

CURRICULUM VITAE

**RAYMOND C. KELLY, Ph.D., DABFT**  
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**OVERVIEW** Practicing and consulting Toxicologist. Director of SAMHSA (NIDA) Certified Laboratory 1989-2000. Areas of expertise include drug abuse in the workplace, litigation support and expert testimony in civil and criminal cases, toxicology laboratory development and management and interpretation of clinical and forensic toxicological tests.

**EDUCATION** B.S. Biochemistry, Washington State University, 1967  
Ph.D. Chemistry (Biochemistry/Molecular Biology), University of Oregon, 1975  
Post-doctoral appointment in Forensic Toxicology, Case Western Reserve University and Cuyahoga County Coroner's Office (Cleveland, OH), 1975-1977

**EXPERIENCE** Consulting Forensic Toxicologist, (1984-Present)

Laboratory Director, National Medical Services Inc., Alameda, CA (2000-2004)

Director of Toxicology, Associated Pathologists Laboratories, Las Vegas, NV (1993-2000)

Laboratory Director, MEDTOX Bio-Analytical Chatsworth, CA (1989-1993)

Technical Director, Stat Lab, Inc., Mission Hills, CA (1986-1989)

President, Stat Tox Center, Mission Hills, CA (1985-1989)

President and Chief of Lab Operations, Willow Toxicology Group, Pasadena, CA (1984-1985)

Chief of Toxicology, Specialty Laboratories, Inc., Los Angeles, CA (1983-1984)

Assistant Director, Department of Clinical & Industrial Toxicology, Bio-Science Laboratories, Van Nuys, CA (1978-1983)

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Toxicology Supervisor, Laboratory Procedures, Inc.,  
Upjohn, Woodland Hills, CA (1977-1978)

RECENT CONTINUING EDUCATION

"Analytical Method Validation", California Association of Toxicologists, 2009.

"Pharmacology for Toxicologists", California Association of Toxicologists, 2009.

"Addiction and Pain Management for Toxicologists", Society of Forensic Toxicologists, 2006.

"DUID: Standardized Field Sobriety Tests, Principles and Practice", Society of Forensic Toxicologists, 2006.

"Interpretation of Toxicological Analysis in the Elderly", American Academy of Forensic Sciences, 2006.

"Moot Court and DUI Alcohol/Drugs", California Association of Toxicologists, 2005.

"Medical Conditions and DUI Investigations", California Association of Toxicologists, 2005.

"Interpretive Toxicology: Unraveling the Mystery", California Association of Toxicologists, 2003.

"Medicolegal Death Investigation", Society of Forensic Toxicologists, 2002.

"Pharmacology and Toxicology of Brain Drugs", Society of Forensic Toxicologists, 2002.

"DUID - From Research to Courts", Society of Forensic Toxicologists, 2002.

PRESENTATIONS MADE

"Interpretation of Toxicology Findings in a Fatal Accident", California Association of Toxicologists, Reno, NV, 2009.

"DUI Drugs: The Future is Here!", National College for DUI Defense, Cambridge, MA, 2008.

"Persuasive Direct and Cross-Exam of Experts: Critical Use of the Laboratory Data", National College for DUI Defense, Cambridge, MA

"Less Than Perfect DUI Cases: Do You Think They Were Impaired?", American Academy of Forensic Scientists, Washington, D.C., 2008.

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"The Pharmacology of Prescription Drugs, The Therapeutic Range, and DUI", California Association of Toxicologists, Redondo Beach, CA, 2008.

"Ethics in an Adversarial System: Interface Between Science and the Law", California Association of Toxicologists, Seaside, CA, 2007.

"I Ate Apples and Now I'm Flunking My Drug Test?", California Association of Toxicologists, Seaside, CA, 2007.

"Evidentiary Issues in Drug-Facilitated Sexual Assault Cases", California Association of Toxicologists, Pasadena, CA, 2004.

"Approaches to Analyzing for New Drugs", California Association of Toxicologists, San Jose, CA, 2002.

"Interpretive Issues in Hair Drug Testing", American Association of Medical Review Officers Advanced Training Seminar, Las Vegas, NV 2000.

