-5999
Precision Dynamics Corp	13880 Del Sur St	San Fernando	CA	91340	818-897-1111	818-899-4045
Prestige Medical	8600 Wilbur Ave	Northridge	CA	91324	818-993-3031	818-993-4151
Prime Dental Laboratory	2497 E Washington Blvd	Pasadena	CA	91104	626-798-2870	
Principia Optics	26565 Agoura Rd # 201	Calabasas	CA	91302	818-871-0800	
Pure Aire Corp	2219 Agate CT	Simi Valley	CA	93065	805-527-1622	805-527-2664
Pure Produce	3040 Somis Rd	Somis	CA	93066	805-386-3985	
Pure Tek	1145 Arroyo St # D	San Fernando	CA	91340	818-898-2109	818-837-3793
Puregar	21411 Prairie St	Chatsworth	CA	91311	818-739-6046	818-739-6001
Puretek Corp	1145 Arroyo St # D	San Fernando	CA	91340	818-898-2109	818-837-3793
Quality Medical Supply	317 1/2 N Verdugo Rd	Glendale	CA	91206	818-547-4100	
R A Fischer Co	517 Commercial St	Glendale	CA	91203	323-245-2746	323-245-2748
R X Rocker Corp	3541 Old Conejo Rd # 101	Newbury Park	CA	91320	805-499-0696	
Rache Corp	1160 Avenida Acaso	Camarillo	CA	93012	805-389-6868	805-389-6866
Radiological Specialists Inc	5920 Noble Ave	Van Nuys	CA	91411	818-908-9000	818-908-9947
Radiology Technologies Inc	21000 Osborne St # 4	Canoga Park	CA	91304	818-993-1281	818-993-0518
Rainbow Optics	4212 San Fernando Rd	Glendale	CA	91204	818-956-0681	
Rantec Microwave Systems Inc	24003 Ventura Blvd	Calabasas	CA	91302	818-223-5000	818-223-5199
Raymond W Jensen Inds	9401 White Oak Ave	Northridge	CA	91325	310-322-5549	
Rdb Marketing Assoc Inc	4053 Calle Tesoro # F	Camarillo	CA	93012	805-388-0509	805-484-3152
Rebel Distributors Corp	31238 Via Colinas # D	Westlake Village	CA	91362	818-865-6880	

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Recovercare Products Inc	511 5th St # C	San Fernando	CA	91340	818-361-0078	
Reliable Systems Inc	1114 W Magnolia Blvd	Burbank	CA	91506	323-849-7733	323-843-4569
Replacement Parts Industries	20338 Corisco St	Chatsworth	CA	91311	818-882-8611	818-882-7028
Rescue U Disaster Systems	1887 Laurelwood CT	Thousand Oaks	CA	91362	805-492-0393	
Resonance Technology Co	18121 Parthenia St # A	Northridge	CA	91325	818-882-1997	
Revolution Eye Wear	6910 Hayvenhurst Ave # 10	Van Nuys	CA	91406	818-989-2020	818-909-2900
Rhodes Medical Instruments Inc	21044 Ventura Blvd	Woodland Hills	CA	91364	818-347-3577	
Richard Hartt Co	751 S Euclid Ave	Pasadena	CA	91106	626-796-7591	626-796-6770
Ricon Corp	7900 Nelson Rd	Panorama City	CA	91402	818-267-3000	818-267-3167
RIFOCS Corp	1340 Flynn Rd	Camarillo	CA	93012	805-389-9800	805-389-9808
Riggins Engineering Inc	13932 Saticoy St	Van Nuys	CA	91402	818-782-7010	818-782-1189
Robert G Allen Co	7267 Coldwater Canyon Ave	North Hollywood	CA	91605	818-765-8300	818-765-2387
Roberts Tool Co	19827 Nordhoff St	Northridge	CA	91324	818-407-0291	818-407-0307
Rockwell International Corp	1049 Camino Dos Rios	Thousand Oaks	CA	91360	805-373-4545	805-373-4775
Rol Control Products	6700 Worth Way	Camarillo	CA	93012	805-386-4191	
Royal Hills Pharmacy	7301 Medical Center Dr # 10	West Hills	CA	91307	818-887-4670	818-887-4943
Royal Medical Supply	13759 Foothill Blvd	Sylmar	CA	91342	818-367-6507	
Royce Medical Products	742 Pancho Rd	Camarillo	CA	93012	805-484-2600	805-388-1602
Sanguine Corp	101 E Green St # 11	Pasadena	CA	91105	626-405-0079	626-405-1041
Scicon Technologies Corp	27525 Newhall Ranch Rd #	Valencia	CA	91355	661-295-8630	661-295-6611
Scientific Control Systems	1351 Foothill Blvd	La Canada Flt	CA	91011	818-790-0175	818-790-3336
Second Chance Mfg Co	14314 Burbank Blvd # 123	Van Nuys	CA	91401	818-901-7595	
Semiconductor Equipment Corp	5154 Goldman Ave	Moorpark	CA	93021	805-529-2293	805-529-2193
Senior Med Medical Supplies	1109 W Glenoaks Blvd	Glendale	CA	91202	818-502-1205	818-502-0709
Servo Magnetics	6660 Variel Ave	Canoga Park	CA	91303	818-346-3113	818-346-6294
Sespe Medical Rentals	542 Santa Clara St	Fillmore	CA	93015	805-524-0740	
Shamir-USA	29800 Agoura Rd # 102	Agoura Hills	CA	91301	818-889-6292	
Shepherd, J L & Associates	1010 Arroyo St	San Fernando	CA	91340	818-898-2361	818-361-8095
Signature Eyewear	31280 Oak Crest Dr # 1	Westlake Village	CA	91361	818-879-7410	818-879-7485
Silver & Theodore Medical	9428 Eton Ave # G-F	Chatsworth	CA	91311	818-709-8760	
Solgene Therapeutics	31304 Via Colinas Ste 102	Westlake Village	CA	91382	818-991-8500	818-991-4143
Solid Concepts	28231 Avenue Crocker # 10	Valencia	CA	91355	661-257-9300	661-257-9311
Soltec Corp	12977 Arroyo St	San Fernando	CA	91340	818-365-0800	818-365-7839
Southwest Medical Supplies	19205 Parthenia St # C	Northridge	CA	91324	818-701-1887	
Space Maintainers Laboratory	9129 Lurline Ave	Chatsworth	CA	91311	818-998-7460	818-341-4684
Space-Age Medical Svc Inc	4928 Lankershim Blvd	North Hollywood	CA	91601	818-766-4523	
Spectrasource Instruments	31324 Via Colinas # 114	Westlake Vlg	CA	91362	818-707-2655	818-707-9035
Spinal & Orthopedic Devices	5920 Noble Ave	Van Nuys	CA	91411	818-908-9000	818-908-9947
Spring Clean Detox Ctr	3840 Old Topanga Canyon	Calabasas	CA	91302	818-591-8028	
Scor	11064 Randall St	Sun Valley	CA	91352	818-504-4054	818-504-6032
St Jude Medical Inc	15900 Valley View Ct	Sylmar	CA	91342	818-362-6822	818-362-4305

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Stamping Specialties Corp	1107 Tourmaline Dr	Newbury Park	CA	91320	805-376-2509	805-376-2189
Star Optical Co	6718 Valjean Ave	Van Nuys	CA	91406	818-994-9886	818-994-3366
Stubbs, Frank Co Inc	4518 W Vanowen St	Burbank	CA	91505	818-842-5137	818-842-1927
Sunrise International Sales	65 W Easy St # 106	Simi Valley	CA	93065	805-581-8850	805-581-8854
Suntiger Inc	23945 Calabasas Rd # 201	Calabasas	CA	91302	818-225-7765	818-225-7764
Supreme Optical	431 N Brand Blvd # 303	Glendale	CA	91203	818-553-1868	
Surgi-Aid Endoscopies Inc	27717 Avenue Scott	Valencia	CA	91355	661-257-1103	661-257-0507
Survivor Industries Inc	2585 Azurite Cir	Newbury Park	CA	91320	805-498-6062	805-499-3708
Swift First Aid	27460 Avenue Scott Bldg 1	Valencia	CA	91355	661-295-0634	661-295-5079
Syncor International Corp	6464 Canoga Ave	Woodland Hills	CA	91367	818-737-4000	818-737-4893
T & W Converters	601 Sonora Ave	Glendale	CA	91201	818-241-1707	818-241-1473
T S Medical Resource Systems	19431 Business Center Dr #	Northridge	CA	91324	818-701-9156	818-701-9156
Talladium Inc	25031 Anza Dr	Valencia	CA	91355	661-295-0900	661-295-0895
Tantec Magnetics Inc	2125 N Madera Rd	Simi Valley	CA	93065	805-582-3200	805-582-3230
Technical Glass	10903 Chandler Blvd	North Hollywood	CA	91601	323-877-3566	323-762-3577
Teeth Co	7340 Foothill Blvd # 5	Tujunga	CA	91042	818-951-1383	
Tekelec	26580 Agoura Rd	Calabasas	CA	91302	818-880-5656	818-880-6993
Teledyne Medical Devices	877 Rim Crest Dr	Westlake Village	CA	91362	310-574-2045	310-577-3805
Televox	21628 Lassen St	Chatsworth	CA	91311	818-341-7461	
Trimed Inc	25768 Parada Dr	Valencia	CA	91355	661-255-7406	661-254-8485
Trimensa Corp	1050 Lawrence Dr	Newbury Park	CA	91320	805-499-2446	805-499-4366
Ultramet	12173 Montague St	Pacoima	CA	91331	818-899-0236	818-890-1946
Ultron Systems Inc	5105 Maureen Ln	Moorpark	CA	93021	805-529-1485	805-523-1061
Uniform Accessories-Rashman	8600 Wilbur Ave	Northridge	CA	91324	818-993-3030	818-993-4151
Unitech Business Systems	7210 Jordan Ave # B10	Canoga Park	CA	91303	818-710-1195	818-710-1242
United States Manufacturing Co	180 N San Gabriel Blvd	Pasadena	CA	91107	626-796-0477	626-440-9533
US Distributor	3727 W Magnolia Blvd # 77	Burbank	CA	91505	818-247-6764	
Utak Laboratories Inc	25020 Avenue Tibbitts	Valencia	CA	91355	661-294-3935	661-294-9272
Validyne Engineering Corp	8626 Wilbur Ave	Northridge	CA	91324	818-886-8488	818-886-6512
Viade Products	354 Dawson Dr	Camarillo	CA	93012	805-484-2114	805-484-9285
Vic Pollard Dental Products	755 Lakefield Rd # K	Westlake Village	CA	91361	805-495-5222	805-379-3273
View Engineering	1650 Voyager Ave	Simi Valley	CA	93063	805-522-8439	805-578-5250
Visimax Inc Contact Lenses	4505 Van Nuys Blvd	Sherman Oaks	CA	91403	818-788-5837	818-788-5078
Vista Labs	7871 Alabama Ave # 16	Canoga Park	CA	91304	818-348-8039	
Vitamin Classics Inc	24007 Ventura Blvd # 135	Calabasas	CA	91302	818-225-0376	818-225-9251
Vitamin Institute	12610 Saticoy St S	North Hollywood	CA	91605	323-877-5186	323-766-8482
Vitaminerals Inc	1815 Flower St	Glendale	CA	91201	818-500-8718	818-240-2785
Volume Discount Drugs	12925 Magnolia Blvd	Sherman Oaks	CA	91423	818-783-6100	818-783-8818
W T Farley Inc	4450 Shopping Ln	Simi Valley	CA	93063	805-526-4991	805-581-2071
Waldron Enterprises Inc	460 Charles St	Moorpark	CA	93021	805-523-7008	
Walsworth Medical Furniture	2080 Lincoln Ave	Pasadena	CA	91103	626-794-9130	

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area

Company	Address	City	State	ZipCode	Phone	FAX
Walters, S Inc	30423 Canwood St # 115	Agoura Hills	CA	91301	818-706-2202	818-706-2206
Water Technologies	PO Box 18614	Encino	CA	91416	818-981-2115	323-231-7358
Weider Health & Fitness	21100 Erwin St	Woodland Hills	CA	91367	818-884-6800	818-704-5734
Wel Industries Inc	11309 Allegheny St	Sun Valley	CA	91352	818-768-0777	
Westco Chemical Inc	12551 Saticoy St S # 61	North Hollywood	CA	91605	818-980-1152	818-766-7170
Western Purifier Co	5341 Alhama Dr # 2	Woodland Hills	CA	91364	818-703-0444	818-992-8170
Western Systems Research	200 E Del Mar Blvd Ste 110	Pasadena	CA	91105	626-578-7363	626-578-7364
Wheelcare Inc	800 Avenida Acaso # E	Camarillo	CA	93012	805-383-4477	805-383-4469
Whitmor-Wirenetics	27737 Avenue Hopkins	Valencia	CA	91355	661-257-2400	661-257-2495
Wilson Optical Laboratory	345 W Cypress St	Glendale	CA	91204	818-244-7937	
Winspan Inc	12860 San Fernando Rd	Sylmar	CA	91342	818-367-2227	818-367-5380
Wmw Assoc	9301 Jordan Ave # 106	Chatsworth	CA	91311	818-718-2613	818-718-6918
Woodard Laboratories	7712 Densmore Ave	Van Nuys	CA	91406	818-756-0022	818-904-3316
World Circuit Technology Inc	67 W Easy St # 132	Simi Valley	CA	93065	805-526-0714	805-526-2558
World Optics Inc	2445 Kanan Rd	Agoura Hills	CA	91301	818-707-9061	
Xelent X-Ray	4768 Park Granada # 109a	Calabasas	CA	91302	818-591-9729	
Xencor	2585 Nina St	Pasadena	CA	91107	626-744-5750	626-744-5757
Zetetix	6547 Bayberry St	Oak Park	CA	91377	818-991-0480	
Zierhut Design Associates	10755 Los Jordans Rd	Santa Clarita	CA	91350	805-268-0108	805-268-8580

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
3M Pharmaceutical	2834-01	Drug-Manufacturers Pharmaceuticals	5099-05	Importers	5122-03	Pharmaceutical Products-Wholesale
3R Medical Research Inc	3841	Surgical & Medical Instrs & Apparatus				
A Plus Precision Machining Inc	3599-03	Machine Shops	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8711-25	Engineers-Mechanical
A R Hinkel Co	3999-44	Electrolysis Equip & Supls-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5087-60	Electrolysis Equip & Supls-Wholesale
A V Pulmonary Care	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	5169-20	Oxygen (Wholesale)
A-1 Rehab Home Care Value	3841-98	Surgical/Med Instruments/Apparatus (Mfr)	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Ace Hy Sales Inc	2353-02	Hats-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Active Life Orthotics	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5661-02	Shoes-Orthopedic	5999-22	Artificial Limbs
Acuson Corp	3845-98	Electromedical & Electrotherapeutic Apparatus(Mfrs)	3541	Machine Tools: Cutting		
Adaptive Driving Systems Inc	5047-07	Wheel Chair Lifts & Ramps (Wholesale)	3714-01	Automobile Parts & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
ADC	8731	Commercial Physical & Biological Research				
Adelberg Laboratories Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-01	Exporters	8711-11	Engineers-Consulting
Advance Laser Technologies	8731-01	Laboratories-Research & Development				
Advanced Bionics Corp	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Advanced Biotherapy Concepts	8731-26	Biotechnology Products & Services				
Advanced Photonix Inc	3674-01	Semiconductor Devices (Manufacturers)	5085-88	Silicone Products (Wholesale)	8731-01	Laboratories-Research & Development
Advanced Surgical	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Advanteq	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
AeroVironment Inc	8731	Commercial Physical & Biological Research				
Affiliated Research Institute	8731-01	Laboratories-Research & Development	8063-01	Mental Health Services	8099-07	Health Services
Agg Medical Supplies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Ahmpac Laboratories Inc	8731	Commercial Physical & Biological Research	2087	Flavoring Extracts & Syrups	2844	Perfumes, Cosmetics & Toilet Preparations
Aims Media	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7812-03	Audio-Visual Production Service	9999	Unclassifiable Establishments
Air Care Medical Supply	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Air Packaging Technologies Inc	2671-01	Packaging Materials-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5113-08	Packaging Materials-Wholesale
Akemor Hose	5085-19	Hose Couplings & Fittings (Wholesale)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5085-18	Hose & Tubing-Rubber & Plastic (Whol)
Alamo Medical	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	5169-20	Oxygen (Wholesale)
Alaton Kalev	8712-02	Architects	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Alberto-Culver Co	5087-02	Beauty Salons-Equipment & Supls (Whol)	2834-98	Pharmaceutical Preparation	2844-06	Health & Beauty Aids-Manufacturers
Alenia Marconi Systems Inc	8731	Commercial Physical & Biological Research				
Alfigen-The Genetics Institute	8071-01	Laboratories-Medical	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8011-01	Physicians & Surgeons
Allman Products	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Alpine Solutions Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5734-02	Computer Parts & Supplies		
Altair Instruments Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3841	Surgical & Medical Instrs & Apparatus	7699-63	Medical Equipment-Repairing
Amanet	3599-03	Machine Shops	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	9999	Unclassifiable Establishments
Ambryx Biotechnology	8731-01	Laboratories-Research & Development				
American GNC Corp	8731	Commercial Physical & Biological Research				
American Latex Corp	3069-03	Latex Products (Manufacturers)				
American Medical Mfg Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Amgen Inc	2834	Pharmaceuticals	8731	Commercial Physical & Biological Research	2836-02	Biological Specimens-Manufacturers
Andwin Corp	2835	Diagnostic Substances	5047	Medical, Dental & Hospital Eqpt & Splys Wholesale		
Animax International Inc	7389-99	Business Services NEC	8731-05	Human Factors-Research & Development		
Apguard Medical Inc	8099-23	Oxygen Therapy Equipment	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Apria Healthcare Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-10	Health Appliances (Wholesale)
Apria Healthcare Inc	5047-12	Hospital Equipment & Supplies (Whol)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Arcoelectric Corp	3679-01	Electronic Equipment & Supplies-Mfrs	3577-02	Computer Peripherals (Manufacturers)	3613-02	Switches-Electric-Manufacturers
Arete Associates	8731-01	Laboratories-Research & Development				
Assembly & Manufacturing System	3569-07	Automation Systems & Equipment-Mfrs	3559-09	Special Industry Machinery NEC (Mfrs)	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)
Atelco	5085-36	Tapes-Adhesive (Wholesale)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)		
Athenex Research Associates	8731-01	Laboratories-Research & Development	8731	Commercial Physical & Biological Research		
Atira Engineering	3599-03	Machine Shops	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Atlantic Optical Co	3851-03	Optical Goods-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5048-01	Optical Goods-Wholesale
Avall Inc	5599-08	Aircraft Equipment Parts & Supplies	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Avibank Manufacturing Inc	3429-02	Hardware-Manufacturers	3724-98	Aircraft Engines & Engine Parts-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
AvtekAir Inc	3999	Manufacturing Industries, NEC	8731	Commercial Physical & Biological Research		
Axiom Chromatography Inc	3826-98	Laboratory Analytical Instruments (Mfrs)	3589-09	Waste Reduction Disposal Equip-Ind-Mfrs	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)
Banner Pharmacaps Inc	2834	Pharmaceuticals				
Barker Optics Inc	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Baxter Healthcare Corp	2834	Pharmaceuticals				

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Baxter Hyland Immuno	2834	Pharmaceuticals				
Baxter Hyland Immuno	2836-01	Biological Products (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Bay Area Home Health Care	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
BEI Encoder Systems Div	3674-98	Semiconductors & Related Devices (Mfrs)	3679-01	Electronic Equipment & Supplies-Mfrs	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)
BEI Medical Systems Co	3842-09	Surgical Appliances-Manufacturers	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Bemco Inc	3829-08	Testing Apparatus-Manufacturers	3699-02	Electric Equipment-Manufacturers	3825-98	Instrs-Measuring/Testing Elec (Mfrs)
Bes Inc	3844-01	X-Ray Apparatus & Supplies-Manufacturers	5047-20	X-Ray Apparatus & Supplies (Wholesale)		
Best Buy Uniforms	5699-22	Uniforms	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Biocatalytics	8731-01	Laboratories-Research & Development				
Bio-Metics International	2834-03	Vitamin Products-Manufacturers	5122-05	Vitamins & Food Supplements-Wholesale		
Bioselect Inovations	8731-01	Laboratories-Research & Development				
BioSource International Inc	3829-08	Testing Apparatus-Manufacturers	2835-98	IN-Vitro/In-Vivo Diagnostic Sbstnc (Mfr)	2836-01	Biological Products (Manufacturers)
Bird, E F Enterprises Inc	8731	Commercial Physical & Biological Research				
Boeing Co	8731	Commercial Physical & Biological Research	3764	Guided Missile/Space Vehicle Propulsion Units &	3769	Guided Missile/Space Vehicle Parts & Eqpt, NEC
Boiron Borneman Inc	5122-03	Pharmaceutical Products-Wholesale	2834-04	Drug Millers		
Bone Clones	2836-01	Biological Products (Manufacturers)				
Boregyde	8731-01	Laboratories-Research & Development				
Brown & Welin Pharmacy	5912-05	Pharmacies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Burton Medical Products Corp	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	5099-05	Importers
C & R Medical	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
C I Systems Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5063-41	Electronic Testing Equipment (Wholesale)		
California Cybernetics	3569-12	Robots-Manufacturers	5072-15	Robots (Wholesale)	8731-01	Laboratories-Research & Development
California Dental Buying Group	5047-19	Dental Equipment & Supplies-Wholesale	3843-98	Dental Equipment & Supplies-Mfrs		
Camacho Laboratories	5122-03	Pharmaceutical Products-Wholesale	2834-04	Drug Millers		
Cardiac Care Units Inc	3845	Electromedical & Electrotherapeutic Apparatus				
Cardinal Health	5122-03	Pharmaceutical Products-Wholesale	2834-04	Drug Millers		
Care Point Health Svc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Carl W Newell Manufacturing	3089-01	Mold Makers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3949-03	Fishermens Supplies-Manufacturers
Carletta Chiropractic Group	8041-01	Chiropractors DC	8731-05	Human Factors-Research & Development		
Centro Vision Inc	3679-01	Electronic Equipment & Supplies-Mfrs	3674-01	Semiconductor Devices (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Certified La Health Products	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Chad Therapeutics Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)
Charts Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Chatsworth Latex Gloves	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Clinical Micro Sensors Inc	8731-26	Biotechnology Products & Services				
Cohr Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Colorful Products/Cosmetic Dev	2844	Perfumes, Cosmetics & Toilet Preparations	8731	Commercial Physical & Biological Research		
Columbia Analytical Services	8731	Commercial Physical & Biological Research				
Comco Inc	3559-09	Special Industry Machinery NEC (Mfrs)	3291-02	Abrasive Products (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Comfort Control Adjstble Beds	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Commercial Inspection Svc	8734-02	Laboratories-Testing	3844-98	X-Ray Apparatus & Tubes (Manufacturers)	8734-05	X-Ray Inspection Service
Commodity Resource Inc	5093-03	Film Scrap (Wholesale)	2911-05	Petroleum Products-Manufacturers	3844-98	X-Ray Apparatus & Tubes (Manufacturers)
Components For Automation Inc	3494-03	Valves-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5085-13	Valves-Wholesale
Comprehensive Medical Imaging	8071-01	Laboratories-Medical	8731-01	Laboratories-Research & Development		
Computrition Inc	5734-01	Computer Software	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5734-05	Computers-Dealers-Used
Concept Poly Products	2674-02	Bags-Specialty (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Contex Inc Contact Lenses	3827-98	Optical Instruments & Lenses (Mfrs)	3851-98	Ophthalmic Goods-Manufacturers	5048-01	Optical Goods-Wholesale
Continental-Fenton Surgical	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Cooner Wire Co	3496-98	Fabricated Wire Products-Misc (Mfrs)	3357-98	Drawing/Insulating-Nonferrous Wire (Mfr)	3679-01	Electronic Equipment & Supplies-Mfrs
Core-Vent Bioengineering Inc	3843-98	Dental Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Cosmoceutical Research Ctr	8731-01	Laboratories-Research & Development				
Creations Garden Natrl Prod	5499-13	Herbs	2834-03	Vitamin Products-Manufacturers		
Creative Computer Applications	7371-01	Computer Services	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7373-14	Internet Svcs-Network Designers/ConsInt
Crystal Clear Technology	3679	Electronic Components, NEC	8731	Commercial Physical & Biological Research		
CSP Inc	8731	Commercial Physical & Biological Research				
CSR Enterprises	2833-98	Medicinal Chem/Botanical Prods (Mfrs)				
Cygnat Metal Stamping	3469-04	Metal Stamping (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
David Kopf Instruments	3599-98	Indstrl/Coml Machinery/Equip NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Davis Dental Supply Co	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale		

