Genetics and molecular pathology programs are part of over 700 programs the CAP offers for PT/EQA. The CAP's comprehensive range of programs include chemistry, toxicology, hematology, microbiology, and anatomic pathology and are:

- Supported by the largest network of board-certified pathologists and **600+ leading medical laboratory professionals worldwide**—whose expertise is used to adapt to the most current needs of laboratory medicine
- Providing PT/EQA to more than **23,000 laboratories in over 110 countries**, yielding the highest quality results for patient testing while allowing for large peer groups across a broad range of methods/instruments to compare and benchmark performance
- Designed to **provide knowledge and enhance skills** for consistent, quality testing with select PT/EQA programs that also include complimentary continuing education (CE) courses

Ensure the quality of your testing results and maintain confidence in your laboratory's procedures with genetics and molecular pathology PT/EQA from the CAP.

Contact your CAP representative

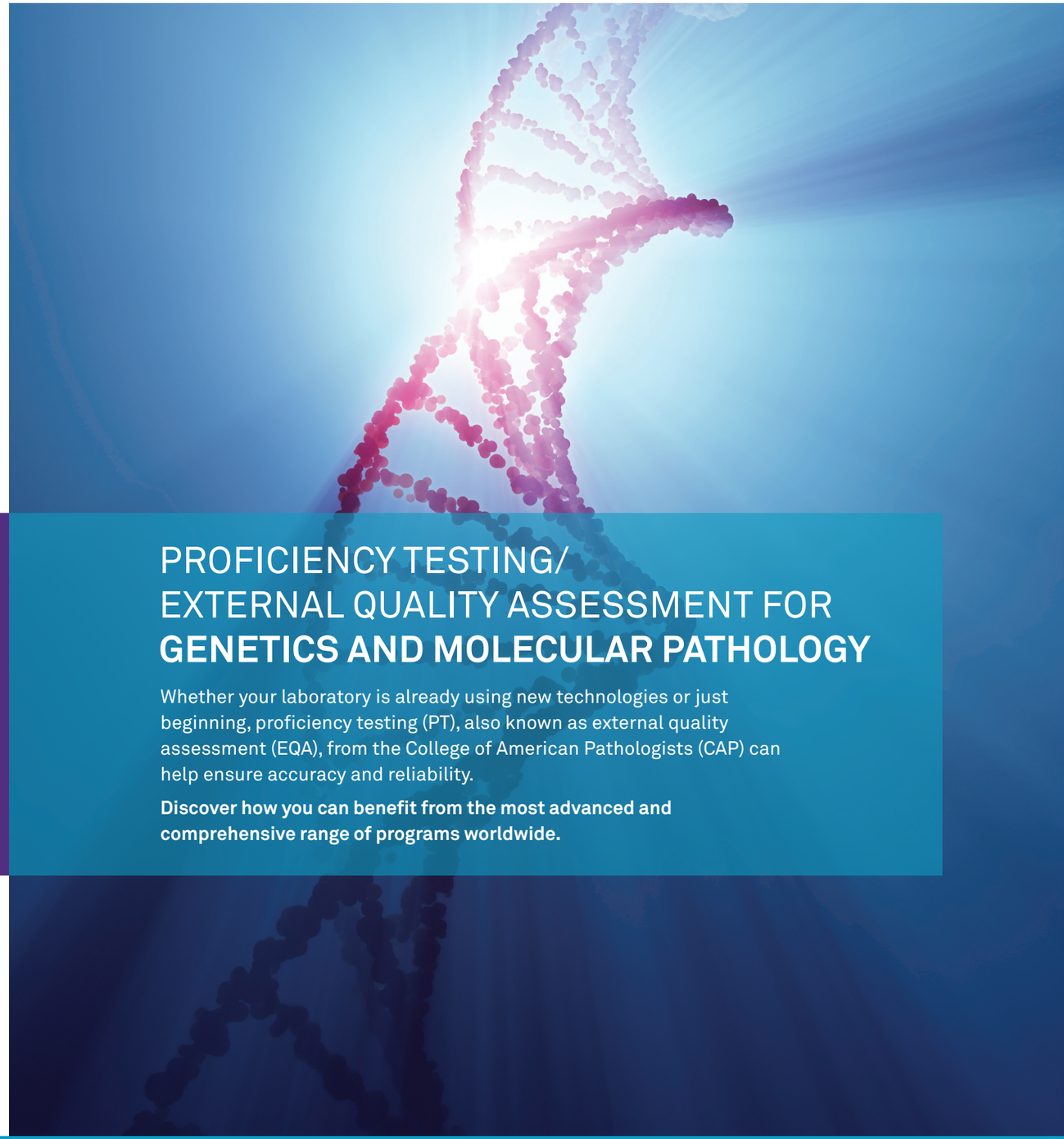
847-832-7000
(Country code: 001)

