Marc Menetrez, Environmental Engineer in EPA's National Risk Management Research Laboratory

Air and Energy Management Division
Mailing Address

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Areas of Expertise:

- Potential environmental impacts of cellulosic ethanol production and biofuels derived from algae
- Forms of biological and natural radiological contamination
- SPECIATE, EPA's repository of volatile organic gas and particulate matter (PM) speciation profiles of air pollution sources
- Biocontaminant Research Program and Biocontaminant Laboratory

Select Publications:

Menetrez, M. Feasibility study of algae-based CO2 capture. In Proceedings, AWMA 2015, Raleigh, NC, June 8-12, 2015. Air and Waste Management Association, Pittsburgh, PA, 1, 2015.

Menetrez, M.Y., Meeting the U.S. renewable fuel standard: a comparison of biofuel pathways. Biofuel Research Journal, (4), 110-122, 2014.

Black, J., T. Dean, G. Byfield, K. Foarde, and **M. Menetrez**. Determining Fungi rRNA Copy Number by PCR. Journal of Biomolecular Techniques. Association of Biomolecular Resource Facilities, Bethesda, MD, 24(1):32-38, 2013.

Menetrez, M. Y. An Overview of Algae Biofuel Production and Potential Environmental Impact. Environmental Science & Technology. ACS Publications, Washington, DC, 46(13):7073-7085, 2012.

Menetrez, M. Y. An Overview of Algae Biofuel Production and Potential Environmental Impact. Energy & Environmental Science. RSC Publishing, Cambridge, UK, 7703-7885, 2011.

Menetrez, M. Y. The Potential Environmental Impact of Waste from Cellulosic Ethanol Production. Journal of Air and Waste Management. Air & Waste Management Association, Pittsburgh, PA, 60(2):245-250, (2010).

View more research publications by Marc Menetrez

Education:

- Ph.D., North Carolina State University, Raleigh, NC; Environmental Engineering, 1987
- M.S., Duke University, Durham, NC; Environmental Engineering, 1982
- M.S., Duke University, Durham, NC; Environmental Management, 1976
- B.S. Long Island University, Brooklyn, NY; Biology, 1974

Professional Experience:

Workgroup/Project Leads

- Manage and direct SPECIATE, EPA's repository of volatile organic gas and particulate matter (PM) speciation profiles of air pollution sources
- Manage the Biocontaminant Research Program
- Established and manage the AEMD Biocontaminant Laboratory
- Three successful CRADA research agreements with manufacturers of antimicrobial treatments
- From 1998 to 2008, duties were managing the Biocontaminant Research Program, and Biocontaminant Laboratory.
- Initiated the integration of the AEMD Biocontaminant Laboratory activities with AEMD Homeland Security research.
- Initiated the ETV-ESTE program of evaluating microbial resistant gypsum wallboard with a consortium of multi-corporation participation and funded sponsorship.
- Evaluated the use of UV in the HVAC antimicrobial treatment of air which was used as the bases for the GSA adaption into FY 2000 building code standards. GSA currently requires all GSA air handling units to us UV air treatment as a direct result.

Impacts of Research

- Found the use of UV light to be effective for antimicrobial treatment of air in HVAC systems; GSA incorporated the approach in its FY 2000 building code standards.
- Demonstrated that humid air can provide sufficient moisture to permit the growth of some mold species on building materials.
- Established the most effective antimicrobial cleaners and paints to remove and prevent mold growth; these findings could provide economic benefits of many millions of dollars by reducing the need to tear out and replace wallboard.
- Determined comparative fungal resistances of various building materials; these findings allow the choice of preferred building materials, precluding the need for frequent replacement with immeasurable economic benefits worldwide.
- These results and engineering solutions have been used by OPPTS, EPA's Regional Offices, GSA, ASTM, ASHRAE, and California State Government to establish new codes, requirements and regulations to control indoor air quality.

Committees and Board Memberships

- EPA Children's Health: Toxic Mold Committee Member
- American Society for Testing and Materials Conference Committee Member, ASTM International Boulder Conference on Mold in the Indoor Environment: Assessment, Health and Physical Effects, and Remediation, 2004

Awards and Honors

- 2004 EPA Bronze Medal for contributing to the protection and safety of the American public through the development of safe disposal methods.
- 2003 EPA Bronze Medal in for successfully conducting a study of indoor mold in support of the Agency's "Children at Risk" program and "Asthma Initiative."