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Delta Scientific Corp	5063-55	Traffic Signs Signals & Equip-Whol	3669-98	Communications Equipment NEC (Mfrs)	3799-98	Transportation Equipment NEC (Mfrs)
Den-Mat Corp	3843	Dental Eqpt & Splys				
Dent Trade	3843-98	Dental Equipment & Supplies-Mfrs				
Dental/Medical Diagnostic Syst	3843-98	Dental Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale
Dermalight Systems	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Design Classics	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Diabetes Selfcare	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Diagnostic Imaging	8734-05	X-Ray Inspection Service	3844-01	X-Ray Apparatus & Supplies-Manufacturers	5047-20	X-Ray Apparatus & Supplies (Wholesale)
Dolphin Imaging Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale		
Dome Inc	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale		
Downtown Supply	5043-04	Motion Picture Equip & Supplies (Whol)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)		
E & E Optics Inc	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
E H Butland Development Corp	3844-98	X-Ray Apparatus & Tubes (Manufacturers)	5047-20	X-Ray Apparatus & Supplies (Wholesale)		
Eagle Medical Supplies	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	7359-28	Wheel Chairs-Renting
Efficient X-Ray Inc	5047-20	X-Ray Apparatus & Supplies (Wholesale)	3844-98	X-Ray Apparatus & Tubes (Manufacturers)		
Electro Ease	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Electro-Component Assembly Co	3841-98	Surgical/Med Instruments/Apparatus (Mfr)	3999-06	Assembly & Fabricating Service		
Electropedic Manufacturing	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Eltron International Inc	2752-02	Printers	3577-01	Computer Supplies & Parts-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Empire Optical Of California	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Endocrine Sciences	8071-01	Laboratories-Medical	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Essential Medical Supply	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
E-Z Trac Inc	8731-01	Laboratories-Research & Development				
Fiberoptic Systems Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	1623-09	Fiber Optics	3843	Dental Eqpt & Splys
Fidelity Mfg Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3861-98	Photographic Equip & Supplies-Mfrs	5099-01	Exporters
First Point Scientific Inc	8731-01	Laboratories-Research & Development				
First Premium Alloy	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale		
Fischer, R A Co Inc	3845	Electromedical & Electrotherapeutic Apparatus				
Fleet Industrial Supply	5085-22	Industrial Equipment & Supplies (Whol)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)		
Fluid Automation Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Focus Optics	3827-98	Optical Instruments & Lenses (Mfrs)	9999	Unclassifiable Establishments		
Four Ventures Enterprises	5122-03	Pharmaceutical Products-Wholesale	2834-04	Drug Millers		
Frank Stubbs Co	3842-05	Orthopedic Appliances-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Freedom Designs Inc	3842-13	Wheel Chairs-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Freestyle USA	3873	Watch & Clock Devices & Parts	3841	Surgical & Medical Instrs & Apparatus		
Fujita Group USA	8731-01	Laboratories-Research & Development				
Fundamental Products Co	8731-02	Experimental Work				
Futuremed America Inc	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
G & A Sales Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5137-01	Uniforms-Men's & Women's-Wholesale		
G & H Technology Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Garren Scientific Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5049-06	Laboratory Equipment & Supplies (Whol)		
Gen En Con	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8711-11	Engineers-Consulting		
General Air Corp	3559-09	Special Industry Machinery NEC (Mfrs)	1541-03	Clean Rooms-Installation & Equipment	3564	Blowers & Fans
General Optics Inc	3851-03	Optical Goods-Manufacturers	3827-98	Optical Instruments & Lenses (Mfrs)	5048-01	Optical Goods-Wholesale
General Research Laboratories Inc	2834-03	Vitamin Products-Manufacturers	2833	Medicinal Chemicals & Botanical Prdts		
Genetic Identification Svc	8731-26	Biotechnology Products & Services				
Gingi-Pak	3843-01	Dental Equipment-Manufacturers	2834-04	Drug Millers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Glamour Vitamin Labs Inc	2834-03	Vitamin Products-Manufacturers				
Glass Instruments Inc	3231-98	Glass Prod Made-Purchased Glass (Mfrs)	3229-01	Glass-Blowers (Manufacturers)	3641-03	Electric Lamp Bulbs & Tubes-Mfrs
Glenoaks Rx Pharmacy	5912-05	Pharmacies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Golden State Medical Supply	5122-03	Pharmaceutical Products-Wholesale	2834-04	Drug Millers		
Gordon Optical Supply	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Graham Optical Systems	3827	Optical Instruments				
Gram Research & Development	8731-01	Laboratories-Research & Development				
Green Pharmacy	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale		
Gyne-Tech Instrument Corp	3845-98	Electromedical/Therapeutic Aprpts (Mfrs)	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Hammermeister Precision Inc	3599	Machinery & Eqpt, Inld & Commercial, NEC	3827	Optical Instruments		
Hammer-Plane Inc	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Hampshire Laboratories	2834-03	Vitamin Products-Manufacturers	5499-04	Vitamins		

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Hanger Inc	6324-06	Medical Provider Consultants	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5999-22	Artificial Limbs
Hanger Prosthetics & Orthotics	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys				
Hanger Prosthetics & Orthotics	8331-02	Rehabilitation Services	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5999-22	Artificial Limbs
Hanson Lab Furniture	3821-01	Laboratory Equipment & Supplies-Mfrs	2522-98	Office Furniture-Except Wood (Mfrs)	3499-03	Metal Goods-Manufacturers
Hanson Research Corp	3825-98	Instrs-Measuring/Testing Elec (Mfrs)	3829-98	Measuring/Controlling Devices NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Haskel International Inc	3561-01	Pumps-Manufacturers	3594-01	Fluid Power Pumps & Motors (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Hawaii Chemtect Intl	8731-26	Biotechnology Products & Services				
Hazeltine Medical Supply	3841-98	Surgical/Med Instruments/Apparatus (Mfr)	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Health & Hospital Consultants	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Hema Care Corp	8099-16	Blood Banks & Centers	2834-98	Pharmaceutical Preparation	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Hersh Acoustical Engrg Inc	8731	Commercial Physical & Biological Research	3296	Mineral Wood	3651	Household Audio & Video Eqpt
High Fashion Optics	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers	5995-04	Opticians
Hill Industries	3599	Machinery & Eqpt, Incl & Commercial, NEC	3728	Aircraft Parts & Eqpt, NEC	3841	Surgical & Medical Instrs & Apparatus
Hirose Electric	3678-98	Electronic Connectors (Manufacturers)	3669-98	Communications Equipment NEC (Mfrs)	3679-01	Electronic Equipment & Supplies-Mfrs
Homecare Service Specialist	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Hoyle Products Inc	3952-98	Lead Pencils Crayons/Artists Mtrl (Mfrs)	2679-98	Converted Paper/Paperbrd Prod NEC (Mfrs)	3829-98	Measuring/Controlling Devices NEC (Mfrs)
Humanics Ergo Systems Inc	8731-05	Human Factors-Research & Development				
Hydro Systems	3432-01	Plumbing Fixtures & Supplies-Mfrs	3088-98	Plastics-Plumbing Fixtures (Mfrs)	3842-14	Whirlpool Bath Equip & Supplies-Mfrs
Hydros Inc.						
Hyperbaric Chamber Systems	3845	Electromedical & Electrotherapeutic Apparatus	3841	Surgical & Medical Instrs & Apparatus	8734	Testing Laboratories
IITC Inc	3841-01	Surgical Instruments-Manufacturers				
Imaging Services Inc	3844-01	X-Ray Apparatus & Supplies-Manufacturers	5047-20	X-Ray Apparatus & Supplies (Wholesale)		
Impak Corp Of America	3841	Surgical & Medical Instrs & Apparatus				
Immuno-Biogene						
Independent Tape Co	5085-36	Tapes-Adhesive (Wholesale)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)		
Infab Corp	5047-02	X-Ray Protection (Wholesale)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3842-07	Safety Equipment & Clothing-Mfrs
Interlink Electronics	3679-01	Electronic Equipment & Supplies-Mfrs	3676-01	Resistors (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
International Hospital Supply	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
International Remote Imaging	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	2834-98	Pharmaceutical Preparation	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
International Thermal Pkg Inc	8731-01	Laboratories-Research & Development				
Interscan Corp	3829-12	Air Quality Measuring Equipment	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5075-20	Air Pollution Measuring Equip (Whol)
Intracommunity Home Care Inc	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Isco Optic USA	3827-98	Optical Instruments & Lenses (Mfrs)				
Isi	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3679-01	Electronic Equipment & Supplies-Mfrs	5063-35	Electronic-Mfrs Representatives (Whol)
Isotope Products Laboratories Inc	2819-05	Radioactive Materials (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Isovac Engineering Inc	3826	Analytical Instruments				
Jac Instrument Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	5099-05	Importers
Jack Nemeth Lensco	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Jant Pharmacal Corp	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-01	Exporters		
Jeffersons & Assoc	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Jet Propulsion Laboratory	8731	Commercial Physical & Biological Research				
Jmar Precision Systems Inc	3825-05	Instruments-Measuring (Manufacturers)	3674-01	Semiconductor Devices (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Kabot Design Engineering	8731	Commercial Physical & Biological Research				
Kaire Holdings Inc	2835-98	IN-Vitro/In-Vivo Diagnostic Sbstnc (Mfr)	5499-01	Health & Diet Foods-Retail	7299-34	Weight Control Services
Karamof Chemical Inc	2834	Pharmaceuticals				
Kavlico Corp	3679-01	Electronic Equipment & Supplies-Mfrs	3612-98	Power Distr/Specialty Transformer (Mfrs)	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)
K'Care Medical Sales	5047-04	Physicians & Surgeons Equip & Supls-Whol	3844-98	X-Ray Apparatus & Tubes (Manufacturers)	5999-39	Wheel Chairs & Scooters
KDL Precision Molding Corp	3061-98	Molded Extruded/Lathe Cut Rbbr Gds (Mfr)	3053-01	Seals-Oil, Grease, Etc (Manufacturers)	3053-02	Gaskets-Manufacturers
Keck-Craig Inc	8731	Commercial Physical & Biological Research				
Keepsakes Inc	5999-25	Plaques	2731-01	Publishers-Book	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Kendall Healthcare	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Kentech	8731-01	Laboratories-Research & Development				
Kinamed Inc	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8731-01	Laboratories-Research & Development
Kish Optics Inc	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Knurr USA Inc	2522-98	Office Furniture-Except Wood (Mfrs)	2521-98	Wood-Office Furniture (Manufacturers)	3564-98	Industrial & Coml Fans & Blowers (Mfrs)
Koach Engineering Corp	3585	Air Conditioning & Heating Eqpt	3559	Special Ind Machinery, NEC		
Konigsberg Instruments Inc	3841-98	Surgical/Med Instruments/Apparatus (Mfr)	3829-98	Measuring/Controlling Devices NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Kopf, David Instruments	3841	Surgical & Medical Instrs & Apparatus				
Koros Surgical Instrument Corp	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5999-13	Surgical Appliances

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Kyffin Pharmacy	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
L A Optics	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
La Sensors	8731-01	Laboratories-Research & Development				
Lasco Diamond Products	3843-98	Dental Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale
Ldr Productions	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7812-11	Video Production & Taping Service		
Lewis & Stolpe	3851-07	Artificial Eyes-Human (Manufacturers)	8071-01	Laboratories-Medical		
Light Technology Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Lightwave Link Inc	3827-98	Optical Instruments & Lenses (Mfrs)	8748-53	Engineers-Communications		
Limerick Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8399-16	Breastfeeding Supplies & Information		
Line One Laboratories	3069-03	Latex Products (Manufacturers)	2834-04	Drug Millers	5099-05	Importers
Litecom Inc	8731	Commercial Physical & Biological Research	3827	Optical Instruments		
Lockheed Martin Corp	3761	Guided Missiles & Space Vehicles	8731	Commercial Physical & Biological Research		
L-W Athena	3861-03	Photographic Equipment-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5049-99	Professional Equipment NEC (Wholesale)
Lyons Medical Instrument Corp	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	3841-03	Hospital Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Lyttron Inc	8731-01	Laboratories-Research & Development				
M & A Plastics Inc	3089-01	Mold Makers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
M K Medical	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Marco Products Co	3589-98	Service Industry Machinery NEC (Mfrs)	3541-07	Machine Tools-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Mass Brands Ltd	3843-02	Dentifrices (Manufacturers)				
Massey Prosthetic Arts	5999-22	Artificial Limbs	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5999-22	Artificial Limbs
Masanaga Group Inc	3827-98	Optical Instruments & Lenses (Mfrs)				
Matech Inc	3843-98	Dental Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale
Materials Technology Corp	3845	Electromedical & Electrotherapeutic Apparatus	8734	Testing Laboratories		
MBK Enterprises Inc	5085-36	Tapes-Adhesive (Wholesale)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	3599	Machinery & Eqpt, Indl & Commercial, NEC
Mc Kesson General Medical Corp	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
McKay Enterprises	3841-98	Surgical/Med Instruments/Apparatus (Mfr)				
Mde Imaging Systems	3844-01	X-Ray Apparatus & Supplies-Manufacturers	5047-20	X-Ray Apparatus & Supplies (Wholesale)		
Mds	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Meclab Inc	3728	Aircraft Parts & Eqpt, NEC	3827	Optical Instruments		
Med Rents	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Medic Id	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7631-01	Jewelry-Repairing		
Medical Analysis Systems Inc	2835-98	In-Vitro/In-Vivo Diagnostic Sbstnc (Mfr)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Medical Associates Network Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Medical Data Electronics Inc	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	3679-01	Electronic Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Medical Illumination Inc	3645-01	Lighting Equipment-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Medical Packaging Corp	3821-01	Laboratory Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5049-06	Laboratory Equipment & Supplies (Whol)
Mediq Ptn	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Medtronic Inc	5047-12	Hospital Equipment & Supplies (Whol)	3841-01	Surgical Instruments-Manufacturers	3845-03	Pacemakers-Cardiac (Manufacturers)
Meissner Filtration Prdts Inc	3569-04	Filters-Liquid (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Melco Wire Products Co Inc	3496-98	Fabricated Wire Products-Misc (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3993-98	Signs & Advertising Specialties (Mfrs)
Mem Solutions	8731-01	Laboratories-Research & Development				
Merit Engineering Inc						
Merlin Technologies Pharmacy	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5912-05	Pharmacies
Merry X-Ray Chemical Corp	5047-20	X-Ray Apparatus & Supplies (Wholesale)	2819-98	Industrial Inorganic Chmcls NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Mes Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8099-23	Oxygen Therapy Equipment		
Metacomp Technologies Inc	8731-01	Laboratories-Research & Development				
Michael's Pharmacy	5912-05	Pharmacies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Micro Specialist	3827	Optical Instruments				
Microrecording Systems Conslt	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Mila Medical Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Milner, Bob & Associates Co	3821	Laboratory Apparatus & Furniture	8734	Testing Laboratories		
MiniMed Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3586	Measuring & Dispensing Pumps	8731	Commercial Physical & Biological Research
Montgomery Watson Laboratories	8734-14	Laboratories-Analytical	1629-10	Water Pollution Control	8731-01	Laboratories-Research & Development
Moorhead & Co	3556-98	Food Products-Machinery (Manufacturers)	2834-98	Pharmaceutical Preparation	5087-01	Bakers Supplies (Wholesale)
Multi-Pure Drinking Water Sys	5078-01	Water Coolers Fountains & Filters (Whol)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7389-84	Water Treatment Equip Svc & Supls
Nanostream						
National Electro-Sales Corp	3692-98	Primary Batteries-Dry & Wet (Mfrs)	3679-01	Electronic Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
National Papers	5113-08	Packaging Materials-Wholesale	2673-01	Bags-Plastic (Manufacturers)	2674-01	Bags-Paper (Manufacturers)
Natren Inc	2099-10	Health Food Products-Manufacturers	2834-04	Drug Millers	5149-14	Health Food Products-Wholesale

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Natrol Inc	2834-03	Vitamin Products-Manufacturers	5122-05	Vitamins & Food Supplements-Wholesale	5149-14	Health Food Products-Wholesale
Neeron International	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale		
Neotech Products Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
New Avenue Industries	5943-01	Office Supplies	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	7389-12	Telemarketing Services
NMB Technologies Corp	3621-98	Motor & Generator-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Norman Brush Co	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Nortel Networks	8731	Commercial Physical & Biological Research	3577	Computer Peripheral Eqpt, NEC		
North American Home Health	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
North American Scientific Inc	3829	Measuring & Controlling Devices, NEC	3826	Analytical Instruments		
Northern Magnetics Inc	3621-98	Motor & Generator-Manufacturers	3728-01	Aircraft Components-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Northridge Laboratories Inc	2834-03	Vitamin Products-Manufacturers	5099-05	Importers		
Northrop Grumman PRB Systems	8731	Commercial Physical & Biological Research				
Nova Care Hanger	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)	5999-22	Artificial Limbs	5999-99	Miscellaneous Retail Stores NEC
Nu-Hope Laboratories	5999-13	Surgical Appliances	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)
Nuoptix Associates Inc	3827	Optical Instruments				
Oacis Research	5734-01	Computer Software	8731-05	Human Factors-Research & Development		
Ocular Prosthetics Inc	3851-07	Artificial Eyes-Human (Manufacturers)				
Odu-USA	3678-98	Electronic Connectors (Manufacturers)	3357-98	Drawing/Insulating-Nonferrous Wire (Mfr)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Omnicol Inc	3842-19	Masks-Protective (Manufacturers)	3841-03	Hospital Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
One Lambda Inc	3845	Electromedical/Therapeutic Apparatus	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5049-06	Laboratory Equipment & Supplies (Whol)
Optical Communication Products	3827	Optical Instruments				
Optical Exchange	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Optical Systems Corp	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Optics One	8734-18	Optical Engineers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Optiline	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Optimum Optical Systems Inc	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Optiphase Inc	8731	Commercial Physical & Biological Research	3674	Semiconductors		
Orhto Source	5047-19	Dental Equipment & Supplies-Wholesale	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8021-01	Dentists
Orthomedics	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5999-22	Artificial Limbs		
P L Of California	2326-04	Uniforms-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5137-01	Uniforms-Men's & Women's-Wholesale
Pac Grand Pharmacy & Supply	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5912-05	Pharmacies		
Pace Transducer Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Pacesetters Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	8231-11	Special Interest Libraries
Panorama Optics	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Panther Electronics	8731	Commercial Physical & Biological Research				
Paragon Implant Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale	8072-01	Laboratories-Dental
Parastor Inc	8731	Commercial Physical & Biological Research				
Park Valley Pharmaceutical	2834-04	Drug Millers				
Parks Optical Inc	3827	Optical Instruments				
Pasadena Optical Co	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Pdi Enterprises	8099-07	Health Services	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale
Pediatric Diagnostic Svc Ctr	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8071-01	Laboratories-Medical		
Pentagon Co	5063-35	Electronic-Mfrs Representatives (Whol)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Person & Covey Inc	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale	2844	Perfumes, Cosmetics & Toilet Preparations
Pharmaceutical Services Corp						
Pharmacia & Upjohn Inc	5122	Drugs, Drug Proprietaries & Sundries Wholesale	2834	Pharmaceuticals		
Pharmavite Corp	5122-05	Vitamins & Food Supplements-Wholesale	2833-98	Medicinal Chem/Botanical Prods (Mfrs)	2834-04	Drug Millers
Photo Research Inc	3829-98	Measuring/Controlling Devices NEC (Mfrs)	3569-98	General Ind Machinery/Equip NEC (Mfrs)	3826-98	Laboratory Analytical Instruments (Mfrs)
Physicians Immune Diagnostics	8734	Testing Laboratories				
Plexcom Inc	3669-98	Communications Equipment NEC (Mfrs)	3661-98	Telephone & Telegraph Apparatus (Mfrs)	3827-98	Optical Instruments & Lenses (Mfrs)
Plugged In Computer Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3841-01	Surgical Instruments-Manufacturers	5734-07	Computer & Equipment Dealers
Pmc Inc	3089-02	Plastics & Plastic Products (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5051-07	Pipe-Wholesale
Pollard Dental Products Inc	3843	Dental Eqpt & Splys				
Precision Dental Intl Inc	5047-19	Dental Equipment & Supplies-Wholesale	3843-98	Dental Equipment & Supplies-Mfrs		
Precision Dynamics Corp	3089-01	Mold Makers	3089-02	Plastics & Plastic Products (Mfrs)	3821-03	Laboratory Furniture (Manufacturers)
Prestige Medical	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5099-05	Importers
Prime Dental Laboratory	8072-01	Laboratories-Dental	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale
Principia Optics	8731-01	Laboratories-Research & Development				
Pure Aire Corp	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8999-99	Services NEC	9999	Unclassifiable Establishments

Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Pure Produce	8731-01	Laboratories-Research & Development				
Pure Tek	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale		
Puregar	2834-03	Vitamin Products-Manufacturers				
Puretek Corp	2834	Pharmaceuticals				
Quality Medical Supply	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
R A Fischer Co	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	3699-02	Electric Equipment-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
R X Rocker Corp	3842-13	Wheel Chairs-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-25	Wheel Chairs-Wholesale
Rache Corp	3479-07	Engravers-Metal	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Radiological Specialists Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	5047-20	X-Ray Apparatus & Supplies (Wholesale)
Radiology Technologies Inc	3844-01	X-Ray Apparatus & Supplies-Manufacturers	7699-71	X-Ray Apparatus-Repairing		
Rainbow Optics	5048-01	Optical Goods-Wholesale			3851-03	Optical Goods-Manufacturers
Rantec Microwave Systems Inc	3679	Electronic Components, NEC	3826	Analytical Instruments		
Raymond W Jensen Inds	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3643-98	Current-Carrying Wiring Devices (Mfrs)	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)
Rdb Marketing Assoc Inc	3089-02	Plastics & Plastic Products (Mfrs)	3089-10	Plastics-Products-Finished-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Rebel Distributors Corp	5122-04	Cosmetics-Wholesale	2834-04	Drug Millers		
Recovercare Products Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Reliable Systems Inc	5063-08	Fire Alarm Systems (Wholesale)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5065-05	Radio Paging/Signaling Eqpt Systs (Whol)
Replacement Parts Industries	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Rescue U Disaster Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	1799-78	Earthquake Products & Services		
Resonance Technology Co	3841-98	Surgical/Med Instruments/Apparatus (Mfr)	8071-01	Laboratories-Medical		
Revolution Eye Wear	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Rhodes Medical Instruments Inc	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	3821-01	Laboratory Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Richard Hartt Co	3827-98	Optical Instruments & Lenses (Mfrs)				
Ricon Corp	5047-07	Wheel Chair Lifts & Ramps (Wholesale)	3536-98	Overhead Traveling Cranes Hoists (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
RIFOCS Corp	3827	Optical Instruments				
Riggins Engineering Inc	3599-03	Machine Shops	3599-98	Indstrl/Coml Machinery/Equip NEC (Mfrs)	3728-01	Aircraft Components-Manufacturers
Robert G Allen Co	3676-01	Resistors (Manufacturers)	3675-01	Electronic Capacitor (Manufacturers)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Roberts Tool Co	3728-02	Aircraft Equipment Parts & Supls-Mfrs	3593-98	Fluid Power Cylinders & Actuators (Mfrs)	3594-01	Fluid Power Pumps & Motors (Mfrs)
Rockwell International Corp	8731-01	Laboratories-Research & Development	8231-11	Special Interest Libraries		
Rol Control Products	5999-20	Home Health & Health Care Equipment	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5999-39	Wheel Chairs & Scooters
Royal Hills Pharmacy	5912-05	Pharmacies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Royal Medical Supply	5049-06	Laboratory Equipment & Supplies (Whol)	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Royce Medical Products	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-12	Hospital Equipment & Supplies (Whol)		
Sanguine Corp	8731-05	Human Factors-Research & Development	5122-03	Pharmaceutical Products-Wholesale		
Scicon Technologies Corp	3543-01	Model Makers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Scientific Control Systems	8731	Commercial Physical & Biological Research				
Second Chance Mfg Co	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Semiconductor Equipment Corp	3679-01	Electronic Equipment & Supplies-Mfrs	3559-09	Special Industry Machinery NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Senior Med Medical Supplies	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Servo Magnetics	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3621-02	Electric Motors-Manufacturers		
Sespe Medical Rentals	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Shamir-USA	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Shepherd, J L & Associates	3844	X-ray Apparatus & Tubes	3821	Laboratory Apparatus & Furniture		
Signature Eyewear	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale	5099-05	Importers
Silver & Theodore Medical	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Solgene Therapeutics						
Solid Concepts	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5734-01	Computer Software	5734-02	Computer Parts & Supplies
Soltec Corp	5063-41	Electronic Testing Equipment (Wholesale)	3821-03	Laboratory Furniture (Manufacturers)	3826-98	Laboratory Analytical Instruments (Mfrs)
Southwest Medical Supplies	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Space Maintainers Laboratory	3843	Dental Eqpt & Splys	8072-01	Laboratories-Dental	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Space-Age Medical Svc Inc	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Spectrasource Instruments	3827	Optical Instruments				
Spinal & Orthopedic Devices	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys				
Spring Clean Detox Ctr	3842-18	Colonic Therapy-Apparatus & Supls (Mfrs)				
Sscor	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
St Jude Medical Inc	3845-98	Electromedical/Therapeutic Apprts (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol
Stamping Specialties Corp	3841	Surgical & Medical Instrs & Apparatus				
Star Optical Co	5048-01	Optical Goods-Wholesale	3851-03	Optical Goods-Manufacturers		
Stubbs, Frank Co Inc	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys				

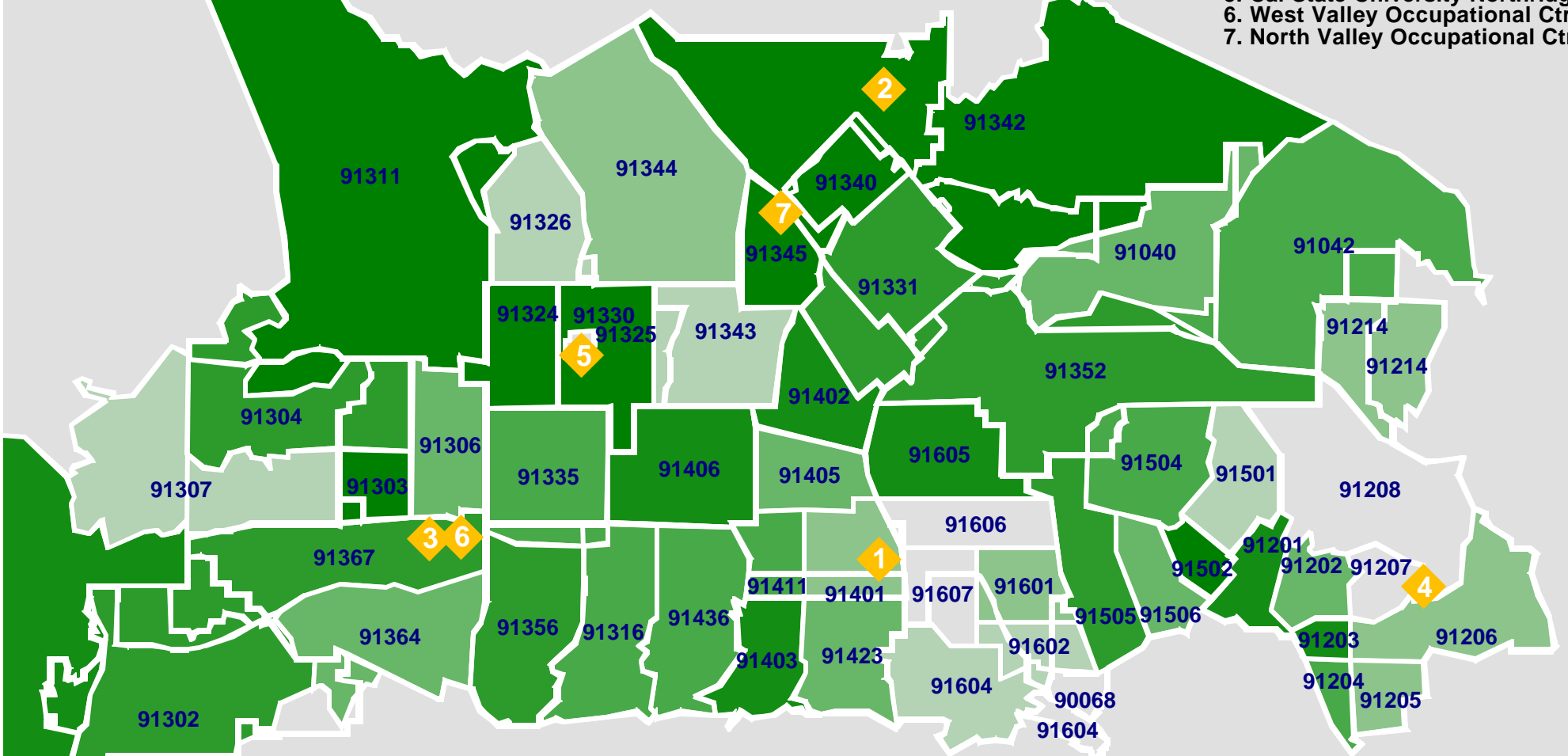
Biotechnical Biomedical Firms in the Extended San Fernando Valley Area - SIC Codes

Company	PrimarySIC	PrimarySICDesc	SIC2	SIC2Desc	SIC3	SIC3Desc
Sunrise International Sales	3842-13	Wheel Chairs-Manufacturers	5099-01	Exporters		
Suntiger Inc	3851-98	Ophthalmic Goods-Manufacturers	5995-05	Sunglasses & Sun Goggles		
Supreme Optical	5048-01	Optical Goods-Wholesale	3827-98	Optical Instruments & Lenses (Mfrs)		
Surgi-Aid Endoscopies Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Survivor Industries Inc	2099	Food Preparations, NEC	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys		
Swift First Aid	3842-11	First Aid Supplies-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5912-03	First Aid Supplies
Syncor International Corp	5912-05	Pharmacies	2834-98	Pharmaceutical Preparation	2835-98	IN-Vitro/In-Vivo Diagnostic Sbstnc (Mfr)
T & W Converters	5085-36	Tapes-Adhesive (Wholesale)	2672-98	Coated & Laminated Paper NEC (Mfrs)	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)
T S Medical Resource Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5049-06	Laboratory Equipment & Supplies (Whol)		
Talladium Inc	3843-98	Dental Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3842-98	Orthopedic Prosthetic/Srgcl Appl (Mfrs)
Tantec Magnetics Inc	8731	Commercial Physical & Biological Research	8711	Engineering Services		
Technical Glass	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Teeth Co	3843-98	Dental Equipment & Supplies-Mfrs				
Tekelec	3845	Electromedical & Electrotherapeutic Apparatus				
Teledyne Medical Devices						
Televox	5047-23	Hearing Aids & Devices-Wholesale	3842-04	Hearing Aids-Manufacturers		
Trimed Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Trimensa Corp	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale		
Ultramet	3499-03	Metal Goods-Manufacturers	3471-05	Plating (Manufacturers)	3479-04	Coatings-Protective-Manufacturers
Ultron Systems Inc	3674-98	Semiconductors & Related Devices (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Uniform Accessories-Rashman	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5047-04	Physicians & Surgeons Equip & Supls-Whol	5099-05	Importers
Unitech Business Systems	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
United States Manufacturing Co	3842	Orthopedic, Prosthetic & Surgical Appliances/Splys				
US Distributor	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Utak Laboratories Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	8734-14	Laboratories-Analytical		
Validyne Engineering Corp	3829-98	Measuring/Controlling Devices NEC (Mfrs)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Viade Products	3843-01	Dental Equipment-Manufacturers				
Vic Pollard Dental Products	3843-98	Dental Equipment & Supplies-Mfrs	3291-02	Abrasive Products (Manufacturers)	5047-19	Dental Equipment & Supplies-Wholesale
View Engineering	3829-98	Measuring/Controlling Devices NEC (Mfrs)	3823-98	Industrial Measuring/Cntrl Instr (Mfrs)	3827-98	Optical Instruments & Lenses (Mfrs)
Visimax Inc Contact Lenses	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Vista Labs	8731	Commercial Physical & Biological Research	3321	Gray Iron Foundries		
Vitamin Classics Inc	2834-03	Vitamin Products-Manufacturers	5122-04	Cosmetics-Wholesale		
Vitamin Institute	2899-05	Chemicals-Manufacturers	2819-98	Industrial Inorganic Chmcls NEC (Mfrs)	2834-03	Vitamin Products-Manufacturers
Vitaminerals Inc	2834	Pharmaceuticals				
Volume Discount Drugs	5912-05	Pharmacies	2834-04	Drug Millers	5122-03	Pharmaceutical Products-Wholesale
W T Farley Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Waldron Enterprises Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3843-98	Dental Equipment & Supplies-Mfrs	5047-19	Dental Equipment & Supplies-Wholesale
Walsworth Medical Furniture	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol
Walters, S Inc	3851	Ophthalmic Goods				
Water Technologies	2836	Biological Prdts, Exc Diagnostic Substances				
Weider Health & Fitness	2721-02	Publishers-Periodical	2721-01	Publishers-Magazine	2834-98	Pharmaceutical Preparation
Wel Industries Inc	3841-01	Surgical Instruments-Manufacturers	5047-04	Physicians & Surgeons Equip & Supls-Whol		
Westco Chemical Inc	5169-16	Chemicals (Wholesale)	2819-98	Industrial Inorganic Chmcls NEC (Mfrs)	2834-98	Pharmaceutical Preparation
Western Purifier Co	7389-84	Water Treatment Equip Svc & Supls	3841-04	Physicians & Surgeons Equip & Supls-Mfrs	5074-06	Plumbing Fixtures & Supplies-Wholesale
Western Systems Research						
Wheelcare Inc	5047-25	Wheel Chairs-Wholesale	3841-04	Physicians & Surgeons Equip & Supls-Mfrs		
Whitmor-Wirenetics	5051-02	Wire (Wholesale)	3357-98	Drawing/Insulating-Nonferrous Wire (Mfr)	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
Wilson Optical Laboratory	3851-03	Optical Goods-Manufacturers	5048-01	Optical Goods-Wholesale		
Winspan Inc	3841-04	Physicians & Surgeons Equip & Supls-Mfrs				
Wmw Assoc	5047-20	X-Ray Apparatus & Supplies (Wholesale)	3844-01	X-Ray Apparatus & Supplies-Manufacturers		
Woodard Laboratories	8731-01	Laboratories-Research & Development				
World Circuit Technology Inc	3672-02	Circuit Boards-Manufacturers	3679-01	Electronic Equipment & Supplies-Mfrs	3841-04	Physicians & Surgeons Equip & Supls-Mfrs
World Optics Inc	5047-04	Physicians & Surgeons Equip & Supls-Whol	3841-01	Surgical Instruments-Manufacturers		
Xelent X-Ray	3844-98	X-Ray Apparatus & Tubes (Manufacturers)	7699-71	X-Ray Apparatus-Repairing		
Xencor	8731-26	Biotechnology Products & Services				
Zetetix	8731-01	Laboratories-Research & Development				
Zierhut Design Associates	8731	Commercial Physical & Biological Research				

Biotechnical Employees

Location of Community Colleges - Occupational Centers - State University

1. Los Angeles Valley College
2. Los Angeles Mission College
3. Los Angeles Pierce College
4. Glendale Community College
5. Cal State University Northridge
6. West Valley Occupational Ctr
7. North Valley Occupational Ctr

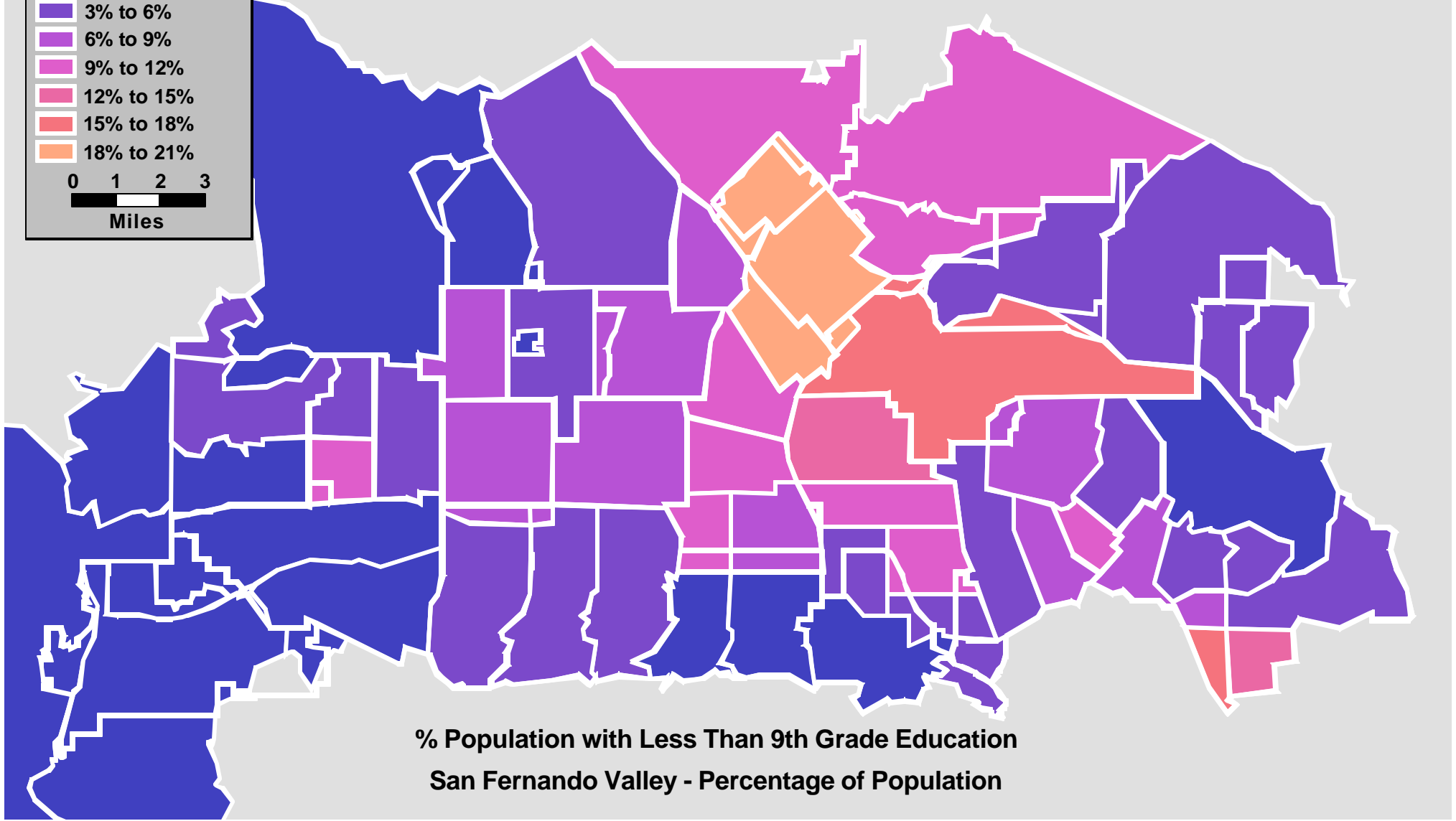
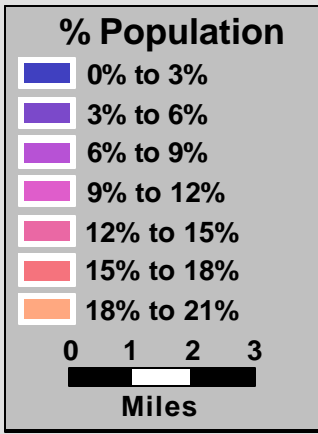


Biotechnical Employees Workplace Distribution by Zip Code

San Fernando Valley - Count Estimates

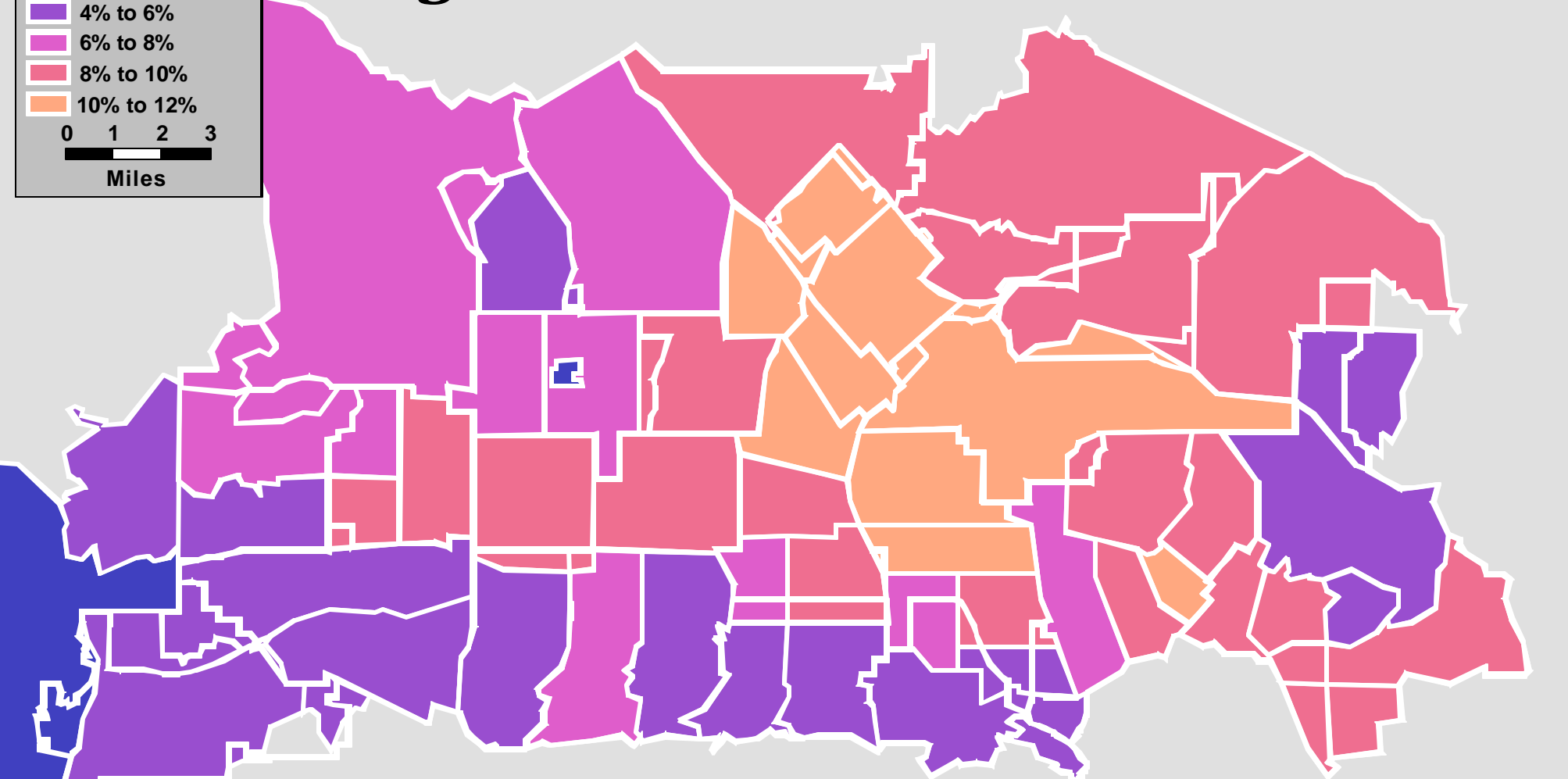
**EDUCATIONAL ATTAINMENT
IN THE
SAN FERNANDO VALLEY**

Less Than 9th Grade Education



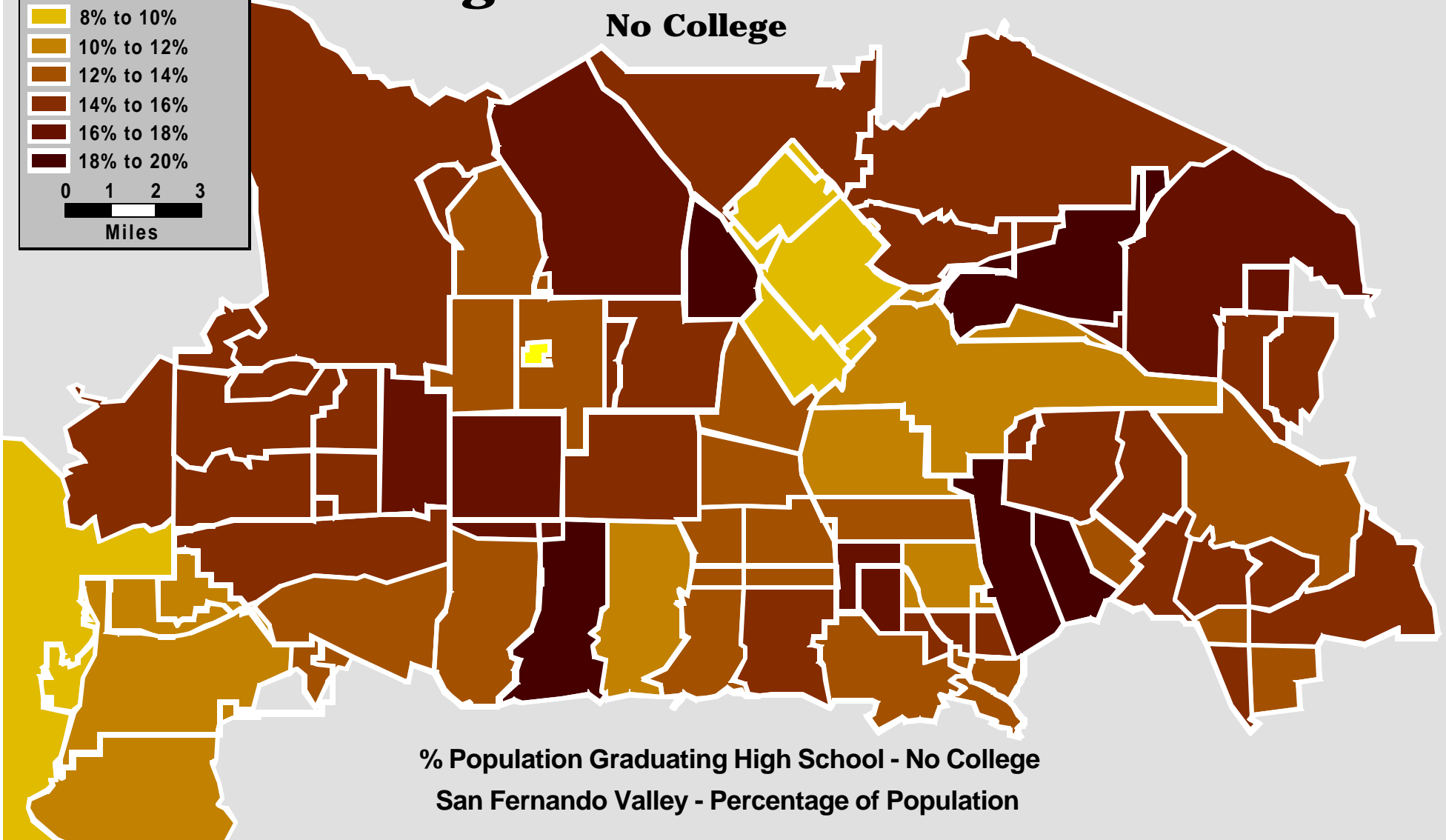
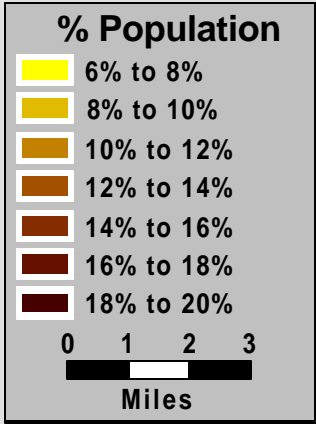
**% Population with Less Than 9th Grade Education
San Fernando Valley - Percentage of Population**

