

Curriculum Vitae

Michele A. Glinn, PhD, F-ABFT

Education

Doctor of Philosophy, 1993

Major in Biochemistry, Minor in Physiology, Wayne State University, Detroit, MI
Dissertation: Lipid Peroxidation in the Mitochondrial Inner Membrane

Bachelor of Arts, 1985

Major in Anthropology, Wayne State University, Detroit, MI

Certifications

- Fellow of the American Board of Forensic Toxicology, 2008
- New York State Department of Health Clinical Laboratory Director, 2016
- College of American Pathologists Laboratory Inspector, 2016
- ASLCD-LAB Inspector, 2009
- ISO Assessor 2009
- SFST Practitioner (Michigan), 2005
- Class IV Datamaster Operator (Michigan), 2005

Areas of Scientific Expertise

- Forensic and clinical toxicology
- Drug disposition and metabolism in human subjects
- Drug effects on human subjects
- Analysis of biological and non-biological specimens for alcohol, drugs, chemicals and contaminants
- Breath alcohol testing
- Oxidative metabolism
- Laboratory compliance with CAP, CLIA, ASCLD-LAB, ISO 17025 standards
- Medicolegal aspects of alcohol and drug use
- Standardized field sobriety testing

Professional Experience

Avertest dba Averhealth, 2013 - present

Laboratory Director 2013 – 2023

Scientific Director 2023 - present

601 Lambert Point Drive, Hazelwood, Missouri, 63042

- Administration of forensic and clinical toxicology programs
- Oversight of laboratory operations and quality control programs
- Review of analytical data and result reports
- Maintenance of compliance with government and accreditation regulations
- Court testimony on scientific issues related to forensic drug testing
- Consultation with customers on interpretation of laboratory results
- Assistance with other aspects of laboratory management as needed

Panome Bio, 2025 - present

Clinical Consultant

4340 Duncan Avenue

St. Louis, MO 63110

- Review of CLIA-approved toxicology testing program and services
- Consultation and interpretation of results for clients as needed

Consulting Laboratory Director, 2014 - present

Laboratory Management Consultants

527 Village Lane

Hazard, KY, 41701

- Review of toxicology operations and quality control programs for client laboratories

Consultant in Forensic Toxicology, 2010 - present

Okemos, MI

- Review of laboratory reports and documents
- Review of laboratory operations and quality control procedures
- Written reports and recommendations
- Court testimony in criminal and civil cases
- Clients: attorneys, state agencies, program managers, oversight bodies

Timberlands Testing (previously Essential Testing), 2011- 2018

Laboratory Director October 2011 – March 2017

Technical Consultant March 2017 – July 2018

1616 Eastport Plaza Dr, Collinsville, IL 62234

- Administration of clinical toxicology program
- Oversight of laboratory operations and quality control program
- Review of analytical data and result reports
- Maintenance of compliance with government and accreditation regulations
- Consultation with customers on interpretation of laboratory results
- Assistance with other aspects of laboratory management as needed

Michigan State Police Forensic Sciences Division, 1999 - 2011

Toxicology Program Coordinator

Lansing Laboratory

7320 N. Canal Rd, Lansing, MI 48213

- Administration of statewide drug toxicology program for the Michigan State Police Forensic Science Division
- Analysis of biological and samples for alcohol and drugs
- Review of casework completed by laboratory scientists
- Implementation of new analytical procedures when required

- Instruction of law enforcement officials on drug and alcohol pharmacology and analytical procedures
- Maintenance of compliance of with government and ASCLD-LAB regulations
- Court testimony on scientific issues related to forensic drug and alcohol analysis
- Conducted studies with human subjects of alcohol metabolism and elimination and variables related to forensic alcohol testing
- Assistance with MSP Breath Alcohol Testing program (Alcohol Enforcement Unit)

Indiana State Department of Toxicology, 1998-1999

Assistant Director
State Department of Toxicology
Department of Pharmacology and Toxicology
Indiana University and Purdue University at Indianapolis
420 University Blvd, Indianapolis, IN 46202

- Administered forensic drug analysis and breath alcohol testing programs for the State of Indiana
- Operated breath alcohol testing training and certification programs for Indiana law enforcement officials and State Department personnel
- Maintained databases containing forensic drug testing data for the State of Indiana.
- Conducted studies with human subjects of alcohol metabolism
- Court testimony on scientific issues related to forensic alcohol and drug testing.