"Hair Color Bias Issues in Testing for Drugs of Abuse in Hair", American Association of Medical Review Officers Advanced Training Seminar, Chicago, IL, 1998.

"Procedures for Forensic Testing of Hair Samples", Substance Abuse and Mental Health Services Administration Drug Testing Advisory Board - Scientific Meeting on Drug Testing of Alternative Specimens and Technologies, Rockville, MD, 1997.

"'Real-World' Hair Color Bias in Testing for Drugs of Abuse: Does It Exist?", Joint Meeting of Southwestern Association of Toxicologists, Southwestern Association of Forensic Scientists, Northwestern Association of Forensic Scientists, California Association of Toxicologists, Las Vegas, NV, 1997.

"Experiences with Workplace Hair Drug Testing", a conference sponsored by the Society of Forensic Toxicologists and the Center for Substance Abuse Prevention, Department of Health and Human Services, Tampa, FL, 1994.

Kelly, R.C. and Coleman, M., "Felbamate (Felbatol®) Determination by HPLC", California Association of Toxicologists Meeting, San Diego, CA, 1994.

PROFESSIONAL  
LICENSES AND  
ASSOCIATIONS

Diplomate, American Board of Forensic Toxicology

Past President, California Association of Toxicologists

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Editorial Review Board, Journal of Analytical  
Toxicology, 1979-1998

Fellow, American Academy of Forensic Sciences,  
Toxicology Section

California Licensed Clinical Laboratory Toxicologist,  
Laboratory Director License DRJ3, 1983-2007

New York Licensed Laboratory Director, Forensic Toxic-  
ology, License KELLR1, 1995-2005

Nevada Licensed Laboratory Director, License 4613DIR-1

Inspector, Substance Abuse and Mental Health Services  
Administration (SAMHSA), National Laboratory  
Certification Program (1993-2000).

Inspector, College of American Pathologists, Forensic  
Urine Drug Testing Program

National Institute on Drug Abuse Research Service  
Award Recipient

Member, California Department of Health Services  
Clinical Laboratory Technology Advisory  
Committee, 1989-1993

Member, Nevada State Health Division  
Perinatal Substance Abuse Subcommittee  
1996-2000

Author of 20+ scientific papers in analytical, clinical  
and forensic toxicology and physical  
biochemistry/molecular biology

PATENTS

"Method for forensically screening hair samples", U.S. Patent Nos. 5910419,  
6/8/99 and 5981204, 11/9/99.

PUBLICATIONS

TOXICOLOGY AND PHARMACOLOGY

Kelly, R.C. and Sunshine, I., "Proficiency testing in forensic toxicology:  
criteria for experimental design", Clin. Chem 22: 1413-1414 (1976).

Kelly, R.C., "Some thoughts on proficiency testing in forensic toxicology",  
J. Analyt. Toxicol. 1:123-125 (1977).

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- Kelly, R.C., Valentour, J.C. and Sunshine, I., "Solvent suppression of the decomposition of phenobarbital during on-column methylation with trimethylanilinium hydroxide", J. Chromatogr. 138:413-422 (1977).
- de Groot, G., Maes, R.A.A., Hodnett, C.N., Kelly, R.C., Bost, R.O. and Sunshine, I., "Four cases of fatal doxepin poisoning", J. Analyt. Toxicol. 2:18-20 (1978).
- Kelly, R.C., Prentice, D.E. and Hearne, G.M., "Cephalosporin antibiotics interfere with the analysis for theophylline by high-performance liquid chromatography", Clin. Chem. 24:838-839 (1978).
- Kelly, R.C., Kopelman, R.C. and Sunshine, I., "A simple gas chromatographic procedure for the determination of camphor in plasma", J. Analyt. Toxicol. 3:76-77 (1979).
- Kopelman, R.C., Miller, S., Kelly, R. and Sunshine, I., "Camphor intoxication treated by resin hemoperfusion", J. Am. Med. Assoc. 241:727-728 (1979).
- Kelly, R.C., Anthony, R.M., Krent, L., Thompson, W.L. and Sunshine, I., "Toxicological determination of benzodiazepines in serum: Methods and concentrations associated with high-dose intravenous therapy with diazepam", Clin Toxicol. 14:445-457 (1979).
- Kelly, R.C., Christmore, D., Smith, R., Doshier, L. and Jacobs, S.L., "Mexiletine in plasma by high pressure liquid chromatography", Therap. Drug Monit. 3:279-286 (1981).
- Kelly, R.C., Krent, L., Sunshine, I. and Balter, M.B., "Association of benzodiazepines with death in a major metropolitan area", J. Analyt. Toxicol. 6:91-96 (1982).
- Kelly, R.C. and Christmore, D.S., "Identification of phencyclidine and its analogues at low concentrations in urine by selected ion monitoring", J. Forensic Sci. 27:827-836 (1982).
- Kelly, R.C., Doshier, L., and Rubin, H.R., "A convenient thin-layer chromatographic screening method for acetaminophen in serum", J. Analyt. Toxicol. 8:54-58 (1984).
- Kelly, R.C., "Radioreceptor assays: Innovations in monitoring neuroleptic Drugs", Diag. Med. (Feb. 1984).
- Christmore, D.S., Kelly, R.C. and Doshier, L.A., "Improved recovery and stability of ethanol in automated headspace analysis", J. Forensic Sci. 29:1038-1044 (1984).
- Baxter, L.A., Kelly, R.C., Peter, J.B., Liston, E.H. and Touserani, S., "Urinary phenylacetate and response to methylphenidate", J. Psychiat. Res. 22:131-139 (1988).