High School Non-Graduates

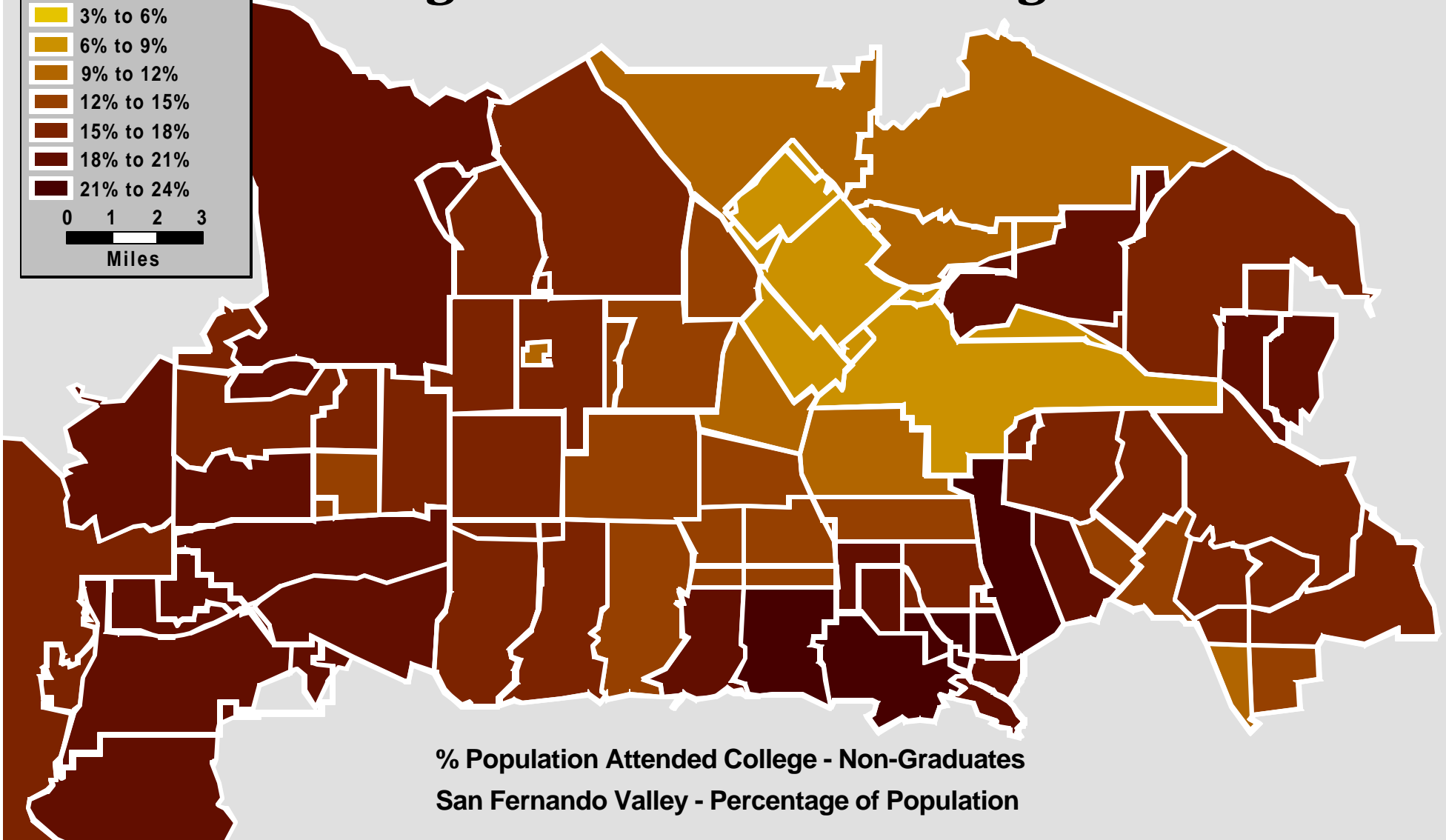
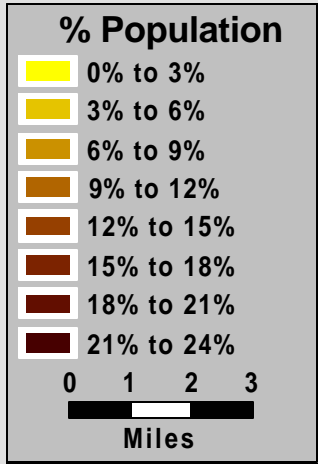


% Population Attending High School - Non-Graduates
San Fernando Valley - Percentage of Population

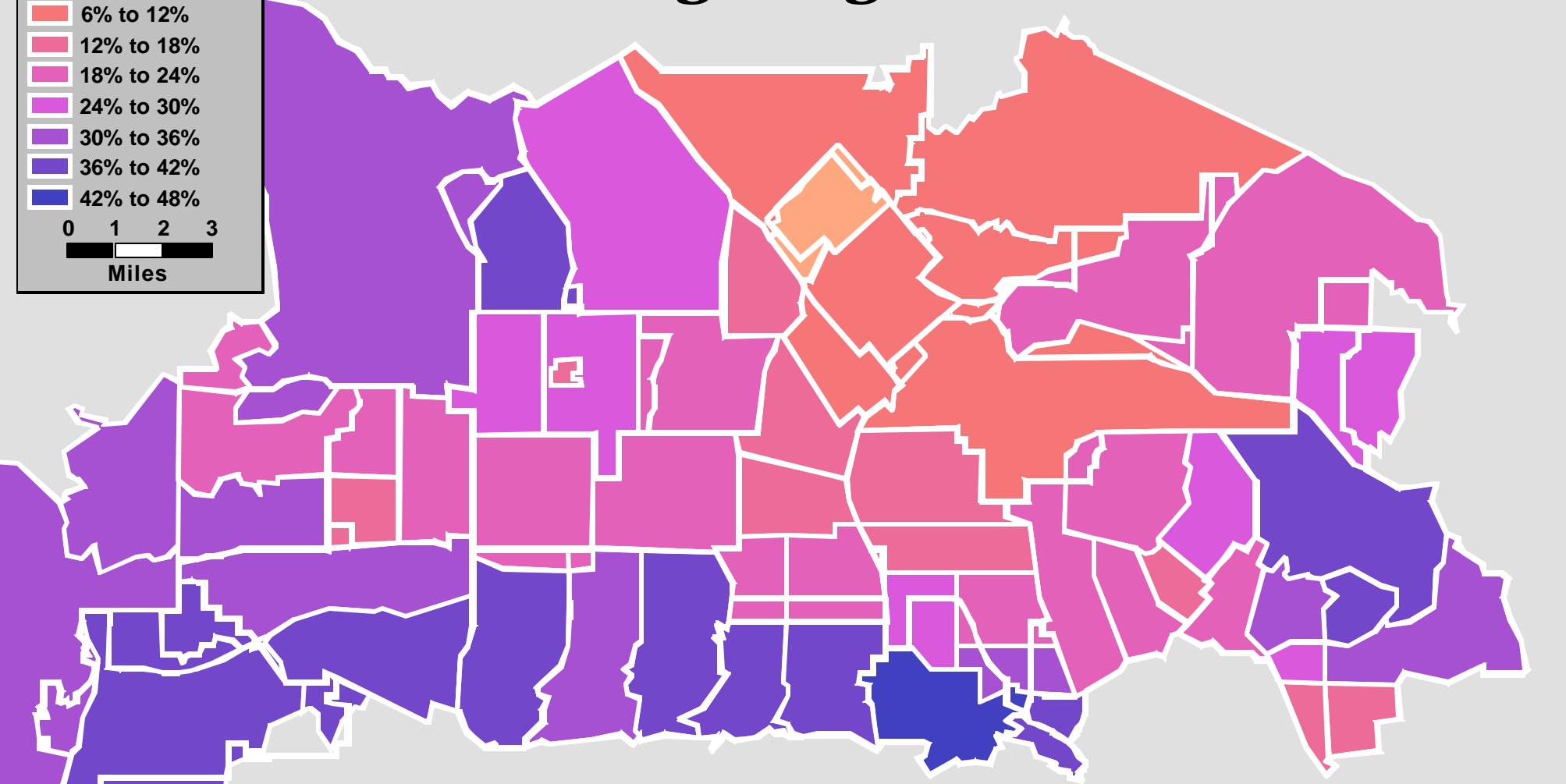
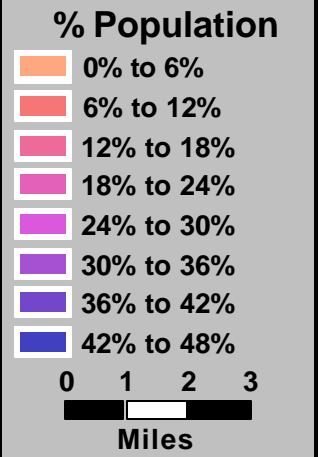
High School Graduates No College



College Students Without Degrees

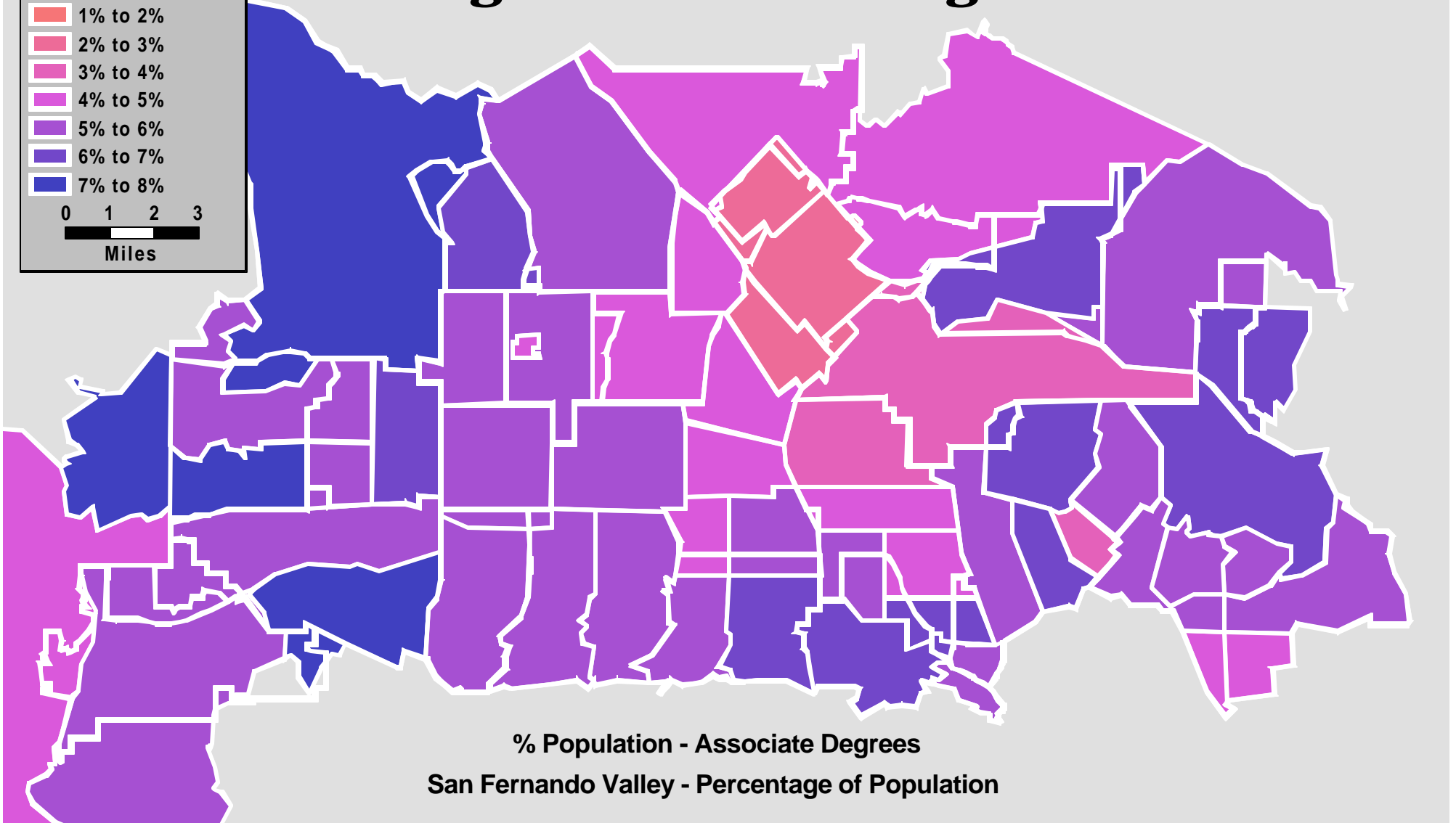
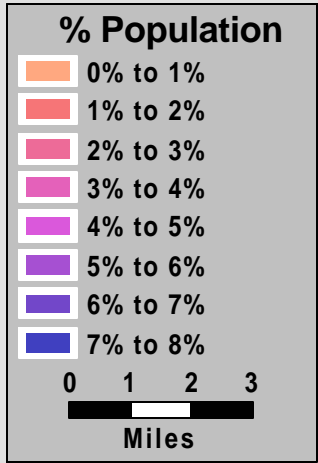


College Degrees

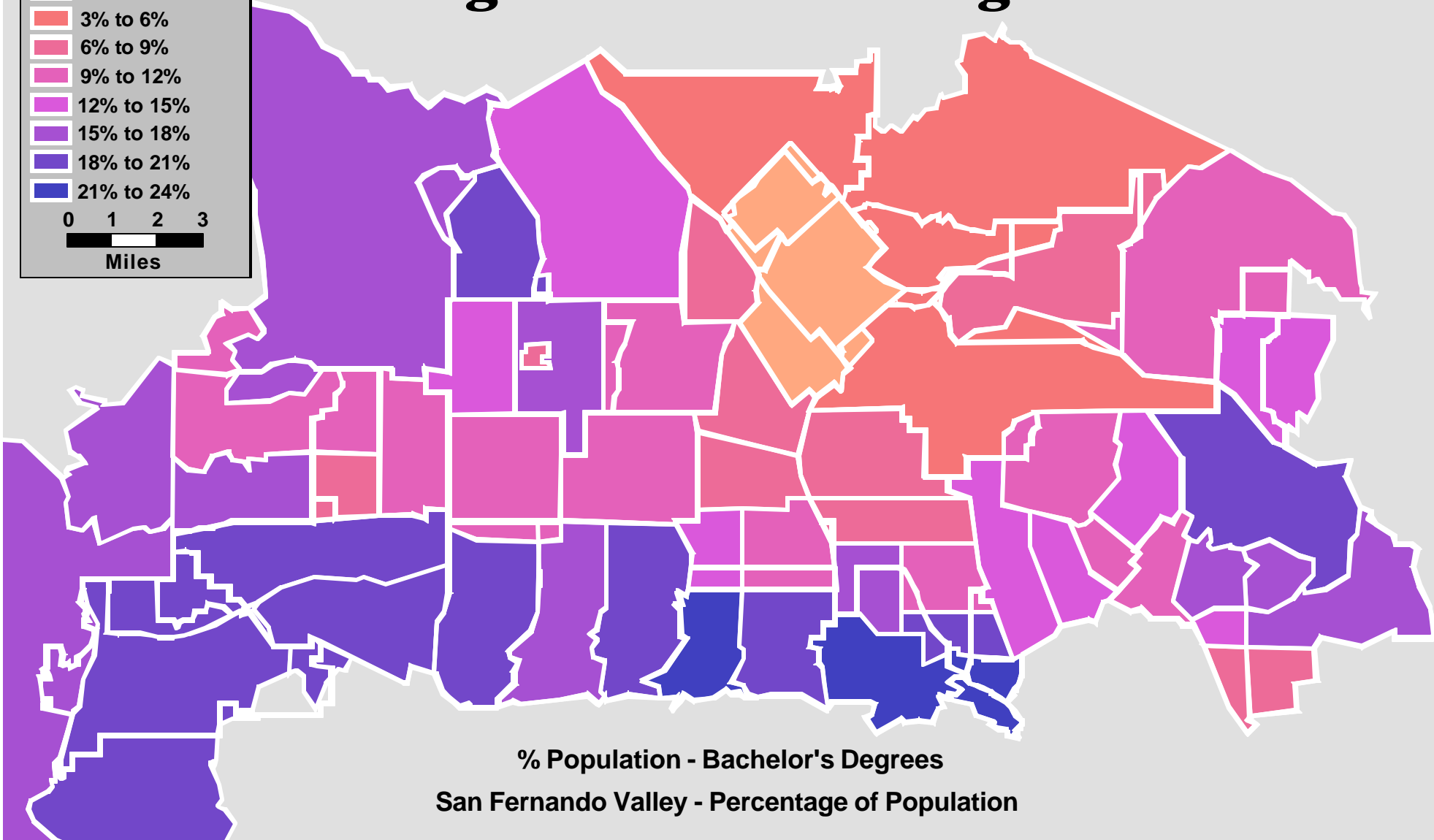
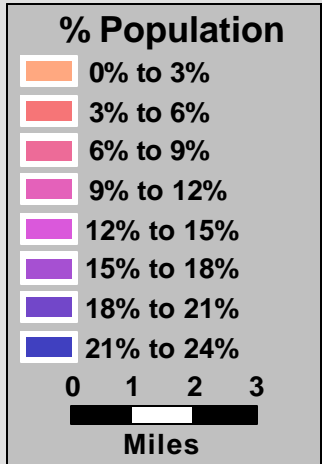


% Population - College Degrees
San Fernando Valley - Percentage of Population

College - Associate Degrees



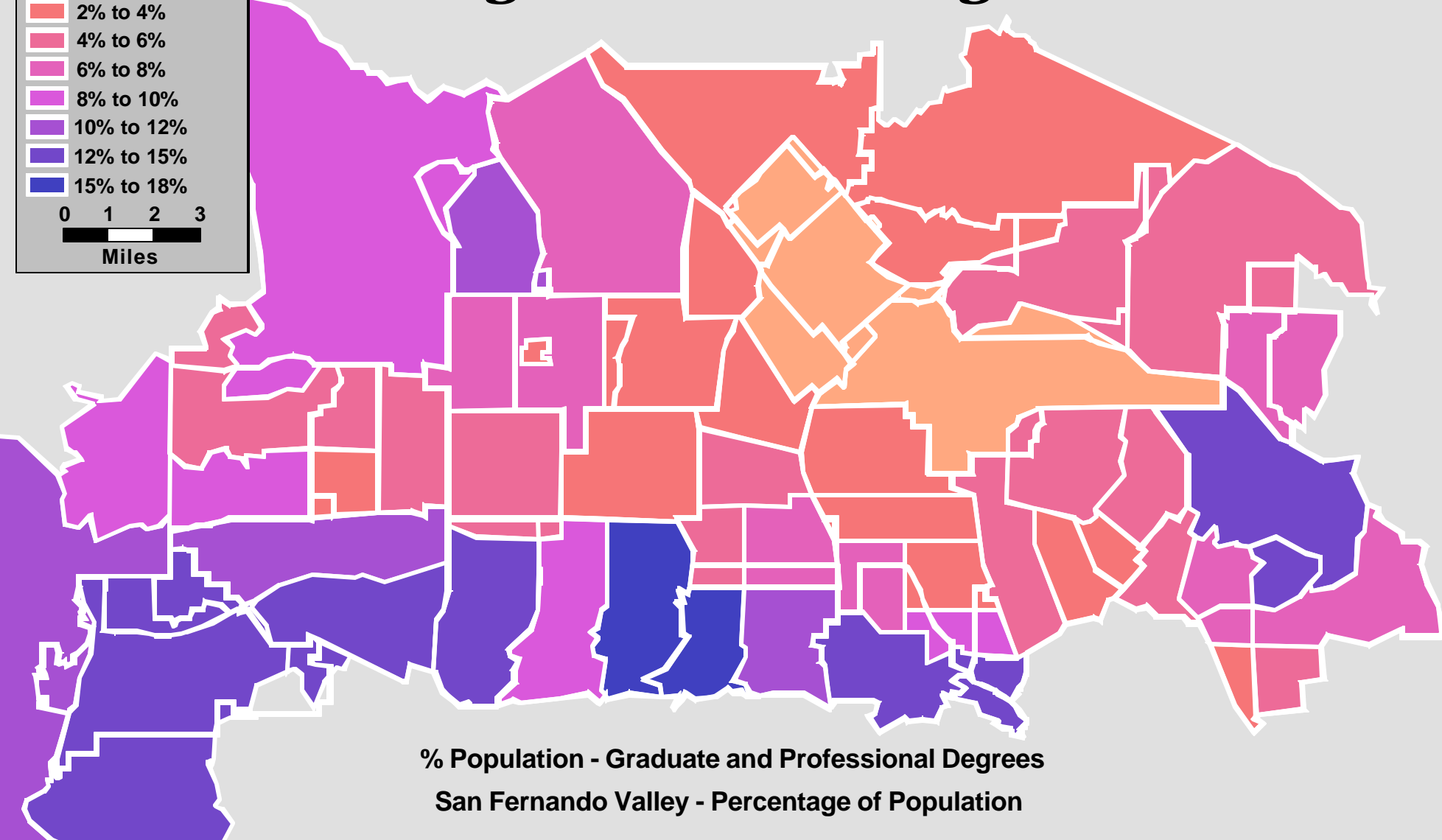
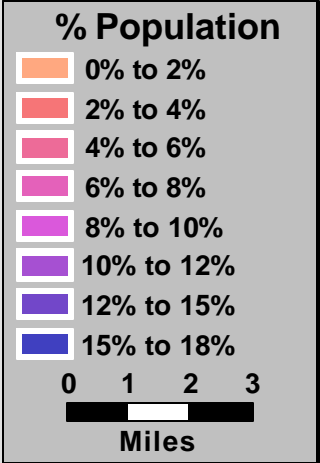
College - Bachelor's Degrees