Visiting Scientist/Research Associate, 1997 - 1998

Dept. of Neuroscience Research, Eli Lilly Research Laboratories
Indiana University School of Medicine
Indianapolis, IN, 46202

- Research areas: pharmacological manipulation of neuronal metabolism for treatment of neurodegenerative disorders

Postdoctoral Scientist, 1993 - 1997

Dept. of Neuroscience Research, Eli Lilly Research Laboratories
Lilly Corporate Center
Indianapolis, IN, 46285

- Research area: pharmacological manipulation of neuronal metabolism for treatment of neurodegenerative disorders

Graduate Research Assistant, 1988 – 1993

Dept. of Biochemistry, Wayne State University School of Medicine
540 E. Canfield, Suite 7374
Detroit, MI, 40201

- Research area: mitochondrial energy metabolism and lipid peroxidation

Research Assistant, 1987-1988

Henry Ford Hospital Sleep Research and Disorders Center
2921 West Grand Boulevard
Detroit, MI 48202

- Research area: drug effects on sleep patterns in normal and insomniac subjects

Teaching Experience

Instructor in the Pharmacology and Toxicology of Alcohol, Drugs of Abuse and Drug Testing Instrumentation, 2000 - present

- Clients: law enforcement officials, judges, prosecuting attorneys, sexual assault nurse examiners, and drug courts in multiple states nationwide.
- Sponsors: the Michigan State Police, the Prosecuting Attorneys' Association of Michigan, Michigan Public Defenders Offices, Sexual Assault Nurse Examiners and Averhealth.

Guest Instructor in Forensic and Clinical Toxicology, 2016 - 2022

- Department of Pharmaceutical Sciences, Southern Illinois University at Edwardsville, 200 University Park Dr, Edwardsville, IL 62025

Instructor in the Pharmacology and Toxicology of Alcohol, Drugs of Abuse and Drug Testing Instrumentation, 1989-1999

- State of Indiana law enforcement officials and prosecuting attorneys, Indiana Law Enforcement Academy, Plainfield, IN.

Graduate Teaching Assistant in Biochemistry, 1989-1991

- Dept. of Biochemistry, Wayne State University School of Medicine, 540 E. Canfield, Suite 7374, Detroit, MI, 40201

Specialized Training

Professional Meetings

- Society of Forensic Toxicologists Annual Meetings 2001 - present
- Midwestern Association for Toxicology and Therapeutic Drug Monitoring Annual Meetings 2001 – present
- International Association for Chemical Testing Annual Meetings, 2009-2013
- American Academy of Forensic Sciences Annual Meeting, Reno, NV 2000
- Association of Official Analytical Collaboration Annual Meeting, New Orleans, LA, Sept 2023
- DARK Lab Quality Confab, New Orleans, LA, 2013, 2015

Inspector Training

- American Society for Crime Lab Directors Laboratory Accreditation Board Inspector Training, Lansing, MI, 2003
- International Standards Organization Assessor Training, Tampa, FL, 2011
- College of American Pathologists Inspector Training, www.CAP.org, 2016

Breath Alcohol and Field Sobriety Testing

- DMT Operation, National Patent Analytical Systems, 2006
- Standardized Field Sobriety Testing, MSP Alcohol Enforcement Unit, 2005
- Lifeloc/Class IV Operator Training, MSP Alcohol Enforcement Unit, 2004
- Datamaster Operation, NPAS, Lansing, MI, Sept. 2002
- Class II Breath Test Operator, MSP Certified, December 2000
- Datamaster and Intoxilyzer 5000 Operations, Indiana State Department of Toxicology, 1998

