

UGA Wins, Scientific Integrity Loses

by David L. Lewis, Ph.D.[†]

September 30, 2010

In 1863, under the presidency of Abraham Lincoln, Congress passed the False Claims Act to recover taxpayer funds looted from the U.S. Treasury through fraudulent claims. Included in the False Claims Act were "Qui tam" provisions, which allow private citizens with both direct and independent knowledge of such acts of fraud to file lawsuits on behalf of the U.S. Government and receive a portion of the money recovered. Qui tam is short for a Latin phrase that loosely translates: "He who sues on behalf of the king and himself."

In 2005, Andy McElmurray, William Boyce, and I filed a qui tam lawsuit over a grant used to support research on treated sewage sludge (biosolids), which the U.S. Environmental Protection Agency had awarded to the University of Georgia Research Foundation in 1999.¹ The grant, according to our lawsuit, was used to publish fraudulent data in order to support an EPA program that poses a serious threat to public health and the environment. The U.S. District Court in Athens recently dismissed our case based on an issue over which the courts are divided, which involves the use of Freedom of Information Act and Open Records documents.²

EPA's sewage sludge regulation, called the 503 Rule, failed to pass a critically important internal peer-review in EPA's Office of Research and Development where I had worked as a research microbiologist for 32 years. But rather than improving the rule to better protect public health, employees who developed the rule in EPA's Office of Water began to fund a network of researchers at land grant universities, including UGA, to silence critics and publish research supporting it.³

After I published articles in *Nature* questioning the 503 Rule,^{4,5} EPA terminated me in 2003 and UGA decided against giving me a faculty position. Using my own personal funds, my coworkers at UGA and I conducted the first studies linking widespread illnesses and several deaths to biosolids in 2002.^{6,7} In 2008, *Nature* editors cited a multi-university study in Ohio confirming this link.⁸ They praised our work at UGA and called EPA's biosolids program an "institutional failure" of three presidential administrations.

Research on climate change, alternative energy sources, pollution control and other important areas has become a high-stakes game in which various groups within government, industry and academia attempt to steer and, in some cases, manipulate science. The use of unreliable data by EPA, USDA and other federal agencies to defend their scientifically questionable policies in these areas is a common practice that is eroding scientific integrity.

U.S. District Court Judge Anthony Alaimo of the Southern District of Georgia concluded in 2008 that there was a "broad consensus" that data from Augusta published in the UGA study were "unreliable, incomplete, and in some cases fudged."⁹ "In January 1999," Alaimo wrote, "the City rehired [a wastewater treatment plant manager] to create a record of sludge applications that did not exist previously."

EPA employees who developed the 503 Rule funded UGA to dispel public concerns over hundreds of head of cattle that died after eating forage grown with Augusta's biosolids on dairy farms owned by the McElmurray and Boyce families. Soil, forage and tissue samples collected by the farmers' experts revealed that the forage had taken up potentially toxic levels of cadmium, molybdenum and other hazardous wastes from the biosolids.

Augusta's fabricated data, which EPA provided to UGA, indicated that the City's biosolids contained much lower levels of heavy metals after EPA promulgated the 503 Rule in 1993. Julia Gaskin, the study's lead author in UGA's College of Agricultural and Environmental Sciences, was quoted in a press release: "Some individuals have questioned whether the 503 regulations are protective of the public and the environment. This study puts some of those fears to rest."¹⁰

EPA used Gaskin's study, which concluded that Augusta's biosolids "should not pose a risk to animal health,"¹¹ to convince the National Academy of Sciences (NAS) to disregard the cattle deaths on the McElmurray and Boyce farms. In a 2002 report citing the study, the NAS concluded that there is no documented evidence that the 503 Rule has failed to protect the environment.¹²

According to Ellen Harrison of Cornell, a member of the panel that produced the report, the NAS drew heavily upon my unpublished manuscripts when identifying various areas of concern needing additional research, then removed references crediting my work without consulting the panel.¹³ As a result, *Environmental Health Perspectives* (EHP) initially rejected our work when Professor David Gattie and I submitted it for publication, stating that we needed to credit the NAS for it! But once we produced copies of Harrison's sworn testimony and the manuscripts plagiarized by the NAS, EHP published our work.¹⁴

The EPA coauthor of the Gaskin study, Robert Brobst, admitted that the data he used in Gaskin's study were "sloppy," "poor quality," and "bad."¹⁵ Gaskin testified that she knew there were problems with the data when she submitted the paper, but had been assured by Brobst that they were not "totally fabricated."¹⁶ She also said that she believed Augusta's biosolids harmed the dairy farms;¹⁷ and she disagreed with the way EPA used her study.¹⁸

Before filing my qui tam lawsuit, we offered UGA several opportunities to simply correct the scientific record and avoid any costs associated with litigation. Authors of the Gaskin study declined; and UGA engaged in an all-out effort to defeat our qui tam lawsuit and avoid having to retract Augusta's fabricated data.