% Population - Bachelor's Degrees

San Fernando Valley - Percentage of Population

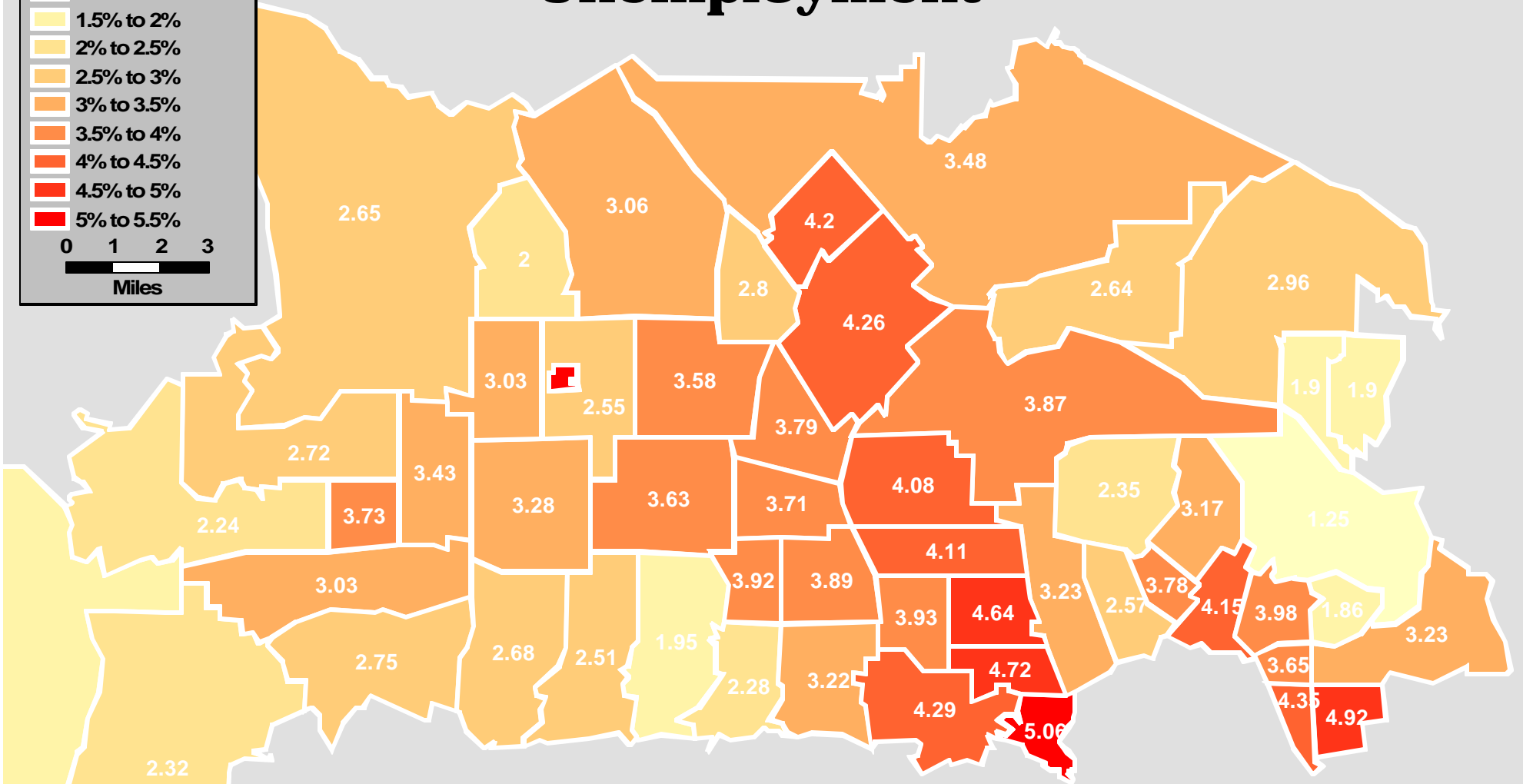
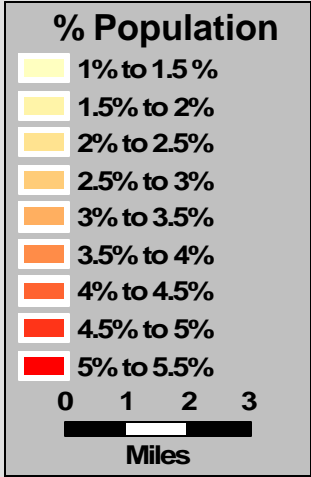
College - Graduate Degrees



% Population - Graduate and Professional Degrees
San Fernando Valley - Percentage of Population

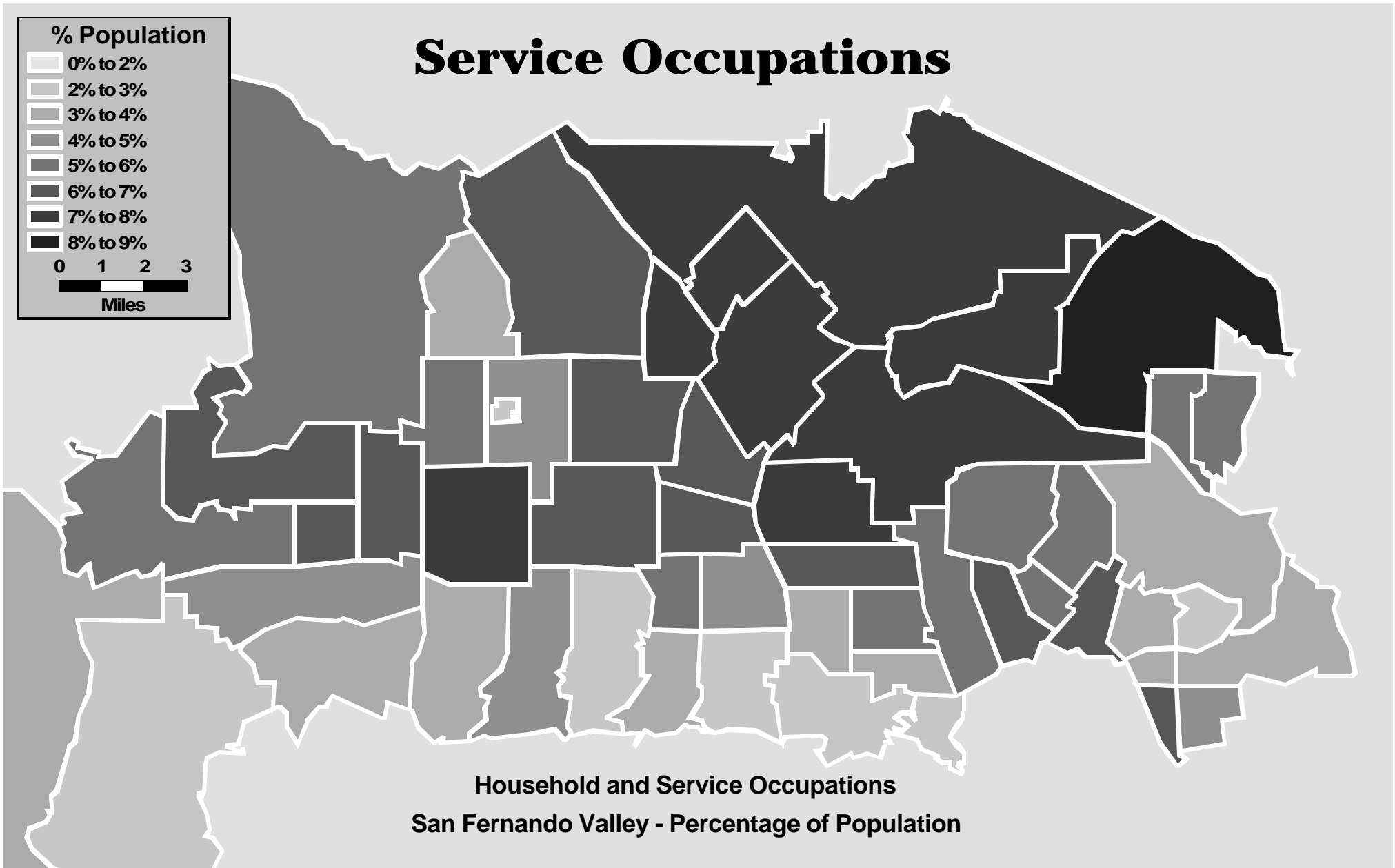
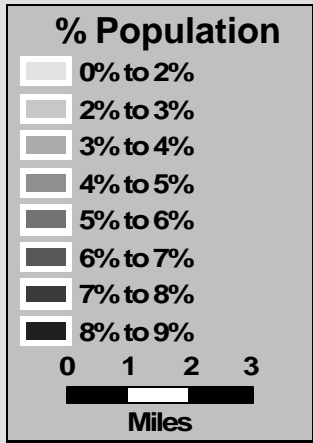
**OCCUPATIONS
IN THE
SAN FERNANDO VALLEY**

Unemployment



Percent of Labor Force - Unemployed
San Fernando Valley - Percentage of Population

Service Occupations



Household and Service Occupations
San Fernando Valley - Percentage of Population

Manufacturing & Labor Occ.

% Population

- 0% to 2%
- 2% to 4%
- 4% to 6%
- 6% to 8%
- 8% to 10%
- 10% to 12%
- 12% to 14%

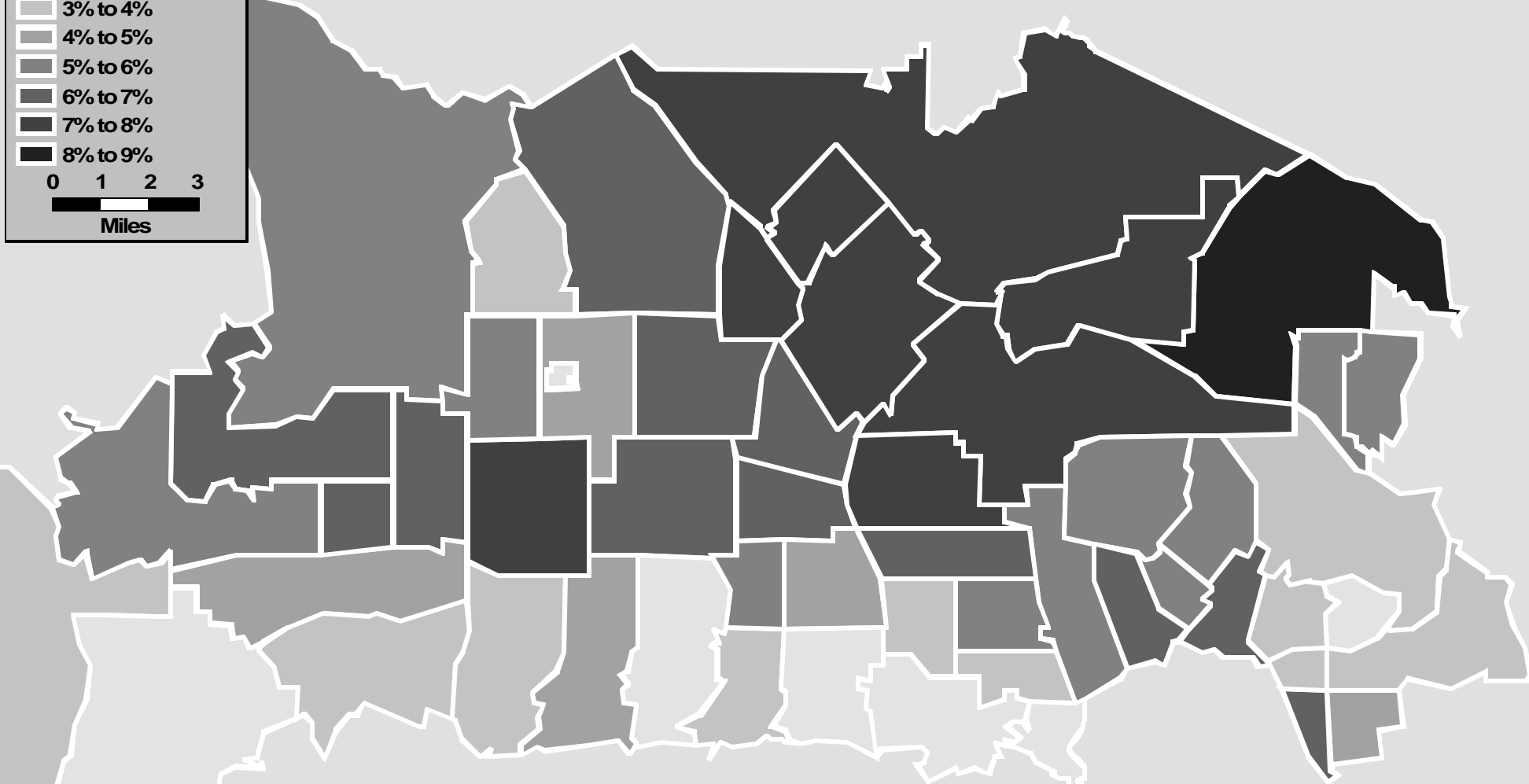
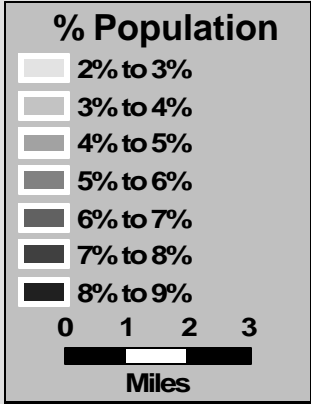
0 1 2 3



Miles

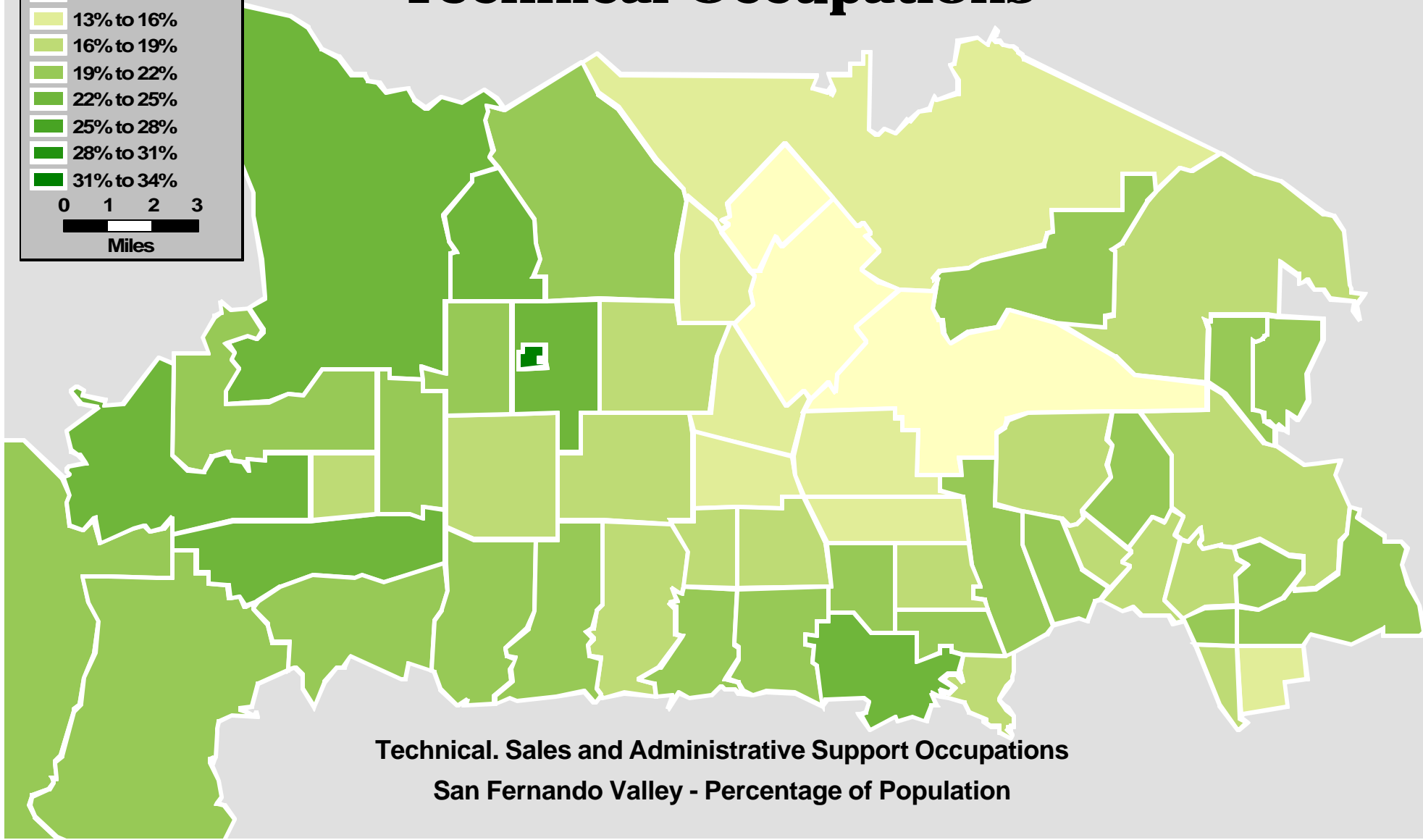
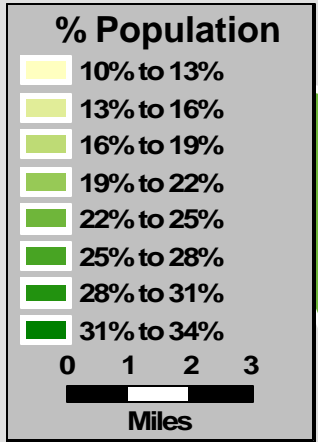


Crafts & Precision Occ.



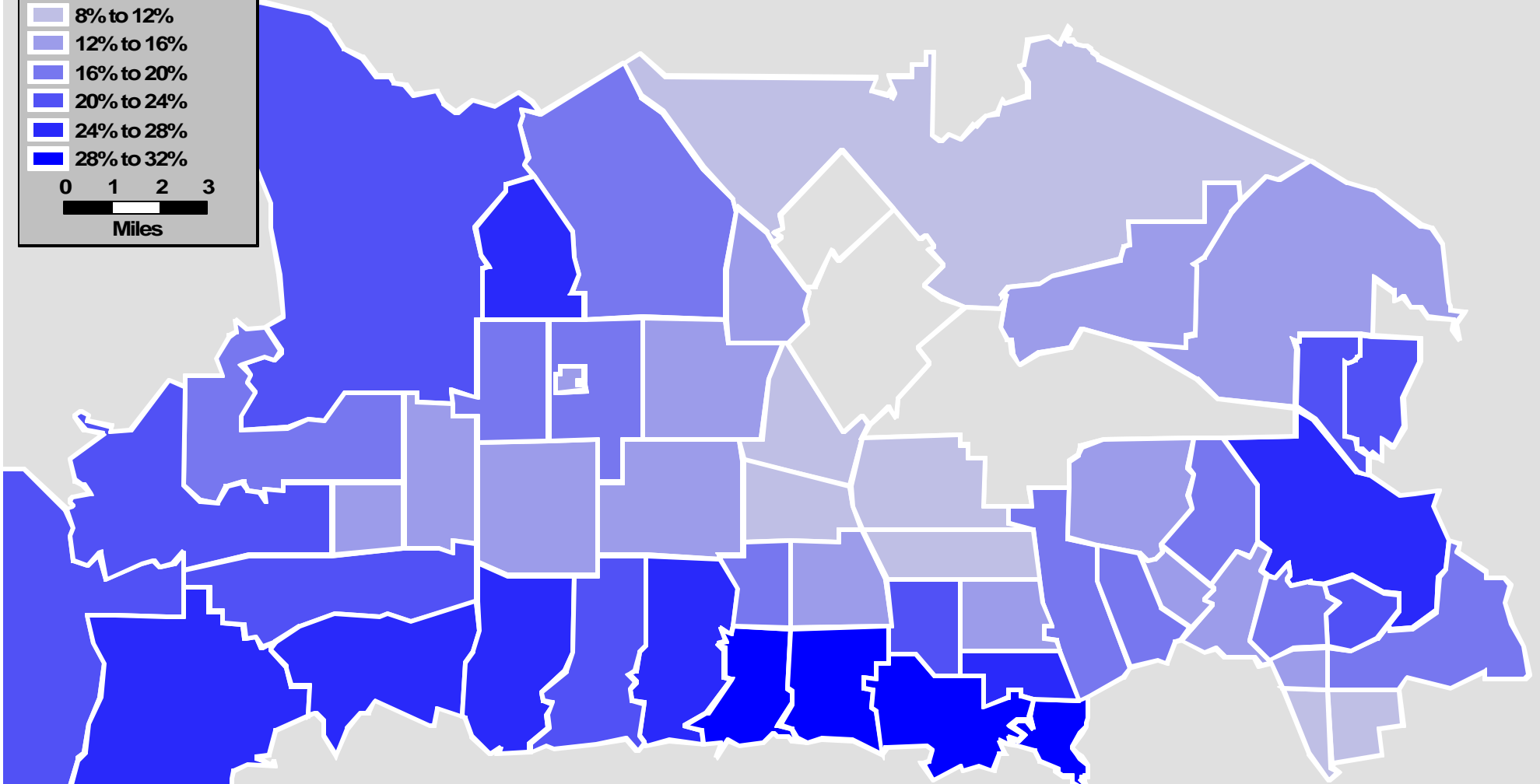
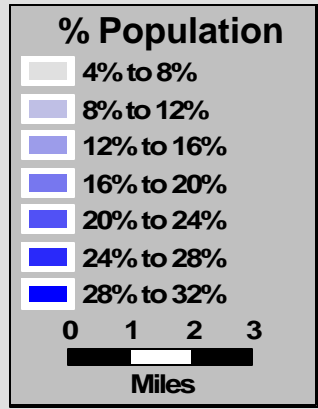
Precision Production/Craft/Repair Occupations
San Fernando Valley - Percentage of Population

Technical Occupations



Technical. Sales and Administrative Support Occupations
San Fernando Valley - Percentage of Population

Professionals & Executives



**Executive/Administrative/Managerial and Professional Specialty Occupations
San Fernando Valley - Percentage of Population**

METHODOLOGY – NOTES

Biotechnology-Biomedical Firms

For purposes of Biotechnology-Biomedical firm identification, criteria included the following SIC Codes, which were refined through verification by product/service descriptions. Those firms with no bio or medical description were filtered.

