



## *Statement of Qualifications*

**Chromosomal Laboratories, Inc**  
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[www.chromosomal-labs.com](http://www.chromosomal-labs.com)



## Company Background

Chromosomal Laboratories, Inc is a leading analytical laboratory specializing in DNA analysis for forensic casework, convicted offender databasing, paternity, family reconstruction and research and development.

## Quality Built-In

A core philosophy at Chromosomal Laboratories is “Quality Built-In”. This means that every step of the process, from sample collection to results reporting, is critically designed, evaluated and monitored. This translates into the highest quality possible.

## Quality System

The Quality System at Chromosomal Laboratories is modeled after ISO 17025:2005, General Requirements for the Competence of Testing and Calibration Laboratories, the international benchmark for approving the competence of testing and calibration laboratories. The Chromosomal quality program has been engineered to meet the diverse requirements of several accreditation bodies and standards, including AABB, ASCLD and DAB. The laboratory complies with applicable industry guidelines, including the Quality Assurance Standards for Forensic DNA Testing Laboratories and Convicted Offender DNA Databasing Laboratories issued by the FBI Director.

## Accreditations

In demonstration of excellence, Chromosomal Laboratories participates in a number of national and international accreditation programs, including the American Association of Blood Banks (AABB), Forensic Quality Services – International, (FQS-I) and the New York Department of Health. These programs provide external review and approval of the laboratory systems and quality.



## Forensic Quality Services International (FQS-I)

Chromosomal Laboratories is accredited by Forensic Quality Services International (FQS-I) to perform biological screening, DNA analysis for forensic casework and DNA analysis for CODIS databasing. Through this ISO 17025 accreditation, our forensic department provides validated, court admissible testing to the legal community, law enforcement, and private investigators. The laboratory has validated procedures for both autosomal STRs and Y-STRs.

Forensic Quality Services International (FQS-I) is an independent corporation established in 2003 by NFSTC. FQS-I is a separate business unit within FQS, whose sole purpose is accreditation of forensic laboratories to ISO 17025. FQS-I is the longest established provider of ISO accreditation to forensic science testing laboratories in the United States. It is one of the accrediting bodies recognized by the National DNA Index System (NDIS) Procedures Board and the only one that has completed the rigorous scrutiny of operations required for recognition by the National Cooperative for Laboratory Accreditation.

FRA-1.0 is based on ILAC G19, and is specific to “Forensic Requirements for Accreditation” for laboratories involved in forensic testing. FRA-2.0 is an audit document based on the Quality Assurance Standards for DNA Analysis for DNA Testing laboratories and Convicted Offender DNA Databasing Laboratories.



### State of Texas – DPS Accreditation

Chromosomal Laboratories, Inc has been granted Full DPS Accreditation by the Director of the Department of Public Safety for the discipline of *Biology*.



### American Association of Blood Banks (AABB)

Chromosomal Laboratories, Inc is an American Association of Blood Banks (AABB) Accredited Relationship Testing Facility. AABB is an international association involved in activities related to transfusion and cellular therapies including transplantation medicine. Since its beginning in 1947, AABB continues to support the highest standards of medical, technical and administrative performance, scientific investigation, clinical application, standard setting, accreditation and education.



### State of New York

Chromosomal Laboratories, Inc is authorized to perform DNA Forensic Identity and DNA Parentage/Identity Testing on samples originating in the State of New York by the New York State Department of Health, PFI: 8237.



### U.S. Department of Homeland Security Immigration Testing

The U.S. Department of Homeland Security requires that DNA testing must be performed by an American Association of Blood Banks (AABB) accredited laboratory. As an AABB Accredited Testing Facility, Chromosomal meets the requirements for Immigration Testing for the U.S. Department of Homeland Security. Chromosomal Laboratories, Inc works with the State Department and embassies all over the world, in providing relationship services to petitioners and beneficiaries.

## Proficiency Testing

In demonstration of its commitment to quality, Chromosomal Laboratories participates in multiple third party proficiency testing programs for relationship testing and forensics. The Chromosomal Program far exceeds any regulatory requirement.