cap.org/international

COLLEGE of AMERICAN PATHOLOGISTS

325 Waukegan Road
Northfield, IL 60093-2750, USA

COLLEGE of AMERICAN PATHOLOGISTS
Laboratory Quality Solutions



PROFICIENCY TESTING/ EXTERNAL QUALITY ASSESSMENT FOR **GENETICS AND MOLECULAR PATHOLOGY**

Whether your laboratory is already using new technologies or just beginning, proficiency testing (PT), also known as external quality assessment (EQA), from the College of American Pathologists (CAP) can help ensure accuracy and reliability.

Discover how you can benefit from the most advanced and comprehensive range of programs worldwide.

Genetics and Molecular Pathology PT/EQA Offerings

The CAP annually introduces and updates programs in the following disciplines:

The field of pathology is constantly changing, and keeping up with these changes is essential for laboratories that perform genetics and molecular testing.

CAP PT/EQA programs are developed by committees of board-certified pathologists and leading experts who work in a variety of specialties and are dedicated to improving quality and performance.

45+
Programs

Sub-Discipline	Overview	Highlighted Program
Next-Generation Sequencing	Analysis of alterations for both germline and somatic (solid tumor and hematologic malignancies) purposes. These offerings include bioinformatic-only challenges as well as the complete analytical process (wet bench plus bioinformatic analysis), tumor mutational burden, and copy number variation for solid tumors.	**Next-Generation Sequencing for Hematologic Malignancies Bioinformatics (NGSB3)** This online *in silico* bioinformatics program is designed to complement and augment somatic variant wet bench NGS proficiency testing programs with a greater diversity of variants at a greater range of variant allele fractions.
Molecular Oncology—Solid Tumors	Tumor profiling for single nucleotide variant and insertion, deletion, and duplication analysis in common solid tumor genes, RNA and sarcoma fusion analysis, microsatellite instability, cell-free tumor DNA, and morphology-based programs.	**In Situ Hybridization (ISH, ISH2)** These programs include 4-core tissue microarray and H&E slides for EBV, HPV, Kappa/Lambda, and 5-core tissue microarray slides in duplicate for *HER2* (ERBB2).
Molecular Oncology—Hematologic Malignancies	Qualitative and quantitative testing for the common lymphoid and myeloid genes using either RNA or DNA and minimal residual disease testing for diagnosing and monitoring leukemia tumor burden.	**Minimal Residual Disease (MRD, MRD1, MRD2)** A program for laboratories diagnosing and monitoring leukemia tumor burden by measuring the quantity of *BCR/ABL1* or *PML/RARA* fusion transcripts with three RNA specimens in sterile water (MRD, MRD1, MRD2).
Molecular Genetics and Biochemical	Programs for metabolic disease detection, noninvasive prenatal screening, and heredity at the molecular level, including, but not limited to, genotyping, sequencing, methylation analysis, and duplication/deletion analysis for various genetic diseases and disorders.	**Noninvasive Prenatal Testing (NIPT)** A program for cell-free DNA screening of fetal aneuploidy that includes three liquid specimens and two shipments per year.
Cytogenetics	Programs focus on chromosomal changes, including broken, missing, rearranged, or extra chromosomes for both constitutional and neoplastic diseases and disorders via chromosome analysis, probes, FISH, and microarray testing.	**CAP/ACMG Cytogenetics (CY, CYBK)** Challenges in this program include a case history and images of metaphase cells. Each mailing, delivered twice a year, includes three constitutional and three neoplastic challenges.

Visit our online store
Scan this code to learn more about our genetics and molecular pathology PT/EQA programs