Sources: InfoUSA, BusinessUSA/ABI, Harris InfoSource, So. California Biomedical Council

Geographic Criteria:

San Fernando Valley Extended Area: Mulholland Drive on the south, Los Angeles County line on the north, Pasadena inclusive on the east, and Camarillo inclusive on the west.

San Fernando Valley: Mulholland drive on the south, Sylmar inclusive on the north, Glendale inclusive on the east, and Calabasas inclusive on the west.

Search Criteria

InfoUSA Extended San Fernando Valley

Area Cities/Communities:

CA AGOURA HILLS
CA ARLETA
CA BURBANK
CA CALABASAS
CA CAMARILLO
CA CANOGA PARK
CA CASTAIC
CA CHATSWORTH
CA ENCINO
CA FILLMORE
CA GLENDALE
CA GRANADA HILLS
CA HIDDEN HILLS
CA LAKE HUGHES
CA LANCASTER
CA MISSION HILLS

CA MOORPARK
CA NEWBURY PARK
CA NORTH HILLS
CA NORTH HOLLYWOOD
CA NORTHRIDGE
CA OAK PARK
CA PACOIMA
CA PANORAMA CITY
CA PASADENA
CA QUARTZ HILL
CA RESEDA
CA SAN FERNANDO
CA SANTA CLARITA
CA SAUGUS
CA SEPULVEDA
CA SHERMAN OAKS
CA SIMI VALLEY
CA SOMIS
CA STEVENSON RANCH
CA STUDIO CITY

CA SUN VALLEY
CA SUNLAND
CA SYLMAR
CA TARZANA
CA THOUSAND OAKS
CA TOLUCA LAKE
CA TOPANGA
CA TUJUNGA
CA UNIVERSAL CITY
CA VALENCIA
CA VALLEY VILLAGE
CA VAN NUYS
CA WEST HILLS
CA WESTLAKE VILLAGE
CA WINNETKA
CA WOODLAND HILLS

ZIP Codes:

91040 CA SUNLAND
91041 CA SUNLAND

91042 CA TUJUNGA
91043 CA TUJUNGA
91201 CA GLENDALE
91202 CA GLENDALE
91203 CA GLENDALE
91204 CA GLENDALE
91205 CA GLENDALE
91206 CA GLENDALE
91207 CA GLENDALE
91208 CA GLENDALE
91209 CA GLENDALE
91210 CA GLENDALE
91214 CA GLENDALE
91214 CA LA CRESCENTA
91221 CA GLENDALE
91222 CA GLENDALE
91224 CA LA CRESCENTA
91225 CA GLENDALE
91226 CA GLENDALE
91301 CA AGOURA HILLS
91301 CA CORNELL
91302 CA CALABASAS
91302 CA HIDDEN HILLS
91303 CA CANOGA PARK
91304 CA CANOGA PARK
91304 CA WEST HILLS
91305 CA CANOGA PARK
91306 CA CANOGA PARK
91306 CA WINNETKA
91307 CA CANOGA PARK
91307 CA WEST HILLS
91308 CA CANOGA PARK
91308 CA WEST HILLS
91309 CA CANOGA PARK
91311 CA CHATSWORTH
91313 CA CHATSWORTH
91316 CA ENCINO

91324 CA NORTHRIDGE
91325 CA NORTHRIDGE
91326 CA NORTHRIDGE
91327 CA NORTHRIDGE
91328 CA NORTHRIDGE
91329 CA NORTHRIDGE
91330 CA NORTHRIDGE
91331 CA ARLETA
91331 CA PACOIMA
91333 CA PACOIMA
91335 CA RESEDA
91337 CA RESEDA
91340 CA SAN FERNANDO
91342 CA LAKE VIEW TER
91342 CA SYLMAR
91343 CA NORTH HILLS
91343 CA NORTHRIDGE
91343 CA SEPULVEDA
91344 CA GRANADA HILLS
91344 CA SAN FERNANDO
91345 CA MISSION HILLS
91346 CA MISSION HILLS
91352 CA SUN VALLEY
91353 CA SUN VALLEY
91356 CA TARZANA
91357 CA TARZANA
91364 CA WOODLAND HILLS
91365 CA WOODLAND HILLS
91367 CA WOODLAND HILLS
91371 CA WOODLAND HILLS
91372 CA CALABASAS
91392 CA SYLMAR
91393 CA NORTH HILLS
91393 CA SEPULVEDA
91394 CA GRANADA HILLS
91395 CA MISSION HILLS
91396 CA WINNETKA

91401 CA SHERMAN OAKS
91401 CA VAN NUYS
91402 CA PANORAMA CITY
91402 CA VAN NUYS
91403 CA SHERMAN OAKS
91403 CA VAN NUYS
91404 CA VAN NUYS
91405 CA VAN NUYS
91406 CA VAN NUYS
91407 CA VAN NUYS
91408 CA VAN NUYS
91409 CA VAN NUYS
91411 CA SHERMAN OAKS
91411 CA VAN NUYS
91412 CA PANORAMA CITY
91413 CA SHERMAN OAKS
91416 CA ENCINO
91423 CA SHERMAN OAKS
91426 CA ENCINO
91436 CA ENCINO
91501 CA BURBANK
91502 CA BURBANK
91503 CA BURBANK
91504 CA BURBANK
91505 CA BURBANK
91506 CA BURBANK
91507 CA BURBANK
91508 CA BURBANK
91510 CA BURBANK
91521 CA BURBANK
91523 CA BURBANK
91601 CA NORTH HOLLYWOOD
91602 CA NORTH HOLLYWOOD
91602 CA STUDIO CITY
91602 CA TOLUCA LAKE
91603 CA NORTH HOLLYWOOD
91604 CA STUDIO CITY

91605 CA NORTH HOLLYWOOD
91606 CA NORTH HOLLYWOOD
91607 CA NORTH HOLLYWOOD
91607 CA STUDIO CITY
91607 CA VALLEY VILLAGE
91608 CA UNIVERSAL CITY
91609 CA NORTH HOLLYWOOD
91610 CA TOLUCA LAKE
91614 CA STUDIO CITY
91615 CA NORTH HOLLYWOOD
91617 CA NORTH HOLLYWOOD
91618 CA UNIVERSAL CITY

SIC Codes:

2819 INDUSTRIAL INORGANIC
CHEMICALS NEC
2833 MEDICINAL CHEMICALS &
BOTANICAL PRODS
2834 PHARMACEUTICAL
PREPARATIONS
2835 IN VITRO/ IN VIVO DIAGNOSTIC
SUBSTANCES
2836 BIOLOGICAL PRODUCTS- EX
DIAGNOSTIC
2869 INDUSTRIAL ORGANIC
CHEMICALS NEC
2879 PESTICIDES & AGRICULTURAL
CHEMICALS NEC
3069 FABRICATED RUBBER PRODUCTS
NEC
3221 GLASS CONTAINERS
3559 SPECIAL INDUSTRY MACHINERY
NEC
3826 LABORATORY ANALYTICAL
INSTRUMENTS
3827 OPTICAL INSTRUMENTS &
LENSES

3841 SURGICAL MEDICAL
INSTRUMENTS/ APPARATUS
3842 ORTHOPEDIC & PROSTHETIC
APPLIANCES
3843 DENTAL EQUIPMENT & SUPPLIES
3844 X- RAY APPARATUS & TUBES
3845 ELECTROMEDICAL/
THERAPEUTIC APPARATUS
3851 OPHTHALMIC GOODS
8731-01 LABORATORIES- RESEARCH &
DEVELOPMENT
8731-02 EXPERIMENTAL WORK
8731-05 HUMAN FACTORS- RESEARCH
& DEVELOPMENT
8731-08 PHARMACEUTICAL RESEARCH
LABORATORIES
8731-09 TESTING
8731-10 TECHNOLOGY ASSISTANCE
PROGRAMS
8731-12 ENGINEERS- BIOMEDICAL
8731-15 GOVT- COML PHYSICAL/
BIOLOGICAL RESEARCH
8731-19 AGRICULTURAL RESEARCH
8731-22 LABORATORIES-
AGRICULTURAL
8731-23 LABORATORIES- MARINE
BIOLOGICAL
8731-24 LABORATORIES-
BIOCHEMICAL
8731-26 BIOTECHNOLOGY PRODUCTS
& SERVICES
8731-27 BIOLOGY CONSULTANTS
8731-28 CHEMICAL RESEARCH
8731-30 WETLANDS CONSULTANTS
8731-31 ERGONOMICS
8731-32 TOXICOLOGISTS
8731-43 BREATH DEODORANTS

8733-04 MEDICAL RESEARCH

Harris InfoSource	2836	3843
Area Code:	2869	3844
818	2879	3845
626	3069	3851
805	3221	8731
SIC:	3559	8733
2819	3826	8734
2833	3827	
2834	3841	
2835	3842	

Educational Attainment – Source: Economic Alliance of the San Fernando Valley, Developed from 1999 estimates and projections by Claritas. The data on schooling completed reflects self-reported information on the highest level of school completed, or the highest degree received. High school graduates included those who received their diplomas or the equivalent (GED for example), and did not attend college. Graduate/Professional degrees include those in medicine, dentistry, law, pharmacy, chiropractic and the like. Degrees from vocational, trade or business schools were not included unless they were college level degrees. Degrees from barber schools, cosmetology schools and the like were specifically excluded from the professional school category.

Occupation and Industry - Source: Economic Alliance of the San Fernando Valley, Developed from 1999 estimates and projections by Claritas. The occupational classification system developed for the 1990 census consists of 500 specific occupational categories for employed persons arranged into six summary and 13 major occupational groups. Some occupation groups are related closely to certain industries. Operators of transportation equipment, farm operators and workers, and private household workers account for major portions of their respective industries of transportation, agriculture, and private households. However, the industry categories include persons in occupations. For example, persons employed in agriculture include truck drivers and bookkeepers; persons employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

Population Census Data – Source: Economic Alliance of the San Fernando Valley, Claritas, 1999, U.S. Census Bureau

FOOTNOTES / BIBLIOGRAPHY

RESOURCES

Alfred E. Mann Institute at the University of Southern California
Los Angeles, California

Amgen, Thousand Oaks, California

California Institute of Technology, Pasadena, California

California Workforce Association, Sacramento, California

Economic Alliance of the San Fernando Valley,
Sherman Oaks, California,
Bruce D. Ackerman, President/CEO

Glendale Community College, Glendale, California
Kenneth Patton, Dean, Career Education/
Workforce and Economic Development

Los Angeles Mission College, Sylmar, California

Los Angeles Pierce College, Woodland Hills, California

Los Angeles Valley College, Van Nuys, California
Tyree Wieder, President

MiniMed, Northridge, California

Precision Dynamics, San Fernando, California
Carolyn Corpolongo

Southern California Biomedical Council, Los Angeles, California
Ahmed A. Enany, Executive Director

The Training Alliance, Sherman Oaks, California,
Kenn Phillips

BIBLIOGRAPHY

Biotechnicians: Employment Projections and Skills Requirements,
BioQuest, Inc., San Francisco, California, 1993

Biotechnology Industry Training Needs, The Resource Group, Riverside,
California, 1995

Biotechnology: The Choice for Your Future, Biotechnology Industry
Organization, and Washington, D.C., 1991.

"California Bioscience Industry," *Bay Area Bioscience Reports*, spring 1993,
Bay Area Bioscience Center, Oakland, California

California Colleges and Universities-1995, California Postsecondary
Education Commission, Sacramento, California, 1995.

Cony, Ann, "Calgene Competitor Patiently Waiting for the Ripe Moment,"
Sacramento Bee, October 6, 1993.

Dahms, Stephen, Ph.D., "Workforce Development:
A Key to Biotech Regional Advantage," *Bio/Medical Synergies*
(Los Angeles: Southern California Biomedical Council, Summer 2000)

The Economic Contributions of the Biotechnology Industry to the U.S. Economy,
Ernst & Young, Biotechnology Industry organization; Washington DC,
May 2000), p.2

The Economist, "Predictors of Global Famine Have Had to Eat Their Words,"
Sacramento Bee, June 18, 1995.

The Emerging Bioscience Skills Gap, Bay Area Bioscience Center and the Bay
Area Council, Oakland, California, 1991.

Gateway to the Future: Skill Standards for the Bioscience Industry,
Education Development Center, Inc., Newton, Mass., 1995

Hall, Carl T., "Making Friends With Frankenfish," *San Francisco Examiner and
Chronicle*, June 18, 1995.

Hall, Carl. T., "Chiron Leads The Rebound in Biotechnology," *San Francisco
Chronicle*, August 14, 1955.

Biomanufacturing in Massachusetts: An Assessment and Educational Analysis,
Minuteman Regional Vocational Technical School District Biotechnology

Task Force, Massachusetts State Department of Education,
Lexington, Mass., 1992

Seymour, Patricia, *Opportunities in Biotechnology*, New York Biotechnology
Association, Inc., Stony Brook, N.Y., 1994.

State of California, Employment Development Department,
Labor Market Information Division, Information Services Group

Yund, Mary Alice, *Bioscience White Paper*, NOVA Private Industry Council,
Sunnyvale, Calif., 1995.

ENDNOTES

¹ *The Economic Contributions of the Biotechnology Industry to the U.S. Economy*, Ernst & Young, (Biotechnology Industry organization: Washington DC, May 2000), p.2

² "Industry Clusters in Los Angeles" *The Economic Edge* (Los Angeles: LAEDC Winter 2001)

³ Source: Amgen, Thousand Oaks, California

⁴ Source: Minimed, Northridge, California

⁵ Alfred E. Mann Institute for Biomedical Engineering, University of Southern California, Los Angeles

⁶ "Baxter Has Big Plans for Biotechnology," *Los Angeles Times*, Sept 1, 1999, Business Section, p. C-1

⁷ Baxter Hyland Immuno, Glendale, California

⁸ Source: Office of the Mayor, City of Los Angeles

⁹ Source: U.S. Dept. of Labor and Milken Institute, Santa Monica California

¹⁰ Source: MISER

¹¹ Source: (Milken Institute)

¹² Source: National Science Foundation

¹³ Source: U.S. Dept. of Labor and (Milken Institute)

¹⁴ Source: U.S. Patent and Trademark office

-
- ¹⁵ Molecular biology and microbiology inventions are those classified by the US Patent and Trademark Office (USPTO) under technology class # 435. Patents having 435 as their primary classification are assigned geographically based on the residence of the first-named inventor. Source: U.S. Patent and Trademark Office, So. California Biomedical Council.
- ¹⁶ Source: U.S. Dept. of Labor and (Milken Institute)
- ¹⁷ Source: Ernst and Young Biotech Industry Report
- ¹⁸ The Economic Development Corporation of Los Angeles County, *6X: The Guide to the Tech Coast of Southern California*, Los Angeles: 1977, p.109
- ¹⁹ (Econ Dev Corp 109)
- ²⁰ Biopharmaceutical Business in California, "Technology Review 81/99"
- ²¹ Source: Biotechnology Industry Organization
- ²² Monsanto Company, 2000, Ref. 3249
- ²³ Source: Biotech Industry Organization, Member Survey
- ²⁴ Source: Commodities - Survey of BIO member companies. All figures are estimates. Source: World and Country Estimates - International Server for the Acquisition of Agri-biotech Applications (ISAAA).
- ²⁵ Source: The Brutlag Bioinformatics Group, Stanford University, Stanford, California
- ²⁶ "Wave of Biotech Start-Ups Expected" *Los Angeles Times*, February 15, 2001, Business Section, p. C-1
- ²⁷ Source: California Employment Development Dept. (EDD) Labor Market Information Division.
- ²⁸ *Biomedical Synergies*, SCBC Summer 2000
- ²⁹ "Schools to Salute Amgen Assistance," *Los Angeles Times*, Ventura County Edition, Dec 7, 2000, Metro Section p. B-3
- ³⁰ (Amgen), Career Center
- ³¹ California State University San Francisco, California Articulation Number (CAN) Web Site, 1999

³² Source: The Training Alliance, California Community Colleges, San Fernando Valley, California

³³ Source: "California Occupational Guides," *Labor Market Information*, California Employment Development Department

³⁴ (EDD)

³⁵ (EDD), California Occupational Information Committee - Abstracted

³⁶ Source: COICC – California Occupational Information Coordinating Committee

³⁷ Information supplied courtesy of (COICC)

Appendix A

Biotechnology

California Occupational Guide Number 2007
1996 (Condensed)

Why are these jobs Emerging?

They fit the categories of:

- New occupations created by technological innovations
- Existing occupations requiring new high technological skills
- New occupations created as offshoots of existing occupations

"Biotechnology is a promising field that is predicted to be one of the pivotal forces of the 21st Century. Today it is saving lives through the development of breakthrough drugs and improving the quality of life with new agriculture and environmental products."

Biotechnology Industry Organization

HIGHLIGHTS

There are over 1,300 companies engaged in biotechnology in the United States and over 30 percent of them are located in California.

In 1992, there were about 80,000 people employed nationwide in the biotechnology industry. By the end of the decade over 200,000 will be employed in biotechnology according to the Biotechnology Industry Organization.

In California, some have predicted that up to 20,000 new jobs will be created in biotechnology companies by the year 2000. Most of these jobs will be in San Diego, Orange and Los Angeles Counties and in the San Francisco Bay Area.

Most growth is expected in the areas of diagnostics and therapeutics since research and development activity and manufacturing have been particularly high in these areas compared to other sectors of the biotechnology industry.

High turnover and attrition in some companies could mean thousands of job openings during the 1990s.

Opportunities exist for workers who have completed their associate and bachelor degrees with emphasis in the biological and laboratory sciences or technology.

INTRODUCTION

These are examples of a few of the many products and processes developed through biotechnology:

Tomatoes that can ripen on the vine, stay fresh while they are shipped to distant produce markets, and still taste good without falling apart in your hands.

Crops that can grow in the previously infertile acid soil of a section of Latin America. This area covers about 800,000 square miles or slightly larger than the size of Mexico.

New drugs which used in combination with existing ones will lower the amount of acquired immune deficiency syndrome (AIDS) viruses in blood.

An human immunodeficiency virus (HIV) testing kit that can be used in the home.

Potential treatment for Lou Gehrig's disease.

Biological processes that will alter a tree's growth cycle so that it can be more easily turned into paper while significantly reducing the paper mill's energy and chemical consumption.

Methods used to capture and convict criminals by identifying an individual's unique deoxyribonucleic acid (DNA) characteristics (genetic profiling).

Corn which produces its own natural pesticides.

One common definition of biotechnology is "the use of living cells and materials to develop and manufacture products used in improving human health, animal health, agriculture, and the environment." Since this definition is quite broad, additional examples on the following pages may help provide a better understanding of biotechnology, its origins, and the industry's current status in California.

BIOTECHNOLOGY

Biological methods such as fermentation, cross-breeding, and hybridization have been long used for producing wine, bread and beer, the breeding of animals, and the improvement of farm crops. Scientists suspected for years that nucleic acid in cells carried a major role in cell inheritance, but it was not until the early 1940s that they were able to prove by experiments at the Rockefeller Institute that DNA has a direct role in passing genetic information in all living cells.

Biotechnology was born in the 1950s with the discovery of the structure and function of the DNA molecule by James Watson and Francis Crick at the University of Cambridge in England.

The DNA molecule contains the genetic information which governs the transmission of hereditary traits from one generation to the next of most living systems. With this knowledge the scientists were able to unlock the mystery of how genetic information was encoded and transmitted. The resulting development of molecular and cellular biology has helped create the tools and technologies for altering genetic information in plants and animals using living cells.

More about Biotechnology

Biotechnology also can be seen as the commercial application of biological knowledge and modern technologies to manufacture products which are used in

agriculture, medical treatment and diagnosis, environmental cleanup, cosmetics, and many other areas.

More specifically, scientists have developed genetically engineered drugs to dissolve blood clots to prevent heart attacks. The development of human insulin to replace insulin from pigs and cows in the late 1987s was considered one of the first major accomplishments of biotechnology. Genetically engineered proteins are used to attack cancer cells, and other substances are used to halt the growth of cells in leukemia patients.

Medical diagnosis has been advanced by products such as monoclonal antibodies which are being used to detect pregnancy, various kinds of cancer, and the presence of sexually transmitted diseases. In the area of animal health an example of a biotechnology application is the development of a gene-spliced vaccine which is being used to control a rabies epidemic among raccoons in the Northeast and Florida.

Currently, there are hundreds of pharmaceutical companies that have several hundred products created through biotechnology methods that are approaching the end of the research and development phase. Most of these products that successfully pass clinical trials and meet regulatory approvals will find their way to the marketplace. The result will be a rapid increase in production and commercial manufacturing activities which will create thousands of job opportunities for prospective workers who meet the educational and work experience requirements.

THE INDUSTRY

Identifying the different types of companies within the biotechnology industry can be difficult. Some companies are created for the purpose of exploring biotechnology, while others use the process of biotechnology to manufacture pharmaceutical, agricultural, environmental and food products.

The types of biotechnology companies can be divided in several ways. The Biotechnology Industry Organization separates the industry into the following areas: therapeutic, human diagnostics, supplier, chemical-environmental, and agricultural. Other industry organizations have added the categories of energy production, medical devices, biopharmaceutical, veterinary, and various combinations of these categories.

The human therapeutics and diagnostics sectors have, by far, the greatest amount of activity, involving 65 to 70 percent of the biotechnology companies in the United States. About 17 percent of the companies are engaged in producing equipment and supplies for bioscience research and manufacturing.

The following are examples of types of activities taking place in five segments of the biotechnology industry and a brief description of the stages of production for a typical product.

Human Diagnostics: Companies are engaged in producing medical devices to test for genetic and infectious diseases. Genetic diseases, such as Sickle-

cell anemia, Cystic Fibrosis, and Alzheimer's disease, are those in which heredity plays a major role. Infectious diseases, like human immunodeficiency virus (HIV), hepatitis B, and influenza, are those which are caused by person-to-person exposure to bacteria or a virus. Examples of diagnostic products are tests for blood screening for various diseases, materials and equipment used to analyze samples of blood and other bodily fluids, and tools to locate defective genes which cause hereditary diseases.

Human Therapeutics: Companies produce materials and pharmaceuticals to treat illnesses. Therapeutic products include genetically engineered proteins used to lessen the effects of heart attacks and to slow or halt the growth of cancer cells of patients with leukemia. Several companies are developing vaccines to treat AIDS and the diseases that are associated with AIDS. Genetically engineered growth hormones are being used to treat dwarfism, and other genetically engineered materials are commonly used to treat anemia and organ transplant rejection. Other diseases which are being treated or prevented through biotechnology include other forms of cancer, diabetes, and hemophilia.

Agricultural & Veterinary: Animal scientists have developed methods for breeding and raising farm animals so that they can be more efficiently raised resulting in lower production costs. Products of biotechnology include treatments and tests for farm animal diseases such as those found in cattle,

sheep, and pigs. Vaccines have been developed to prevent diseases such as foot-and-mouth disease in cattle, tapeworm in sheep, and dozens of other types of bacterial infections and viruses found in animals throughout the world.