## Validation

Validation is the process of demonstrating that a laboratory procedure is robust, reliable, and reproducible in the hands of the personnel performing the test in the laboratory. A robust method is one in which successful results are obtained at a high frequency. A reliable method produces accurate results that correctly reflect the sample being tested. A reproducible method produces the same or very similar results each time a sample is tested. All three types of methods are important for techniques performed in DNA laboratories. All methods employed at Chromosomal Laboratories in the normal course of relationship testing and forensic analysis have undergone rigorous peer reviewed validations.

## Facilities

Chromosomal Laboratories, Inc operates from its state of the art 10,000 square foot laboratory located in Phoenix, Arizona. The facility was designed and constructed with a number of engineering controls for high level security, contamination control and efficient processing procedures necessary for high volume DNA testing. Chromosomal Laboratories, Inc is strategically located in Phoenix, Arizona, an area rich in biotechnology industries and home of the Translational Genomics Research Institute and the International Genomics Consortium.

## Laboratory Instrumentation

Chromosomal Laboratories, Inc has a rigorous equipment selection policy that ensures the laboratory is operating with the best available technology for accurate and efficient DNA analysis. A partial list of our major instrumentation is summarized below.

- ABI 3100 and 3130xl Genetic Analyzers
- ABI GeneAmp PCR System 9700 (4)
- ABI Prism 7000 Real Time PCR System
- epMotion 5075 TMX
- Luminex 100
- Digital Video Imaging System
- Spex 400W MiniCrime Scope
- epMotion 5070

## Laboratory Information Management System

Chromosomal Laboratories, Inc operates a propriety LIMS system for management of client information, results, turn around time and internal chain of custody. All samples are identified via a barcode system to ensure sample integrity throughout.

## Laboratory Management Team

The management and technical team at Chromosomal Laboratories has over 100 years of successful experience in the laboratory testing industry. The diversity of the team's experience and technical talent is unparalleled and ranges from paternity and forensics to laboratory analysis of environmental

bacteria and fungi, anthrax and related bioterrorism agents, chemical contaminants, toxicology, vaccine development, expert witness, consulting, research and development and the manufacture of medical devices.

### **Vladimir D. Bolin - Chief Executive Officer**

Mr. Bolin has over seventeen (17) years of experience in creating and managing multi-discipline laboratories. Mr. Bolin is the co-founder and former CEO of Aerotech Laboratories, Inc, a multi divisional company offering microbiological and chemical analysis of indoor air quality, food, pharmaceuticals, medical devices, drinking water, hazardous waste. Aerotech also had specialized divisions for bioterrorism testing and research and development. Founded in 1993, Aerotech grew to be the largest indoor air quality testing laboratory in the world. Aerotech Laboratories was purchased by the Severn Trent Group of companies in 2004. Prior to Aerotech, Mr. Bolin was President of Bolin Laboratories, Inc., a family owned company founded in 1959. During his tenure, he directed all laboratory operations, including the clinical and veterinary microbiology, environmental and research & development arms. Mr. Bolin has a degree in Molecular and Cellular Biology from the University of Arizona.

### **Nicole Bolin - President**

Mrs. Bolin is a seasoned laboratory executive with over seven years of technical management experience and is a co-founder of Chromosomal Laboratories, Inc. Mrs. Bolin's diverse scientific background, which includes human DNA identification techniques, molecular genetics, microbiology, mycology, quality assurance, and information technologies, coupled with her hands on approach, affords a distinct and balanced approach to laboratory operations, quality assurance and customer service.

In addition to her regular responsibilities, Mrs. Bolin actively participates in R&D initiatives and is responsible for the development and validation of several propriety techniques used in the laboratory. Mrs. Bolin is also the vision behind the National Association for DNA Collection and Management (NADCM), a training and certification division of Chromosomal Laboratories. Prior to starting Chromosomal Laboratories, Mrs. Bolin managed the Microbiology, Mycology, Biochemistry and Consumer Products and Food Safety divisions at Aerotech Laboratories, Inc, which at the time, was the largest and most respected IAQ analytical laboratory in the world. Mrs. Bolin also served as technical architect for numerous modules of a propriety Laboratory Information Management System (LIMS) and has developed most of the software used by Chromosomal Laboratories for DNA sample management and reporting. Mrs. Bolin is degreed in Animal Science from the University of Illinois.