Technical Courses

- Mass Spectrometry in the Clinical Lab, American Association for Clinical Chemistry, St. Louis, MO, 2013
- Developments in Clinical/Forensic Research, AbSciex, Chicago, IL, 2012
- Analyst Operation, AbSciex, Sacramento, CA, 2011
- Effects of Drugs on Human Performance, Robert Borkestein Center for Studies of Law in Action, Bloomington, IN, 2004.
- Understanding Mass Spectra, Lansing Laboratory, Sept. 11 – 13, 2001.
- Mass Spectral Interpretation, American Chemical Society, Stockton, CA, 2000
- Operation and Applications of Tempus Time-of-Flight Mass Spectrometer, ThermoQuest, Manchester, UK, 2000
- Introduction to Excalibur, ThermoQuest Institute, Piscataway NJ, 1999

MSP Specialized Training

- Laboratory Development, FBI, Columbus, OH, 2007
- Daubert Training, MI Attorney General's Office, Lansing Lab, 2006
- Medicolegal Investigation of Death, Wayne County Medical Examiner's Office, 2000
- Expert Witness Training Course, MSP Training Academy, 2000

Membership In Professional Societies

- Society of Forensic Toxicologists (SOFT), 2000 - present
- Midwestern Assn. for Toxicology and Therapeutic Drug Monitoring (MATT), 2003 – present.
- International Association for Chemical Testing (IACT), 1998 – 2000, 2009 - present.
- Association for Diagnostic Laboratory Medicine (AACC), 2012 - present
- International Association for Therapeutic Drug Monitoring, 2024 – present

Honors and Awards

- Midwest Women in Cannabis Award for Science, Green Market Report, 2023
- Richard H. Austin Traffic Safety Award for Long-Term Contributions to Traffic Safety, Toxicology/Blood Alcohol Unit, 2011
- Past-President, MATT, 2009-2010
- President, MATT, 2008 - 2009
- Vice President, MATT, 2007 - 2008
- Graduation *magna cum laude* from Wayne State University, 1993
- Thomas C. Rumble University Graduate Fellowship, Wayne State University, 1990-1991 and 1992-1993 for academic merit.
- Graduation *cum laude* from Wayne State University, 1985
- Four-year full scholarship for undergraduate academic study, 1981-1985 from the Greater Detroit Chevrolet Dealers' Association for academic merit.

Patents

- Methods for Increasing Choline Acetyltransferase (ChAT) Activity (Raloxifene HCl). X. Wu, **M. Glinn**, S. Paul, H. Bryant
Lilly Research Laboratories, Eli Lilly & Co.
U.S., European and Global patents, 1998, 1999 and 2000
- Methods for Increasing Choline Acetyltransferase (ChAT) Activity (Serm III), X. Wu, **M. Glinn**, S. Paul, H. Bryant
Lilly Research Laboratories, Eli Lilly & Co.
U.S., European and Global patents, 1998, 1999 and 2000
- Methods for Increasing Choline Acetyltransferase (ChAT) Activity (Tamoxifen), X. Wu, M. Glinn, S. Paul, H. Bryant
Lilly Research Laboratories, Eli Lilly & Co.
U.S. patent granted Feb 2000
- Cannabis Potency Testing Method
Glenn et al, Viridis Laboratories
Certified by AOAC *Reviewed and Recognized* Program, #102201, Oct 2022
Patent # US 11782040B1
U.S. patent granted 10/10/23

