

## Leadership



### Lab Director Biography

Gene Gillman is Enthalpy's Laboratory Director. Dr. Gillman has considerable experience investigating the constituents and chemistry of tobacco smoke, and in developing and validating relevant LC, LC-MS, GC-MS and biological based test methods.

He brings experience from both the cigarette manufacturing and a tobacco testing CRO perspectives. In his most recent position, he was the laboratory manager of an ISO 17025 accredited laboratory specializing in qualitative and quantitative analysis of tobacco smoke. Dr. Gillman works with domestic and international study groups and trade organizations.

Education: Ph.D. Chemistry, Wake Forest University  
B.S. Chemistry, Appalachian State University

### Selected Articles

Rainey, P.; Gillman, G.; Shi, X.; Cheng, T.; Stinson, A.; Gietl, D.; Albino, A.P. "Fluorescent Detection of Lipid Peroxidation Derived Protein Adducts upon In-Vitro Cigarette Smoke Exposure." *Toxicology Mechanisms and Methods*, **2009**, 19, 401-409

Albino, A.P.; Jorgensen, E.D.; Rainey, P.; Gillman, G.; Clark, T.J.; Gietl, D.; Zhao, H.; Traganos, F.; Darzynkiewicz, Z. "H2AX: A Potential DNA Damage Response Biomarker for Assessing Toxicological Risk of Tobacco Products." *Mutation Research*, **2009**, 678, 43-52.

Wagner, K.A., Finkel, N.H., Fossett, J.E., Gillman I.G., "Development of a Rapid and Quantitative Method for the Analysis of Tobacco Specific Nitrosamines in Mainstream Cigarette Smoke Using Isotope Dilution Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry" *Analytical Chemistry*, **2005**, 77, 1001-1006.

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analytical, inc.

800-1 Capitola Drive  
Durham, NC 27713-4385  
ADDRESS SERVICE REQUESTED

www.enthalpy.com  
ecigs@enthalpy.com  
919.850.4392

Enthalpy Analytical is now accepting all **E-CIGARETTE AND E-LIQUID** **SAMPLES** for product analysis. Contact us today to learn more and let us answer any questions you may have!

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800-1 Capitola Drive  
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Tel: 919.850.4392

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Web: www.enthalpy.com

E-mail: ecigs@enthalpy.com



## History

Founded in 1993, **Enthalpy** has been at the forefront of emission measurements for almost 20 years. Whether your project is routine or requires extensive R&D, **Enthalpy is your single-source solution.**

Guided by the founding principles of providing accurate, timely, and cost-effective analytical solutions, **Enthalpy is a name to trust.**

**Enthalpy receives, analyzes & reports over 1,700 projects annually.**

### Instrumentation

- 2 Triple Quad GC/MS/MS
- 4 gas-phase FTIR spectrometers
- 5 GCs configured with MS detectors
- 16 GCs configured with FID, FPD, TCD, PID detectors
- 11 HPLCs and ICs configured with UV and EC detectors

### Staff

- 3 Ph.D. Scientists
- 15 Analysts and Technicians
- 4 Project Managers
- 4 QA Specialists

**Communication.  
Speed.  
Service.**

## Accreditations

- National Environmental Laboratory Accreditation Conference (NELAC)  
Accredited in NJ, LA, TX, VA



- Accredited to the ISO17025 standard by the American Association for Laboratory Accreditation (A2LA)



- Not all testing referenced is A2LA accredited; consult scope #3198.01 for specific information.

### Project Management

Regardless of scope, every project is assigned one of four project managers to ensure project goals and client expectations are exceeded.



## Product Stewardship

**Our lab works with both trade associations and manufacturers to evaluate e-cigarettes and their products in order to maintain product stewardship and consistency.**

### Services Offered

Enthalpy specializes in the analysis of Harmful and Potentially Harmful Constituents in e-cigarette vapor and e-liquid.

Our laboratory can verify the purity of nicotine and determine the concentration of nicotine in e-liquid.



Among Enthalpy's instruments is a Linear Smoking Machine capable of simultaneously smoking twenty e-cigarettes.

**Single point of contact offered to all customers.**

**Our facility has expanded to over 20,000 ft<sup>2</sup> in order to meet testing needs and is dedicated to providing accurate and reliable results.**