My former UGA department head testified about a meeting he had with faculty in the College of Agricultural and Environmental Sciences who objected to UGA hiring me.¹⁹ Because of their dependence on "future EPA grants" and "connections [with] the waste-disposal community," the faculty advised him to "stay away from things that could end up biting [them] in the rear-end."

Somehow, when scientific integrity was weighed against future grants to be gained by helping EPA employees publish fabricated data, scientific integrity lost.

†David Lewis (LewisDavel@aol.com) serves on the Board of Directors of the National Whistleblowers Center (www.whistleblowers.org).

References

- ¹ *Lewis et al. v. Walker et al.* United States District Court, Middle District of Georgia, Athens Division. Case No. 3:06-CV-16.
- ² *Lewis et al. v. Walker et al.* Order issued Sept. 8, 2010.
- ³ *The Gatekeepers*. Hallman & Wingate, LLP. Marietta, GA. www.hallmanwingate.com
- ⁴ Lewis, D.L. 1996. EPA Science: Casualty of election politics. *Nature* **381**:731-2.
- ⁵ Lewis, David L., Wayne Garrison, K. Eric Wommack, Alton Whittemore, Paul Steudler & Jerry Melillo. 1999. Influence of environmental changes on degradation of chiral pollutants in soils. *Nature* **401**:898-901.
- ⁶ Lewis, D.L., D.K. Gattie, M.E. Novak, S. Sanchez, and C. Pumphrey. 2002. Interactions of pathogens and irritant chemicals in land-applied sewage sludges (biosolids) *BMC Public Health* 2:11 (28 Jun) www.biomedcentral.com/1471-2458/2/11
- ⁷ Lewis, D.L. & D. K. Gattie. 2002. Pathogen risks from applying sewage sludge to land *ES&T* **36**:286A-293A
- ⁸ Editorial, "Stuck in the Mud;" Tollefson, J. "Raking through sludge exposes a stink," *Nature* **453**:258; 262-263.
- ⁹ *McElmurray v. USDA*, United States District Court, Southern District of Georgia, Case No. CV105-159, p. 17. Order issued Feb. 25, 2008. Available online at hallmanwingate.com.
- ¹⁰ "Sludge study relieves environmental fears," Cat Holmes. Jan. 29, 2003. <http://georgiafaces.caes.uga.edu/getstory.cfm?storyid=1770>
- ¹¹ J. Gaskin, R. Brobst, W. Miller, and W. Tollner. 2003. Long-term biosolids application effects on metal concentrations in soil and bermudagrass forage. *J. Environ. Qual.* **32**: 146-152. <http://jeq.scijournals.org/cgi/reprint/32/1/146.pdf>
- ¹² National Research Council. *Biosolids Applied to Land: Advancing Standards and Practice*, pp. 4, 52. National Academy Press. Washington, DC, 2002. www.nap.edu/books/0309084865/html
- ¹³ Harrison, E.Z. Nature Correspondence (correspondence@nature.com), Jun. 17, 2008. [The Gatekeepers, p. 37-38 Hallman & Wingate, LLP. Marietta, GA. www.hallmanwingate.com]

¹⁴ Gattie, D.K. and D. L. Lewis. 2004. A high-level disinfection standard for land-applied sewage sludge (biosolids). *Environ. Health Perspect.* 112:126-31.

¹⁵ *Lewis et al. v. Walker et al.* Depo. R. Brobst, Apr. 14, 2009, p. 269.

¹⁶ *Lewis et al. v. Walker et al.* Depo. J. Gaskin, Jun. 22, 2009, p. 269.

¹⁷ *Lewis et al. v. Walker et al.* Depo. J. Gaskin, Jun. 22, 2009, p. 293.

¹⁸ *Lewis et al. v. Walker et al.* Depo. J. Gaskin, Jun. 22, 2009, p. 374-380.

¹⁹ *Lewis v. EPA*, U.S. Dept. Labor CA 2003-CAA-00005,-6. Depo. R. E. Hodson, Jan. 31, 2003.