Publications

Refereed Journals

- **M. Glinn**, G. Michaud. Potency Levels of Regulated Cannabis Products in Michigan. *J. Forensic Sci.*, 68(6), p. 1894-1905, 2023, doi: 10.1111/1556-4029.15345
- **M. Glinn**, et al. Urinary Concentrations of Topically Administered Pain Medications. *J. Analytical Toxicology*, **41(2)**:127-133, 2017, doi:10.1093/jat/bkw110

- **M. Glinn**, P. Curtis, F. Adatsi. Comparison of the Analytical Capabilities of the BAC Datamaster and Datamaster DMT Forensic Breath Testing Devices. *J. Forensic Sci.*, **56**(6):1632-8, 2011, doi.org/10.1111/j.1556-4029.2011.01874.x
- X. Wu, **M. Glinn** et al. Raloxifene and Estradiol Benzoate Both Fully Restore Hippocampal Choline Acetyltransferase Activity in Ovariectomized Rats. *Brain Research*, **847**:98-104, 1999, doi.org/10.1016/S0006-8993(99)02062-4
- Y. Du, K. Bales, R. Dodel, X. Liu, **M. Glinn**, J. Horn, S. Little, S. Paul. α 2-Macroglobulin Attenuates β -Amyloid Peptide 1-40 Fibril Formation and Associated Neurotoxicity of Cultured Fetal Rat Cortical Neurons. *J. Neurochemistry.*, **70**(3):1182-1188, 1998, doi.org/10.1046/j.1471-1459.1998.70031182.x
- **M. Glinn** et al. Inorganic P_i increases Neuronal Survival in the Axute Early Phase Following Excitotoxic/Oxidative Insults. *J. Neurochemistry*, **70**(5):1850-1858, 1998, doi.org/10.1046/j.1471-4159.1998.70051850.x
- Y. Du, B. Ni, **M. Glinn**, R. Dodel, K. Bales, Z. Zhang, P. Hyslop, S. Paul. α 2-Macroglobulin as a β -Amyloid Peptide-Binding Plasma Protein. *J. Neurochem.*, **69**: 299-305, 1997, PMID:9202323
- **M. Glinn**, B. Ni, S.M. Paul. Inorganic Phosphate enhances phosphonucleotide concentrations in cultured fetal rat cortical neurons. *Brain Research.*, **757**:85-92, 1997, doi:10.1016/S0006-8993(97)00162-5
- B. Ni, **M. Glinn** and S. M. Paul. Phosphate Metabolism in Neurological Disorders (book chapter), World Health Organization, CH-1211 Geneva 27, Switzerland, 1998
- **MA. Glinn**, CP Lee, L. Ernster. Pro-and Anti-Oxidants Activities of the Mitochondrial Respiratory Chain: Factors Influencing NAD(P)H-Induced Lipid Peroxidation. *Biochem. Biophys. Acta-Bioenergetics*, **1318**: 246-254, 1997, doi.org/10.1016/S0005-2728(96)00142-9
- **M. Glinn**, B. Ni, S. Paul. Characterization of NA^+ Dependent Phosphate Uptake in Cultured Fetal Rat Cortical Neurons. *J. Neurochem.*, **65**: 2358-2365, 1995, doi.org/10.1046/j.1471-4159.1995.65052358.x

- V. DeMel, M. Doscher, **M Glinn**, P Martin, M Ram, B Edwards. Structural Investigation of Catalytically Modified F120L and F120Y Semisynthetic Ribonucleases. *Protein Science*, 3:39-54, 1994, doi:10.1002/pro.5560030106
- **M. Glinn**, L. Ernster, CP Lee. Initiation of Lipid Peroxidation in Submitochondrial Particles: Effect of Respiratory Inhibitors. *Arch. Biochem. Biophys.*, 290 (1): 57-65, 1991, doi.org/10.1016/0003-9861(91)90591-6
- E. Stepanski, G. Koshorek, F. Zorick, M. Blinn, T. Roehrs, T. Roth. Characteristics of Individuals Who Do or Do Not Seek Treatment for Chronic Insomnia. *Psychosomatics*, **30**(4): 421-427, 1989, doi.org/10.1016/50033-3182(89)77248-9