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Kelly, R.C., "Drug Testing in the Workplace", in Schur, P.B. and Broder, J.F., Investigation of Substance Abuse in the Workplace, Butterworth-Heinemann Publishers (Boston, MA), 1990.

Kelly, R.C., "Urine Drug Testing" in Loomis, L., Drug Testing: A Workplace Guide to Designing Practical Policies and Winning Arbitrations, Bureau of National Affairs, 1990.

Melgar, R. and Kelly, R.C., "A Novel GC/MS Derivatization Method for Amphetamines", J. Analyt. Toxicol. 17:399-402 (1993).

McCambly, K., Kelly, R.C., Johnson, T., Johnson, J.E. and Brown, W.C., "Robotic solid-phase extraction of amphetamines from urine for analysis by gas chromatography/mass spectrometry", J. Analyt. Toxicol. 21:438-444 (1997).

Sweeney, S.A., Kelly, R.C., Bourland, J.A., Johnson, T., Brown, W.C., Lee, H. and Lewis, E., "Amphetamines in hair by enzyme-linked immunosorbent assay", J. Analyt. Toxicol. 22:418-424 (1998).

Kelly, R.C., Mieczkowski, T., Sweeney, S.A., Bourland, J., "Hair analysis for drugs of abuse. Hair color and race differentials or systematic differences in drug preferences?", Forens. Sci. Intl. 107:63-86, 2000.

Bourland, J.A., Hayes, E.F., Kelly, R.C., Sweeney, S.A., Hatab, M.M., "Quantitation of cocaine, benzoylecgonine, cocaethylene, methylecgonine and norcocaine in human hair by positive ion chemical ionization (PCI) gas chromatography-tandem mass spectrometry", J. Analyt. Toxicol. 24:489-495 (2000).

BIOCHEMISTRY

Jensen, D.E., Kelly, R.C. and von Hippel, P.H., DNA "melting" proteins II. "Effects of bacteriophage T4 gene 32-protein binding on the conformation and stability of nucleic acid structures, J. Biol. Chem. 251:7215-7228 (1976).

Kelly, R.C. and von Hippel, P.H., "DNA 'melting' proteins III. Fluorescence 'mapping' of the nucleic acid binding site of bacteriophage T4 gene 32-protein", J. Biol. Chem. 251:7229-7239 (1976).

Kelly, R.C. and von Hippel, P.H., DNA 'melting' proteins IV. Fluorescence measurements of binding parameters for bacteriophage T4 gene 32-protein to mono-, oligo- and polynucleotides, J. Biol. Chem. 251:7240-7250 (1976).

von Hippel, P.H., Jensen, D.E., Kelly, R.C. and McGhee, J.D., Molecular approaches to the interaction of nucleic acids with 'melting' proteins, in Nucleic Acid-Protein Recognition, Academic Press (1977).