Food/Chemical: Companies are marketing products developed by scientists which detect food-borne microbes and toxins and test for chemical contamination. Genes have been developed to be added to food crops to provide natural protection against insect pests. Genetically engineered enzymes have been used in producing high fructose corn syrup which is used as a sweetener in a large number of prepared foods and beverages and in producing enzymes for making cheese. Scientists are also working on plants which are drought and frost resistant.

Environmental: Bacteria have been developed to clean up oil spills and chemical leaks from storage tanks by rendering the toxic materials or hazardous substances harmless. Experts have said that this area of biotechnology offers great promise. Bacteria are also used in cleaning waste water of harmful chemicals and in detoxifying or reducing industrial waste at its source.

STAGES OF PRODUCTION

Research and Development: A company's first steps in producing and marketing a new product involves the process of research and development (R&D). During R&D, small scale experiments take place as scientists and laboratory staff work together to develop new products which offer promise. At this point in time, the number of staff is usually quite small. Typically, an R&D team would consist of scientists, research associates, laboratory assistants and technicians. Because research is the primary function of the organization, at this point, most lead scientists possess Ph.D.s while other research associates and technical support staff have bachelor's and master's degrees.

Research and Development is a lengthy process (lasting as long as one year or more). Researchers concentrate on new discoveries, and scientists and technical staff engage in process development and the scaling up of production resources to conduct full-scale manufacturing.

R&D uses far fewer workers than manufacturing. Where R&D employs highly educated scientists, engineers, and support personnel, manufacturing does not share the same educational requirements.

Actual production begins at the R&D stage when small amounts of the product are needed for testing and various experiments, including human clinical trials. Production, at this point, includes cell culture and fermentation, where the desired cells and cell parts are grown; primary recovery where the product is captured

for further processing; and the purification and packaging of the product into bulk form.

A company must then prove to the U.S. Food and Drug Administration (FDA) that its product is safe and effective. After receiving approval from the FDA, it may begin testing the drug in clinical trials. During this phase, production of the product takes place in a pilot plant or in an expanded section of the laboratory. Up to fifty people may be employed to operate this small manufacturing facility and to conduct clinical research.

Before receiving FDA approval for manufacturing and marketing, a company must establish that its product is safe and effective and can be manufactured consistently, and the production processes adheres to FDA and U.S. Environmental Protection Agency (EPA) regulations relating to Good Manufacturing Practices (GMPs).

As many as fifteen years may pass from the time a product is first conceived, developed, and tested before it finally receives regulatory approval from the FDA for manufacturing.

Manufacturing and Production: Upon receiving permission from the FDA, the manufacturing process is expanded to produce large quantities of product, which may include creating a manufacturing facility. Additional staff are hired for the manufacturing process including technicians, operators of production and packaging equipment, quality systems personnel, and workers involved with product distribution.

At this stage of operation, the company is hiring more technical personnel with bachelor's and master's degrees and fewer with Ph.D.s. At the time employment opportunities increase for technicians who have associate's degrees from community colleges as well as for support staff with high school diplomas.

OCCUPATIONAL CLUSTERS AND CATEGORIES

The occupations described in the next section are typical of those found in the biotechnology industry. For the purpose of this report, we are describing occupations which are technical in nature, jobs which can serve as stepping stones to technical positions, and jobs which require high school graduation or graduation from a college or university with a bachelor's or master's degree. Jobs requiring Ph.D.s or which are in a company's administrative or sales organization are not included in this report.

Occupational descriptions are grouped by five major categories, all or some of which may be found in a biotechnology company: Research and Development, Clinical Research, Manufacturing and Production, Quality Systems, and Information Systems. Since these job descriptions were derived from a number of industry sources, not all of the occupations may be found in any one given company, and some of the jobs described may have been combined with others in actual research and development or manufacturing environments.

Job Title: These titles reflect jobs commonly found in a biotechnology company.

What They Do: This is a brief job description illustrating an individual's responsibilities and job duties.

Skills/Knowledge: These are examples of some of the major skills, knowledge, and abilities necessary for a worker to successfully carry out the job.

Training Requirements: These are the minimum educational and work experience requirements for the job described. Years of experience required may be stated, for example, as "up to 2 years." This means that employers may be willing to hire job candidates with no experience or may require up to two years of specified experience.

Wage: A wage range is usually cited. The lower end of the wage range reflects the wages typically paid to entry-level workers. The higher end of the wage range reflects the pay for those workers with two to three years of experience in the job described. Wage data were obtained from industry reports or summaries of published wage surveys.

Occupational Codes: This report includes, where possible, appropriate occupational codes from the Dictionary of Occupational Titles and the Occupational Employment System to provide a means of referencing other occupational materials. "DOT" refers to codes found in the Dictionary of Occupational Titles (Fourth Edition, Revision 1). "OES" codes are found in the Occupational Employment Statistics system. "NA" indicates that codes were not found in either the DOT or OES system.

ALPHABETICAL INDEX OF BIOTECHNOLOGY OCCUPATIONS

Occupation

Animal Handlers
Animal Technicians
Aseptic Fill Assistants
Aseptic Fill Research Associates
Aseptic Fill Technicians
Assay Analysts
Biochemical Development Engineers
Cell Culture & Fermentation
Cell Culture & Fermentation Research Associates
Cell Culture & Fermentation Technicians
Clinical Research Associates
Data Entry Clerks
Documentation Clerks
Greenhouse Assistants
Instrumentation/Calibration Technicians
Laboratory Assistants
Laboratory Support Workers
Library Assistants

Manufacturing Engineers
Manufacturing Research Associates
Manufacturing Technicians
Microbiologists
Plant Breeders
Process Development Associates
Process Development Engineers
Production Planners
Purification Assistants
Purification Manufacturing Associates
Purification Technicians
Quality Assurance Auditors
Quality Control Analysts
Quality Control Engineers
Quality Control Inspectors
Research Associates (R&D)
Safety Specialists
Scientific Programmer Analysts
Scientists
Statisticians
Technical Writers
Validation Technicians

RESEARCH AND DEVELOPMENT GREENHOUSE ASSISTANTS

What They Do: Greenhouse Assistants perform a variety of greenhouse research tasks and experiments. They may make detailed observations to detect horticultural or pest problems and take corrective action as needed. Greenhouse Assistants determine optimal cultural requirements and perform tasks to prevent insects and disease from inhabiting the plants. They may collect, record, and analyze data and assist in the interpretation of results. Assistants may also perform troubleshooting and maintenance of equipment.

Skills/Knowledge

- Attention to detail.
- Ability to understand and follow directions.
- Good written, oral and computer communication skills.

Training/Requirements

- High school diploma or associate degree or equivalent.
- Possess up to two years of greenhouse or plant experience.

Wage Range: \$21,000 - \$32,000 per year

Occupational Codes

DOT:
Scientific Helper, 199.364-014

OES:
Physical Life Science Technicians, 245990

RESEARCH AND DEVELOPMENT LABORATORY ASSISTANTS

What They Do: Laboratory Assistants are responsible for performing a variety of tasks in the laboratory including weighing and measuring compounds and solutions, making detailed observations, analyzing data on experiments, and interpreting results. They may also write experimental reports and summaries. Assistants maintain laboratory equipment and inventories for laboratory equipment and supplies. They may perform limited troubleshooting and calibration of laboratory instruments and also care for and handle animals in animal laboratories.

Skills/Knowledge

- Attention to detail.
- Good oral, written and computer communication skills.
- Ability to follow and execute detailed instructions.
- Ability to understand regulatory procedures.
- Understanding of troubleshooting procedures.

Training/Requirements

- High school diploma or associate degree in the laboratory sciences.
- Have up to two years of laboratory experience.

Wage Range: \$17,000 - \$29,000 per year

Occupational Codes

DOT:

Scientific Helper, 199.364-014

OES:

Physical Life Science Technicians, 245990

RESEARCH AND DEVELOPMENT LABORATORY SUPPORT WORKERS

What They Do: Laboratory Support Workers are responsible for washing and caring for glassware in the laboratory. They distribute the equipment to work stations within the laboratory. They operate and maintain the glass washing equipment and keep the work area clean and neat. They may use the autoclave to sterilize glassware and other laboratory items and keep inventory of supplies.

Skills/Knowledge

- Ability to maintain accurate records.
- Good written and oral communication skills.
- Ability to understand and follow directions.

Training/Requirements

- High school diploma or associate degree or equivalent.
- Up to two years of work experience preferred.

Wage Range: \$12,000 - \$21,000 per year

Occupational Codes

DOT:

Cleaner, Laboratory Equipment, 381.687-022

OES:

Janitors, Cleaners, 670050

RESEARCH AND DEVELOPMENT PLANT BREEDERS

What They Do: Plant Breeders work with research staff in designing, developing, executing, and carrying out plant breeding research projects to develop and improve varieties of crops. They work on projects to improve crop characteristics such as size, yield, resistance to disease, weather, and insect pests. The Breeder may use exotic germ plasm and work with various mating systems. They integrate with biotechnology as needed to enhance selection methods and accelerate product development.

Skills/Knowledge

- Ability to maintain accurate records.
- Attention to detail.
- Good oral, written and computer communication skills.

Training/Requirements

- BS degree or equivalent.
- Up to two years of experience in plant breeding, agronomics and/or
- training in plant breeding or plant science.

Wage Range: \$20,000 - \$40,000 per year

Occupational Codes

DOT:
Plant Breeder, 041.061-082

OES:
Biological Scientists, 243080

RESEARCH AND DEVELOPMENT RESEARCH ASSOCIATES

What They Do: Research Associates in Research and Development are usually responsible for performing research and laboratory tasks for projects and products in collaboration with others. They assist in the design and execution of experiments and in the interpretation of the results of the scientific investigation. Their work often requires the preparation of technical reports, protocols, summaries and analyses of data. Research Associates may act as principal investigators in conducting their own experiments.

Skills/Knowledge

- Good oral, written and computer communication skills.
- Ability to maintain accurate records.
- Ability to read and understand relevant scientific literature.
- Strong observational and computational skills.

Training/Requirements

- BS or MS degree in a discipline such as biology, biochemistry, chemistry, molecular biology, or biotechnology.
- Possess up to two years of laboratory experience with MS and two to five years with BS.

Wage Range: \$25,000 - \$45,000 per year

Occupational Codes

DOT:

Various biology and chemistry occupations

OES:

Biological Scientists, 243080

Chemists, 241050

RESEARCH AND DEVELOPMENT SCIENTISTS

What They Do: Scientists perform similar tasks as Research Associates however they are expected to utilize a more detailed knowledge of scientific theory and applications and to apply this knowledge towards the development of new products and inventions and to solve complex research problems. The Scientist is usually responsible for designing and implementing scientific research and development projects in conjunction with other research staff. They provide scientific guidance to staff and may supervise other Scientists and Research Associates.

Skills/Knowledge

- High degree of scientific creativity and technical proficiency.
- Excellent oral, written and computer communication skills.
- Ability to transfer scientific knowledge to practical applications.

Training/Requirements

MS degree in biological sciences or chemistry with up to five years of experience in a research environment or Ph.D. in a scientific discipline with up to two years of experience.

Wage Range: \$40,000 - \$65,000 per year

Occupational Codes

DOT:

Various biology and chemistry occupations

OES:

Biological Scientists, 243080

Chemists, 241050



CLINICAL RESEARCH ANIMAL HANDLERS

What They Do: Animal Handlers are responsible for the daily care of laboratory animals. They provide food and water to the animals and clean and disinfect their cages, racks, and pens. Handlers examine the animals for signs of illness, provide grooming and baths, adjust the temperature and humidity of the animal quarters, and maintain records to comply with regulatory standards and operating procedures.

Skills/Knowledge

- Ability to monitor, restrain, handle, and care for laboratory animals.
- Attention to detailed instructions.
- Good oral, written and computer communication skills.
- Ability to maintain detailed records.

Training/Requirements

- High school diploma or equivalent with a scientific background.
- Possess up to two years of laboratory experience.

Wage Range: \$13,000 to \$18,000 per year

Occupational Codes

DOT:

Animal Caretaker, 410.674-010

OES:

Animal Caretakers, except Farm, 790170

CLINICAL RESEARCH ANIMAL TECHNICIANS

What They Do: Animal Technicians provide care for research animals before and after surgery. They check on their condition after surgery and maintain required records of their condition. Technicians are also responsible for obtaining laboratory animals, supplies, carrying out preventative maintenance of laboratory equipment, and developing standard operating procedures for the handling and care of animals. In addition, they prepare the treatment rooms for surgery and assist in restraining the animal during examinations and inoculations.

Skills/Knowledge

- Ability to monitor, restrain, handle, and care for laboratory animals.
- Understand detailed instructions and procedures.
- Ability to maintain required laboratory records.

Training/Requirements

- High school diploma or equivalent with a scientific background.
- Possess up to two years of laboratory experience.

Wage Range: \$16,000 - \$23,000 per year

Occupational Codes

DOT:

Veterinary Technician, 079.361-014

OES:

Veterinary Technicians, 329510

Veterinary Assistants, 798060

CLINICAL RESEARCH CLINICAL RESEARCH ASSOCIATES

What They Do: Clinical Research Associates design, plan, and implement clinical research projects. They monitor the running of clinical trials at each trial site and collect pertinent biological data. Research Associates are responsible for evaluating and analyzing clinical data and coordinating activities of associates to ensure compliance with technical guidelines and overall clinical objectives.

Skills/Knowledge

- Knowledge and understanding of clinical terminology and operations.
- Attention to detail.
- Good organization and oral, written and computer communication skills.
- Understanding of regulatory practices.

Training/Requirements

- BS or MS degree in biological sciences or RN degree or equivalent.
- Possess up to two years experience in medical research, pharmaceutical research, or nursing.

Wage Range: \$30,000 to \$55,000 per year

Occupational Codes

DOT: Not Available

OES:

Biological Scientists, 243080

CLINICAL RESEARCH DATA ENTRY CLERKS

What They Do: Data Entry Clerks are responsible for using a keyboard or other type of data entry device to enter clinical research data into a computer statistical database. They may operate on-line terminals, personal computers, and scanners.

Skills/Knowledge

- Ability to key enter data at a high speed and with accuracy.
- Good spelling and grammatical skills.
- Familiarity with technical language and terminology.

Training/Requirements

High school diploma or AA degree with training in word processing, data entry or some job experience.

Wage Range: \$11,000 to \$25,000 per year

Occupational Codes

DOT:
Data Entry Clerk, 203.582-054

OES:
Data Entry Keyers, 560170

CLINICAL RESEARCH STATISTICIANS

What They Do: Statisticians in clinical research work with company staff in various departments to design, test, and implement statistical programs which process data generated from clinical trials. They are responsible for planning data collection efforts, interpreting and evaluating the data produced, identifying trends and data relationships, and taking action to correct data inconsistencies.

Their data are usually presented in the form of computer generated tables, charts, graphs, and written reports.

Skills/Knowledge

- Understanding of clinical terminology and regulations relating to good clinical practices.
- Good organization and oral, written and computer communication skills.
- Familiarity with technical language and terminology.

Training/Requirements

- BS or MS degree and above in mathematics or statistics.
- Possess up to two years experience in clinical research.

Wage Range: \$25,000 to \$45,000 per year

Occupational Codes

DOT:
Statistician, Applied, 020.167-026

OES:
Statisticians, 253120

CLINICAL RESEARCH TECHNICAL WRITERS

What They Do: Technical Writers write and edit laboratory procedure manuals, standard operating procedures, and other technical and administrative publications. The Technical Writer edits and rewrites material in compliance with governmental regulatory and company standards and language and assists in developing documentation and materials for training, reference, informational and other purposes.

Some Technical Writers specialize in researching, writing and editing clinical reports for submission to regulatory agencies such as the Food and Drug Administration.

Skills/Knowledge

- Ability to write in coherent technical English.
- Understand clinical terminology.
- Familiarity with federal standards for technical reports and proposals.

Training/Requirements

- BS degree or equivalent.
- Have up to two years of experience in writing and editing technical
- reports.

Wage Range: \$25,000 to \$45,000 per year

Occupational Codes

DOT:
Writer, Technical Publications, 131.267-026

OES:
Technical Writers, 340050

MANUFACTURING AND PRODUCTION ASEPTIC FILL ASSISTANTS

What They Do: Aseptic Fill Assistants set up and operate equipment used to manufacture and package new and existing products. Assistants weigh, measure, and check products to assure that they contain the correct proportion of specified ingredients.

Skills/Knowledge

- Ability to maintain accurate records.
- Familiarity with regulatory requirements and standard operating procedures.
- Ability to use basic math to collect data and perform calculations.
- Ability to document processes and troubleshoot problems.

Training/Requirements

- High school diploma or associate degree in biotechnology or related health sciences field.
- Up to two years of experience in sterile manufacturing environment is preferred.

Wage Range: \$18,000 to \$26,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION ASEPTIC FILL TECHNICIANS

What They Do: Aseptic Fill Technicians assist in setting up, operating, and maintaining production systems. They may also be responsible for assisting in the packaging and distribution processes and in maintaining production equipment.

Skills/Knowledge

- Knowledge of manufacturing procedures and federal regulations pertaining to manufacturing practices.
- Familiarity with process flow diagrams and statistical process control.
- Ability to select appropriate methods and procedures to solve technical problems.
- Perform effectively under stress or in emergencies.

Training/Requirements

- Associate degree in biological sciences or BS degree in a scientific discipline.
- Possess up to 2 years experience.

Wage Range: \$21,000 - \$32,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION ASEPTIC FILL RESEARCH ASSOCIATES

What They Do: Aseptic Fill Research Associates put company production procedures into practice. They may assist in developing the processes to improve product yield and to reduce the costs in manufacturing systems relating to aseptic fill.

Research Associates may also be responsible for operating and troubleshooting packaging equipment and have responsibility for servicing the equipment.

Skills/Knowledge

- Knowledge about how the production systems operate.
- Ability to suggest and develop improvements to the production system.
- Ability to select appropriate methods and procedures to solve technical problems.
- Attention to detail.
- Knowledge of process flow diagrams, statistical process control, and production scheduling.

Training/Requirements

- BS or MS degree in a biological science.
- Have up to two years of experience in aseptic fill in a manufacturing environment.

Wage Range: \$24,000 - \$55,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION ASSAY ANALYSTS

What They Do: Assay analysts perform assays and tests on tissue and cell cultures to evaluate the quality of the culture media. They obtain and read standard protocols and procedures for testing. Analysts prepare, maintain, and check cell cultures and tissues, reagents, and equipment prior to tests. They must also document and record test results and assist in modifying assay procedures.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Ability to use basic math.
- Ability to follow formal procedures and instructions.
- Knowledge of procedures used in troubleshooting problems in the event of equipment or test failure.
- Ability to document and report test results.
- Understand company quality control and quality assurance systems.

Training/Requirements

- High school diploma or equivalent.
- Up to 2 years of experience in sterile manufacturing environment.

Wage Range: Not Available

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION BIOCHEMICAL DEVELOPMENT ENGINEERS

What They Do: Biochemical Development Engineers are responsible for the design and scaling up of processes, instruments, and equipment from the laboratory stages of development to the pilot plant and manufacturing process. The engineer is also responsible for assisting manufacturing staff in solving problems related to production equipment and systems and for participating in the design of new manufacturing facilities and equipment. In addition, the engineer develops and recommends new process formulas and technologies to achieve cost effectiveness and product quality.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Knowledge of pilot plant and manufacturing processes, manufacturing facilities and equipment.

Training/Requirements

- BS degree in biological, chemical, or pharmaceutical engineering or related discipline.
- Up to 2 years of experience in pharmaceutical processes or research product development.

Wage Range: Not Available

Occupational Codes

DOT:

Chemical Engineer, 008.061-018

OES:

Chemical Engineers, 221140

MANUFACTURING AND PRODUCTION CELL CULTURE AND FERMENTATION ASSISTANTS

What They Do: These Assistants support manufacturing staff in specific product-related operations in bacterial fermentation. They operate and maintain production equipment used in bacterial fermentation such as bioreactors, cell harvest, and separation procedures. They also weigh, measure, and check raw materials to assure proper ingredients and quantities and maintain records to comply with regulatory requirements.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Ability to follow formal procedures and instructions.
- Knowledge of procedures used in troubleshooting problems.
- Ability to document and report test results.
- Understand company quality control and quality assurance systems.

Training/Requirements

- High school diploma or associate degree in microbiology, cell biology in biotechnology, or a health related field.
- Up to 2 years of experience in sterile manufacturing environment.

Wage Range: \$18,000 - \$26,000 per year

Occupational Codes

DOT:

Fermenter Operator, 559.685-070

Laboratory Assistant, Culture Media, 559.384-010

OES:

Chemical Equipment Tenders, 929380

Biological, Agricultural, Food Technicians, 245020

MANUFACTURING AND PRODUCTION CELL CULTURE AND FERMENTATION TECHNICIANS

What They Do: Cell Culture and Fermentation Technicians are responsible for successfully completing all activities involved with cell cultures to maintain protein production levels in compliance with established production practices and procedures. The technicians operate and maintain bioreactors used for monoclonal antibody/protein production. They also assist in preparing production standards and procedures.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Attention to detail and sterile techniques.
- Knowledge of good manufacturing practices.

Training/Requirements

- Associate degree in biotechnology or biology or BS degree in biological sciences or related health fields.
- Experience in sterile manufacturing environment.

Wage Range: \$21,000 - \$32,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION CELL CULTURE AND FERMENTATION RESEARCH ASSOCIATES

What They Do: Research Associates in cell culture and fermentation are responsible for operating and troubleshooting the operation of bioreactors. They produce cell and virus concentrations and volumes according to production schedules and perform cell culture activities such as preparing the media and components, assisting in the development of production testing, harvesting cells and assuring that required production procedures are being followed.

Skills/Knowledge

- Thorough knowledge of bioreactors.
- Ability to devise improvements to existing systems.
- Ability to design, execute and interpret prototype fermentation methods.

Training/Requirements

- BS or MS degree in microbiology or cellular biology.
- Up to 2 years of experience in pharmaceutical processes or research product development.

Wage Range: \$24,000 - \$42,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION INSTRUMENTATION/CALIBRATION TECHNICIANS

What They Do: Instrumentation/Calibration Technicians are responsible for maintaining, testing, calibrating, and repairing a variety of circuits, components, analytical equipment and instrumentation. Technicians calibrate instrumentation, perform validation studies, and set up purchases of equipment. They analyze test results, develop test specifications and electrical schematics, and maintain logs and required documentation. They may prepare technical reports with recommendations for solving technical problems.

Skills/Knowledge/

- Ability to accurately document findings.
- Ability to communicate effectively in writing, orally and electronically.
- Knowledge and ability to follow regulations pertaining to good manufacturing practices.
- Ability to troubleshoot equipment failure.

Training/Requirements

- High school diploma or AA degree in biotechnology or health related fields.
- Scientific background and from one to two years of experience in quality control systems.

