



EmArray Cyto6000 ©2007 **Quick Facts**

EmArray Cyto6000 features a custom designed and validated oligonucleotide microarray, which interrogates over 100 recognized clinical syndromes plus all unique telomere and pericentromeric regions. In addition, this assay also contains genome-wide coverage resulting in a molecular karyotype that provides the most robust method of detecting chromosomal imbalances in your patient.

EmArray Cyto6000 Highlights

- 44,000 custom oligos provide a resolution equivalent to 6,000 band karyotype
- Genome wide coverage with oligos at a minimum of every 75kb
- Enriched coverage of all 41 unique telomere regions
- Enriched coverage of all 43 unique pericentromeric regions for improved marker chromosome identification
- Higher density coverage at over 100 clinically relevant deletion/duplication regions
- Pseudoautosomal probes for detection of sex chromosome imbalances

Application

- As an alternative to telomere FISH testing or BAC array analysis for individuals with developmental delay, mental retardation, or an unexplained clinical presentation
- For detection of chromosomal imbalances in patients with unexplained developmental delay, mental retardation, dysmorphic features, autism spectrum disorder, seizures, or a clinical presentation suggestive of a chromosomal imbalance
- For individuals with unbalanced chromosomal rearrangements to size the deletion or duplication, and identify clinically significant genes
- For individuals with 'apparently balanced' translocations and a clinical phenotype, to test for cryptic deletions/duplications at the breakpoints

Design

- Uses oligonucleotide microarray technology, a giant leap over current BAC arrays on the market
- Custom designed by Emory Genetics Laboratory and validated in-house
- 75kb interval backbone across each chromosome
- Average of 10 oligos for each telomere and centromere FISH clone and minimum of 10 oligos for clinically significant regions/genes
- Detects gain/loss at a minimum of 500kb or smaller for regions of known microdeletion/microduplication syndromes or targeted genes
- Each test uses an opposite sex control
- Highest quality detection of chromosomal imbalances

Providing expert service

- Emory Genetics Laboratory has over 35 years experience in cytogenetic testing
- Our array services are led by Drs. Christa Lese Martin and David Ledbetter, who have over 45 years combined expertise in clinical cytogenetics and the identification of chromosomal imbalances in individuals with mental retardation and developmental disorders
- Comprehensive reports include results and interpretation by a cytogeneticist and a clinical geneticist
- Ordering providers are notified of abnormal test results by a cytogeneticist or genetic counselor
- A team of clinical geneticists and genetic counselors are available to address your questions
- Comprehensive cytogenetic testing, including routine G-banding and FISH, is also available
- Verification of insurance benefits and preauthorization prior to testing

Contact Emory Genetics Laboratory at (404)778-8500 with your questions or to establish institutional accounts.