Case Reports

- **M. Glinn**, P. Curtis
Effects of Smokeless Tobacco and Belching on DMT Breath Alcohol Results
IACT Newsletter, August 2011
- **M. Glinn**
Physiological Effects of K2
PAAM Newsletter, Oct. 2010
- **M. Glinn**
How Many Drugs Does It Take to Prove Impairment?
ToxTalk, SOFT Newsletter, June 2008
- **M. Glinn**, G. French, E. Gormley and O. Idusuyi.
Prolonged Residence Time of Benzoylecgonine in
the Serum of a Chronic Drug User. sMATTERings, MATT
Newsletter, Oct. 2005.

Abstracts and Presentations

- MATT Annual Meeting (2026)
- MATT Annual Meeting (2025)

- MATT Annual Meeting (2024)
- Association of Official Analytical Collaboration National Meeting (2023)
- MATT Annual Meeting (2023)
- Cannabis Science Conference East (2022)
- MATT Annual Meeting (2021)
- MATT Annual Meeting (2019)
- SOFT Annual Meeting (2018)
- MATT Annual Meeting (2018)
- MO Association of Treatment Court Professionals Annual Meeting (2018)
- MO Association of Treatment Court Professionals Annual Meeting (2017)
- IACT Annual Meeting (2017)
- MATT Annual Meeting (2017)
- SOFT Annual Meeting (2016)
- MATT Annual Meeting (2016)
- MATT Annual Meeting (2015)
- MATT Annual Meeting (2014)
- American Society for Mass Spectrometry Annual Meeting (2013)
- MATT Annual Meeting (2012)
- SOFT Annual Meeting (2010)
- IACT Annual Meeting (2009)
- SOFT Annual Meeting (2008)
- MATT Annual Meeting (2008)
- MATT Annual Meeting (2006)
- MATT Annual Meeting (2003)
- SOFT Annual Meeting (2000)
- Society for Neuroscience Abstracts, **24**(1); 1789 (1998).
- Society for Neuroscience Abstracts, **24**(1); 732 (1998).
- Society for Neuroscience Abstracts, **23**(2):2295 (1997)
- Society for Neuroscience Abstracts, **22**(1):196 (1996)
- Society for Neuroscience Abstracts, **22**(1):367 (1996)
- Neurobiol. of Aging, **17**(4s):S109 (1996)
- Society for Neuroscience Abstracts, **21**(3):2065 (1995)
- Biophysical Journal, **64**(2):A103 (1993).
- Biophysical Journal, **61**(2):A195 (1992).
- European Bioenergetics Conference Short Reports, **7**:66 (1992).
- Fed. Of American Societies for Experimental Biology Journal, **5**(5):A1193 (1991).
- Biophysical Journal, **57**(2):556a (1990).

- Sleep Research, **18**:307 (1989).
- Sleep Research, **19**:306 (1989).
- Sleep Research, **17**:132 (1988).

Official Publications on Behalf of the State of Indiana

Reports to Governor's Council on Impaired and Dangerous Driving

- An Assessment of the Operations and Structure of the Indiana State Department of Toxicology. Hon. Linda Chezem, Hon. Thomas Wyss, Hon. Peggy Welch, Mr. Michael Medler, **Dr. Michele Glinn**, Sept., 2010.
- Report on Breath Alcohol Testing in the State of Indiana, July 1 1996 - June 30, 1998. J. Klaunig and **M. Glinn**, 1999.

White Papers

- Effects of Dentures on Breath Alcohol Testing. **M. Glinn**, 1998
- Pulmonary Disorders and Breath Alcohol Testing. **M. Glinn**, 1998
- Organic Solvent Interference with Breath Alcohol Testing. **M. Glinn**, 1998

Contact Information

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