

University of Riverside (SMOG Chamber Testing)

1. **Investigation of the effect of mid- and high-level ethanol blends on the particulate and the mobile source air toxic (MSAT) emissions from a GDI flex fuel vehicle** (published 12 Dec 2018) [Link to Study](#)
2. **Intermediate and High Ethanol Blends Reduce Secondary Organic Aerosol Formation from Gasoline Direct Injection Vehicles** (published 23 May 2019) [Link to Study](#)
3. **Emissions from a GDI Flex Fuel Vehicle with High and Low Ethanol Blends: Gaseous Toxic Pollutants, and Oxidative Stress and Proinflammatory Properties of Particulates** (Submitted May 2019-Pending Peer Review)

Future Fuel Strategies, Tammy Klein lead consultant

1. **Effects of Ethanol Blends on Light-Duty Vehicle Emissions: A Critical Review** Completed and made available on-line January 2019. [Link](#) to press release and key points of the study. Request a copy of the study (meta-analysis) from FixOurFuel.com
2. **Emissions from Low-and Mid-Level Blends of Anhydrous Ethanol in Gasoline** [Link](#) to SAE 2019-01-0997. Published and presented April 2019, at SAE World Congress
3. **Second study looking into fuel blending still underway. To be published in the Fuels Journal and possibly submitted for peer review by June 1, 2019**
4. **Work underway with interested parties to write a Fuel Blending Guide as a possible SAE Recommended Practice**

North Carolina State University

1. **Comparison of Real World-Vehicle Fuel Use and Tailpipe Emissions from Gasoline-Ethanol Fuel Blends** [Link](#) to the study. Published March of 2019

Less Recent Work funded by UAI

1. **Effect of Heat of Vaporization, Chemical Octane, and Sensitivity on Knock Limit for Ethanol-Gasoline** Link to [SAE 2012-01-1277](#)
2. **An Overview of the Effects of Ethanol-Gasoline Blends on SI Engine Performance, Fuel Efficiency, and Emissions** Link to [SAE 2013-01-0635](#)
3. **Fuel Property Effects on Particulates in Spark Ignition Engines** Link to [SAE 2013-01-1124](#)
4. **Issues with T50 and T90 as Match Criteria for Ethanol-Gasoline Blends** Link to [SAE 2014-01-9080](#)
5. **Permeation Testing of Lower and Higher Aromatic E0, E10 and E20** Testing conducted by SGS Environmental Testing Center. Report available upon request.
6. **Declaration of James Wilkinson, PHD. Golder and Associates.** Study reviewing EPA's Motor Vehicle Emissions Model (MOVES) using EPA default fuel properties and real world fuel properties. Completed July, 2015 and available upon request.