Wage Range: \$22,000 to \$35,000 per year

Occupational Codes

DOT:

Calibrator, 710.381-034

OES:

Workers, Precision, 899990

MANUFACTURING AND PRODUCTION MANUFACTURING ENGINEERS

What They Do: Manufacturing Engineers are responsible for developing, implementing, evaluating and maintaining manufacturing methods, operational sequences, and manufacturing processes. They work with engineering department staff to coordinate the release of new products, estimate manufacturing costs, determine time standards and recommend production requirements for new and existing product lines.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Knowledge of product design and materials.
- Knowledge of manufacturing processes, equipment capabilities, and production methods.
- Knowledge and understanding of quality control/assurance standards.

Training/Requirements

- BS degree in a scientific discipline or equivalent.
- Up to 2 years experience in research product development or in manufacturing.

Wage Range: \$32,000 - \$56,000 per year

Occupational Codes

DOT:

Manufacturing Engineer, 012.167-042

OES:

Industrial Engineers, 221280

MANUFACTURING AND PRODUCTION MANUFACTURING RESEARCH ASSOCIATES

What They Do: Manufacturing Research Associates are responsible for assisting in the implementation of production procedures to improve manufacturing processes. The Research Associate may also maintain production equipment and be involved in the packaging and distribution processes.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Detailed knowledge of manufacturing systems.
- Knowledge of good manufacturing practices and attention to detail.
- Ability to identify and devise methods to improve existing systems.
- Good computational skills.

Training/Requirements

- BS or MS degree in biological sciences or in other scientific discipline.
- Up to two years of experience in a manufacturing environment.

Wage Range: \$22,000 to 40,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION MANUFACTURING TECHNICIANS

What They Do: Manufacturing Technicians operate and maintain equipment used in the manufacturing and packaging of products. Technicians are responsible for implementing and coordinating production in the fermentation, purification and septic fill processes. They weigh, measure and check raw materials, and ensure that the manufactured batches contain the proper amount and mix of ingredients.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Ability to understand detailed instructions.
- Knowledge of good manufacturing practices.

Training/Requirements

- HS diploma or equivalent at the entry level.
- BS or MS degree in biological sciences.
- Up to 2 years of experience in manufacturing.

Wage Range: \$18,000 - \$33,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION PROCESS DEVELOPMENT ASSOCIATES

What They Do: Process Development Associates implement procedures to optimize and improve manufacturing processes. They assist in developing production processes which improve product yield and reduce production costs. Processes may be in fermentation, purification, and aseptic fill areas. Associates may be also responsible for researching, developing, and implementing new methods and technologies to improve production.

Skills/Knowledge

- Good oral, written, and computer communication skills.
- Attention to detail essential.
- Detailed knowledge of manufacturing processes, equipment capabilities, and production methods.

Training/Requirements

- BS or MS degree in biosciences, other scientific disciplines or in engineering.
- Up to 2 years experience in manufacturing.

Wage Range: \$22,000 - \$38,000 per year

Occupational Codes

DOT:

Production Engineer, 012.167-046

OES:

Industrial Engineers, 221280

MANUFACTURING AND PRODUCTION PROCESS DEVELOPMENT ENGINEERS

What They Do: Process Development Engineers design, develop, modify and enhance existing manufactured products and manufacturing processes. Specific tasks vary depending on the type of process under consideration, for example, assignments may involve electrical, mechanical, or chemical engineering. Engineers may be responsible for contacts with outside vendors and for the administration of contracts.

Skills/Knowledge

- Ability to suggest and develop improvements to the production system.
- Familiarity with regulatory requirements and standard operating procedures.

Training/Requirements

- BS or MS degree in the biosciences or in electrical, mechanical, or chemical engineering.
- Up to 2 years of related experience.

Wage Range: \$25,000 - \$53,000 per year

Occupational Codes

DOT:

Chemical Engineer, 008.061-018

Electrical Engineer, 003.061-010

Mechanical Engineer, 007.061-014

OES:

Chemical Engineers, 221140

Electrical Engineers, 221260

Mechanical Engineers, 221350

MANUFACTURING AND PRODUCTION PRODUCTION PLANNERS

What They Do: Production Planners plan, schedule, and coordinate all of the activities throughout the manufacturing process. They draft schedules for each operational step, assure that materials are available, and determine that all production activities are in place to meet expected completion and shipping dates. Planners work closely with staff in production, quality control, customer service, and marketing and sales to assure that production schedules can be met and that the finished products are meeting company standards and customer needs.

Skills/Knowledge

- Possess good written, oral and computer communication skills.
- Ability to analyze processes in detail.
- Ability to select appropriate methods and procedures to solve technical problems.
- Perform effectively under stress or in emergencies.

Training/Requirements

- BS degree or equivalent.
- Possess up to 2 years of manufacturing experience.

Wage Range: \$21,000 - \$31,000 per year

Occupational Codes

DOT:

Production Planner, 012.167-050

OES:

Industrial Engineers-except Safety, 221280

MANUFACTURING AND PRODUCTION PURIFICATION ASSISTANTS

What They Do: Purification Assistants assist technicians in setting up and maintaining equipment used in protein purification and in the manufacturing of final products. They also assist in the preparation of materials used in the purification process. Purification Assistants also check, weigh, and measure batches of manufactured materials to assure that they contain the correct ingredients and proper amounts. This is usually an entry level position involving primarily routine work assignments.

Skills/Knowledge

- Ability to understand and follow instructions.
- Knowledge of and adherence to good manufacturing practices, regulatory requirements, and company production policies.
- Ability to take and maintain detailed records.

Training/Requirements

- HS diploma or associate degree in a bioscience or health field.
- Have up to two years of experience in sterile manufacturing.

Wage Range: \$18,000 - \$26,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION PURIFICATION MANUFACTURING ASSOCIATES

What They Do: Purification Manufacturing Associates are responsible for implementing improvements to existing purification systems. They may also assist in developing processes to reduce production costs while improving the final product. Associates may operate purification equipment and have responsibility for troubleshooting and maintaining this equipment.

Skills/Knowledge

- Ability to maintain accurate records.
- Familiarity with regulatory requirements and standard operating procedures.
- Detailed knowledge of purification systems.
- Ability to document processes and diagnose problems.

Training/Requirements

- BS or MS in biochemistry or other scientific discipline.
- Have up to two years of related experience.

Wage Range: \$27,000 - \$42,000 per year

Occupational Codes: Not Available

MANUFACTURING AND PRODUCTION PURIFICATION TECHNICIANS

What They Do: Purification Technicians set up, operate and maintain the equipment used in protein purification. They prepare buffers used in the purification process and perform in-process testing.

Skills/Knowledge

- Knowledge of manufacturing procedures and federal regulations relating to manufacturing practices.
- Ability to maintain accurate and detailed records.

Training/Requirements

- Associate degree in laboratory sciences or BS in biotechnology or related scientific field.
- Possess up to 2 years experience preferably in sterile manufacturing.

Wage Range: \$21,000 - \$32,000 per year

Occupational Codes: Not Available

QUALITY SYSTEMS DOCUMENTATION CLERKS

What They Do: Documentation Clerks are responsible for maintaining the company's documentation system requirements such as standard operating procedures and other required documentation. They audit documentation manuals to assure that they are accurate and current and maintain a filing system of all master documents.

Skills/Knowledge

- Good written, oral and computer communication skills.
- Ability to maintain and locate documents and records.
- Ability to work independently.

Training/Requirements

- High school diploma or associate degree.
- Up to two years of experience in documentation or quality control or quality assurance.

Wage Range:
\$20,000 to \$30,000 per year

Occupational Codes

DOT:
File Clerk I, 206.387-034

OES:
File Clerks, 553210

QUALITY SYSTEMS MICROBIOLOGISTS

What They Do

Microbiologists develop and carry out chemical, physical and biochemical tests to study microscopic organisms, such as bacteria and viruses, found in samples of raw materials used in production and in samples of in-process and finished products. Using optical and electron microscopes, chromatographic equipment, spectrophotometers, amino acid analyzers, and other equipment to examine microorganisms to ensure that company and regulatory quality standards are being met. They are also responsible for documenting the results of microbiological tests.

Skills/Knowledge

- Ability to work independently and in work groups and teams.
- Good written and oral communication skills.
- Knowledge and understanding of company, industry, and regulatory standards.
- Ability to carry out detailed tasks requiring high degrees of accuracy.

Training/Requirements

- BS or MS degree in microbiology.

Wage Range:

\$26,000 to \$47,000 per year

Occupational Codes

DOT:

Microbiologist, 041.061-058

OES:

Biological Scientists, 243080

QUALITY SYSTEMS QUALITY ASSURANCE AUDITORS

What They Do

Quality Assurance Auditors perform audits of the production and quality control departments to determine if these organizational units are adhering to regulatory requirements on good manufacturing practices and are complying with company specifications and standards.

Skills/Knowledge

- Ability to understand regulatory standards.
- Good organizational, computational and communication skills.
- Ability to maintain detailed records.

Training/Requirements

- BS degree in the biosciences or another scientific discipline.
- Up to two years of experience in biological or pharmaceutical manufacturing.

Wage Range:

\$26,000 to \$40,000 per year

Occupational Codes

NA

QUALITY SYSTEMS QUALITY CONTROL ANALYSTS

What They Do

Quality Control Analysts conduct routine and non-routine analysis of raw materials and formulations which are in-process or finished according to standard operating procedures. They compile data for the documentation of testing procedures and prepare reports and review data to determine if products are being produced in accordance with specifications. They are also responsible for revising and updating company standard operating procedures and may calibrate and maintain laboratory equipment.

Skills/Knowledge

- Knowledge of statistical flow diagrams and process flow diagrams.
- Familiarity with regulations pertaining to good manufacturing and good laboratory practices.

Training/Requirements

- BS or MS degree in biological sciences or another scientific discipline.
- Possess up to two to five years of experience preferably in a research environment in chemistry or biochemistry.

Wage Range:

\$26,000 - \$40,000

Occupational Codes

DOT:

Quality Control Technician, 012.261-014

OES:

Physical, Life Science Technicians, NEC, 245990

QUALITY SYSTEMS QUALITY CONTROL ENGINEERS

What They Do: Quality Control Engineers develop, apply and maintain quality control standards for processing materials into partially finished or finished products. Engineers design and implement methods and procedures for inspecting, testing, and evaluating the precision and accuracy of the production equipment and equipment used in the testing and inspection. They prepare documentation for inspection, testing procedures to assure that products comply with company and regulatory practices. Engineers may also conduct company training or supervise quality control efforts.

Skills/Knowledge

- Knowledge of statistical flow diagrams and process flow diagrams.
- Familiarity with regulations pertaining to good manufacturing and good laboratory practices.

Training/Requirements

- BS or MS degree in engineering or the biological sciences.
- Possess up to two to five years of quality control experience.

Wage Range:
\$30,000 to \$50,000 per year

Occupational Codes

DOT:
Quality Control Engineer, 012.167-054

OES:
Industrial Engineer, except Safety, 221280

QUALITY SYSTEMS QUALITY CONTROL INSPECTORS

What They Do: Quality Control Inspectors are responsible for performing a variety of inspections, checks, tests, and sampling procedures on raw materials, materials in-process, and finished products to be sent to a microbiologist or Quality Control Analyst for further analysis. They document their findings for other staff to evaluate. They also monitor the operation of critical equipment and instrumentation and write and revise inspection procedures and inspection checklists.

Skills/Knowledge

- Ability to accurately document findings.
- Ability to communicate effectively in writing, orally and by computer.
- Knowledge and ability to follow regulations pertaining to good manufacturing practices.
- Ability to troubleshoot equipment failure.

Training/Requirements

- High school diploma or associate degree in biotechnology or health related fields.
- Scientific background and from one to two years of experience in quality control systems.

Wage Range:

\$22,000 to \$35,000 per year

Occupational Codes

DOT:

Quality Control Technician 012.261-014

OES:

Physical, Life Science Technicians, NEC, 245990

QUALITY SYSTEMS SAFETY SPECIALISTS

What They Do: Safety Specialists develop, implement, and monitor industrial safety programs. They inspect plant areas on a regular basis to ensure compliance with federal and state occupational and safety regulations. They evaluate equipment and raw materials for safety and monitor and perform tests to determine employee exposure to toxic materials, noise and other hazards. Safety Specialists may be responsible for providing employee training in hazardous waste collection and disposal.

Skills/Knowledge

- Thorough understanding of federal and state industrial safety regulations and industry and professional standards.
- Good organization and oral, written, and computer communication skills.
- Ability to accurately document and report test results and to take appropriate corrective action.

Training/Requirements

- BS degree or equivalent.
- Possess up to two years of related experience.

Wage Range:

\$20,000 to \$36,000 per year

Occupational Codes

DOT:

Safety Inspector, 168.264-014

OES:

Compliance Officers and Enforcement Inspectors--except Construction, 219100

QUALITY SYSTEMS VALIDATION TECHNICIANS

What They Do: Validation Technicians develop, perform and prepare test procedures and standards to determine and ensure that products are being manufactured according to regulatory standards, company specifications and validation requirements. They compile and analyze validation data, prepare reports and recommend changes and improvements in manufacturing procedures. They also maintain validation records and data files. Validation technicians may be responsible for troubleshooting manufacturing problems and developing solutions.

Skills/Knowledge

- Good documentation and computational skills.
- Understanding of regulations pertaining to good manufacturing practices.
- Good organization and oral, written, and computer communications skills .

Training/Requirements

- High school diploma or associate degree in a biotechnical or related health sciences field.
- Have up to two years of experience in a sterile manufacturing environment.

Wage Range:

\$25,000 to \$40,000 per year

Occupational Codes

NA

INFORMATION SYSTEMS LIBRARY ASSISTANTS

What They Do: Library Assistants locate and order articles and publications requested by library users. These materials may be in the form of books, periodicals, microfiche, audio and video tapes, computer diskettes, and other electronic media. They perform special data collection projects as requested and are responsible for conducting on-line computer searches of scientific databases. Library Assistants are also responsible for maintaining the publications catalog systems.

Skills/Knowledge

- Ability to communicate effectively.
- Ability to use computers to conduct data searches and for word processing.
- Detail oriented.

Training/Requirements

- High school diploma or equivalent.
- Possess up to two years of relevant library experience or completion of on-the-job training.

Wage Range: \$12,000 to \$20,000 per year

Occupational Codes

DOT:

Library Assistant, 249.367-046

OES:

Library Assistants, etc., 539020

INFORMATION SYSTEMS SCIENTIFIC PROGRAMMER ANALYSTS

What They Do: Scientific Programmer Analysts design, develop, evaluate and modify computer programs to solve scientific or engineering problems and to support research and development efforts. They analyze existing systems and formulate logic for new systems. Analysts devise logical procedures, prepare flow charts, develop coding, perform tests and debug programs. They are responsible for providing documentation for new and existing programs, determining system specifications, input and output processes, and hardware and software compatibility.

Skills/Knowledge

- Analytical skills.
- Ability to think logically.
- Good communication and interpersonal skills.
- Ability to work with abstract concepts and to work accurately under pressure.

Training/Requirements

- BS degree in a scientific discipline or equivalent.
- Possess up to two years of related experience.

Wage Range: \$24,000 to \$50,000 per year

Occupational Codes

DOT:

Programmer-Analyst, 030.162-014

OES:

System Analysts, Elec. Data Processing, 251020

PREPARING FOR JOBS IN BIOTECHNOLOGY

Employers have stated that there are many skills and abilities that they look for in entry-level workers. Some of these include the following:

- Ability to work as a team member.
- General laboratory skills.
- English language skills: to communicate and understand written and spoken instructions and directions, conduct record keeping, and maintain log books.
- Use of basic math: add, subtract, multiply, and divide using whole numbers, fractions, and decimals; solve problems using percentages, metric system conversions, and ratios. Highly level technical jobs will require competency in college level mathematics.
- Use of computers for word processing, producing spreadsheets, and manipulating data.
- Ability to understand and follow instructions such as governmental regulations and company policies relating to safety, production practices and laboratory procedures.
- Attention to detail.
- Recognition of problems and reporting them.

Students preparing for careers in biotechnology should be prepared to complete high school courses such as chemistry, biology, and mathematics. Laboratory experience and training is especially important to develop the basic skills that will be needed on the job or to

succeed in course work at community college and university levels. A strong base in the high school sciences and mathematics, in addition to the development of communication skills, is especially necessary to prepare students for employment if they wish to enter the workforce upon graduation from high school.

Some community colleges, industry organizations, and companies have established or are attempting to forge partnerships to provide training to prospective biotechnology technicians.

Students should work closely with their instructors, counselors and advisers throughout their years in high school and college to plan their academic programs and to assess their opportunities in the industry.

Companies may be willing to hire interns, and many will consider interns who have completed high school, graduates with associate degrees, and students attending community colleges.

Most biotechnology companies provide in-house training following employment; however, it would be more realistic to expect training from a combination of sources: employers, colleges and universities, and technical schools.

For those who are interested in careers as scientists in California, most community colleges offer courses in the biological sciences. Schools in the California State University and University of California systems and private institutions throughout the state offer numerous courses ranging from biology and the biological sciences to biochemistry, bioengineering, and biomedical physics to molecular and cellular biology.

Students should be aware that the biotechnology industry continually changes as it develops new products. The mix of workers in the manufacturing stage will differ from

the worker mix in research and development. Some companies may eventually specialize in R&D while others may concentrate more on manufacturing. A company specializing in R&D will tend to hire fewer workers than a manufacturing facility. It will also hire mainly scientists, engineers, and a small number of technicians to develop and test their products. When a company reaches the manufacturing stage, it then hires more workers to staff technical, clerical, administrative, sales, and maintenance positions.

RELATED ACADEMIC PROGRAMS IN CALIFORNIA COMMUNITY COLLEGES

The following is a list of programs offered in the California Community College system in the biological sciences and related areas. It was compiled from the publication California Colleges and Universities-1995 published by the California Postsecondary Education Commission. Prospective students interested in these programs should contact these schools for more detailed information. This list is not all-inclusive and subject to change at any time.

BIOCHEMISTRY

College of San Mateo
College of the Siskiyous

BIOLOGICAL AND PHYSICAL SCIENCES

College of Alameda
Citrus College
Los Medanos College
San Diego City College
Victor Valley College

BIOLOGICAL TECHNOLOGY/BIOLOGICAL LABORATORY TECHNOLOGY

Fullerton College

BIOLOGY/BIOLOGICAL SCIENCES

Allan Hancock College
Antelope Valley College
Bakersfield College
Barstow College

Butte-Glenn College
Cabrillo College
Canada College
Cero Coso Community College
Cerritos College
Chabot College
Chaffey College
Citrus College
College of Alameda
College of Marin
College of the Canyons
College of the Desert
College of San Mateo
College of the Redwoods
College of the Sequoias
Columbia College
Compton Community College
Contra Costa College
Crafton Hills College
Cuesta College
Cuyamaca College
Cypress College
Diablo Valley College
East Los Angeles College
El Camino College
Feather River College
Foothill College
Fresno City College
Fullerton College

Gavilan College
Glendale Community College
Golden West College
Grossmont College
Hartnell College
Imperial Valley College
Kings River Community College
Las Positas College
Long Beach City College
Los Angeles Mission College
Los Angeles Southwest College
Los Angeles Valley College
Mendocino College
Merced College
MiraCosta College
Mission College
Modesto Junior College
Monterey Peninsula College
Moorpark College
Mt. San Antonio College
Mt. San Jacinto College
Orange Coast College
Oxnard College
Palo Verde College
Palomar College
Pasadena City College
Porterville College
Rancho Santiago College
Riverside Community College
Saddleback College
San Bernardino Valley College
San Diego City College
San Diego Mesa College

San Diego Miramar College
San Francisco City College
San Joaquin Delta College
San Jose City College
Santa Barbara City College
Santa Monica College
Santa Rosa Junior College
Shasta College
Skyline College
Solano Community College
Southwestern College
Taft College
West Hills College
West Los Angeles College
West Valley College
Yuba College

**BIOMEDICAL ELECTRONIC EQUIPMENT
TECHNOLOGY**

Cerritos College
Los Angeles City College
Los Angeles Valley College
Napa Valley College
San Joaquin Delta College

BIOTECHNOLOGY/BIOTECHNOLOGY RESEARCH

Contra Costa College
DeAnza College
MiraCosta College
San Diego Miramar College
Skyline College
Vista College

LABORATORY TECHNOLOGY

Merced College

MEDICAL LABORATORY TECHNOLOGY

Fresno City College

San Diego Mesa College

College of the Siskiyous

MEDICAL TECHNOLOGY

East Los Angeles City College

Fullerton College

MICROBIOLOGY

Compton Community College

Crafton Hills College

Foothill College

Fullerton College

Rancho Santiago College

Riverside City College

Shasta College

College of the Siskiyous

Southwestern College

SOURCES OF ADDITIONAL INFORMATION

New York Biotechnology Association, Inc.
25 East Loop Road
Stony Brook, NY 11790
(516) 444-8895
<http://www.nyba.org/>

Bay Area Bioscience Center
1300 Clay Street, Suite 320
Oakland, CA 94612
(510) 874-1464
<http://babcbio.com/>

Biotechnology Industry Organization
1625 K Street, N.W., Suite 1100
Washington, DC 20006
(202) 857-0244
<http://www.bio.org/welcome.html>

Education Development Center, Inc.
55 Chapel Street
Newton, MA 02158-1060
(617) 969-7100
<http://www.edc.org/>

American Society for Biochemistry and Molecular Biology
9650 Rockville Pike
Bethesda, MD 20814-3996
(301) 53300-7145

American Society for Microbiology
Office of Education and Training-Career Information
1325 Massachusetts Avenue, NW
Washington, DC 20005
(202) 737-3600
<http://www.asmusa.org/>

BIBLIOGRAPHY

Biotechnicians: Employment Projections and Skills Requirements,
BioQuest, Inc., San Francisco, California, 1993

Biotechnology Industry Training Needs, The Resource Group, Riverside,
California, 1995

Biotechnology: The Choice for Your Future, Biotechnology Industry
Organization, Washington, D.C., 1991.

"California Bioscience Industry," Bay Area Bioscience Reports, Spring 1993,
Bay Area Bioscience Center, Oakland, California

California Colleges and Universities-1995, California Postsecondary
Education Commission, Sacramento, California, 1995.

Cony, Ann, "Calgene Competitor Patiently Waiting for the Ripe Moment,"
Sacramento Bee, October 6, 1993.

The Economist, "Predictors of Global Famine Have Had to Eat Their Words,"
Sacramento Bee, June 18, 1995.

The Emerging Bioscience Skills Gap, Bay Area Bioscience Center and the Bay
Area Council, Oakland, California, 1991.

Gateway to the Future: Skill Standards for the Bioscience Industry,
Education Development Center, Inc., Newton, Mass., 1995

Hall, Carl T., "Making Friends With Frankenfish," San Francisco Examiner and
Chronicle, June 18, 1995.

Hall, Carl. T., "Chiron Leads The Rebound in Biotechnology," San Francisco

Chronicle, August 14, 1955.

Minuteman Regional Vocational Technical School District Biotechnology Task Force, Biomanufacturing in Massachusetts: An Assessment and Educational Analysis, Massachusetts State Department of Education, Lexington, Mass., 1992

Seymour, Patricia, Opportunities in Biotechnology, New York Biotechnology Association, Inc., Stony Brook, N.Y., 1994.

Yund, Mary Alice, Bioscience White Paper, NOVA Private Industry Council, Sunnyvale, Calif., 1995.

Document Source: State of California, Employment Development Department, Labor Market Information Division, Information Services Group, (916) 262-2162.