### **Vince Miller, Ph.D. - Vice President and Chief Technical Officer**

Dr. Miller has over 27 years of experience in the fields of microbiology, pharmaceuticals, genetics and chemistry in academia, and in the consulting and laboratory industries. He is the co-inventor of two patents, the recipient of a grant from the National Institutes of Health, and an author on more than 40 publications and over 40 proceedings at local, national and international conferences. Prior to joining Chromosomal Laboratories, Dr. Miller served for one year as Chief Scientist at the environmental consulting firm, Clark Seif Clark, Inc. and five years as Vice President of Aerotech Laboratories. In both of those positions his duties included: litigative support, education, and

professional liaison to professional and client-based functions. Previously he served on the National Board of Directors of the American Indoor Air Quality Council, the Advisory Board of the Indoor Environmental Standards Organization, and the International Advisory Board for the Hong Kong Indoor Air Quality Society.

Dr. Miller is formally qualified as a Forensic DNA Analyst and Technical Leader in compliance with the FBI's Quality Assurance Standards for DNA Analysis for DNA Testing laboratories and Convicted Offender DNA Databasing Laboratories. He is also qualified by both the American Association for Blood Banks and the New York State Department of Health (in accordance with Article 5, Title V, Section 573 of the Public Health Law) to act as a Laboratory Director for Forensic Identity/Parentage/Identity DNA Testing. Dr. Miller is court qualified as a DNA expert.

### **Jim Bentley - Vice President**

Mr. Bentley began his career as a clinical chemist for a commercial laboratory that is now part of the LabCorp group. In this capacity Mr. Bentley established the first emergency toxicology laboratory in Houston Texas, serving all major hospitals and select crime laboratories. He became Laboratory Director of an 80 person laboratory and recognized technically as a General Supervisor by the Center for Disease Control. Mr. Bentley was engaged by the Japanese government as a GC/MS expert for field work in Melbourne Australia. He was appointed to a Federal Advisory Board in 2004 by Michael O. Leavitt, current Secretary of the U.S. Department of Health and Human Services.

During the 1980s he created two startup environmental laboratories that still exist today. His duties, which grew through acquisitions by the Corning Laboratory Group, resulted in the responsibility as VP/General Manager, for 700 employees. Mr. Bentley worked later as a consultant, aiding in the incubation and development of technical start-ups, including an animal genetics laboratory acquired by Celera Corporation. In the past 4 years before joining Chromosomal Laboratories, Mr. Bentley was Vice President of Aerotech Laboratories with responsibilities in the environmental, industrial hygiene and WMD testing divisions. He has a degree in chemistry from Arizona State University.

### **Stephanie Gidget Hudson, Ph.D. – Assistant Laboratory Director**

Dr. Hudson is a seasoned molecular biologist, researcher and educator with over eleven years of laboratory experience and is a co-author on over ten peer reviewed journal articles on original research in genetics and molecular biology. Dr. Hudson has a diverse range of experience in the field of DNA human identification that includes autosomal and Y-STR techniques, in addition to mitochondrial and SNP genotyping.



# aa BB Accreditation

*Chromosomal Laboratories, Inc.*

*having been assessed by AABB, has been found to meet  
the requirements of applicable Standards of this organization and therefore is granted this*

## **CERTIFICATE OF ACCREDITATION**

for the following activities:

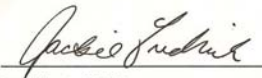
*Relationship Testing Activities*

*In Witness whereof the undersigned, being duly authorized, have caused this Certificate  
to be issued and the AABB Corporate Seal to be affixed.*

### *Effective Dates*

January 1, 2010 - December 31, 2011



  
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President, AABB

  
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Chair, Accreditation Program Committee

