

SUBMITTED ELECTRONICALLY

April 27, 2012

Docket No. APHIS-2010-0103
Regulatory Analysis and Development, PPD
APHIS, Station 3A-03.8
4700 River Road
Unit 118
Riverdale, MD 20737-1238

Re: Docket No. APHIS-2010-0103 (Petitions, Plant Pest Risk Assessments, and Environmental Assessments; Availability: Dow AgroSciences, LLC, Corn Genetically Engineered for Herbicide Tolerance)

Dear Secretary Vilsack,

On behalf of the 48 undersigned scientists, physicians, nurses, and other health professionals, we respectfully request that USDA deny the petition from Dow AgroSciences to deregulate its genetically engineered (GE), 2,4-D-resistant corn (DAS-40278-9). Widespread planting of 2,4-D GE corn is projected to substantially increase the use of 2,4-D; experts estimate that overall agricultural use of this herbicide may rise from 27 to over 100 million pounds over the next decade. 2,4-D soybeans and cotton would boost usage still more. Yet USDA has provided no analysis of the harm to human health that could result.

2,4-Dichlorophenoxyacetic acid (2,4-D) is an herbicide that was one of the two active ingredients in Agent Orange, the Vietnam War defoliant. Although the main health effects of Agent Orange were blamed on the other component of the mixture (2,4,5-T) and dioxin contamination, the data indicates that 2,4-D has significant health risks of its own. It remains unclear whether continuing low-level contamination of 2,4-D with dioxins or dioxin-like compounds plays a role.

Dozens of studies in humans have reported associations between exposure to 2,4-D and non-Hodgkin's lymphoma, a cancer of the lymphocytes (white blood cells). This finding is consistent with other studies finding that 2,4-D increases lymphocyte replication in exposed farmworkers, and that 2,4-D formulations are cytotoxic and mutagenic. For example, in human lymphocytes, 2,4-D causes chromosome breakage and aberrant cells. In 2010, according to the National Cancer Institute, approximately 65,540 people in the United States were diagnosed with non-Hodgkin's lymphoma. The incidence of this disease in the United States has increased to about double the rate seen in the 1970s, even when adjusted for population growth and aging. 2,4-D is likely to be responsible for a fraction of cases of non-Hodgkin's lymphoma each year, although it is difficult to quantify the exact numbers.

Dozens of animal studies show that 2,4-D exhibits hormone-disrupting activity. 2,4-D also affects the function of the neurotransmitters dopamine and serotonin. Interference with hormones and neurotransmitters can cause serious and lasting effects during fetal and infant development, including birth defects, neurological damage, and interference with reproductive function. Human studies support the results of the animal studies. Male farm sprayers exposed to 2,4-D have lower sperm counts and more spermatid abnormalities

compared to men who are not exposed to this chemical. In Minnesota, higher rates of birth defects have been observed in wheat-growing areas of the state with the highest use of 2,4-D and other herbicides of the same class. This increase was most pronounced among infants who were conceived in the spring, the time of greatest herbicide use. A larger study in agricultural counties in Minnesota, Montana, North Dakota, and South Dakota found significant increases in malformations of the circulatory and respiratory systems, especially among infants conceived in April-June in wheat-growing counties. In the same study, infant deaths from birth defects among males were significantly elevated.

2,4-D is classified by the EPA as a hazardous air pollutant and by the State of California as a toxic air contaminant. Human exposure to 2,4-D is widespread, including among children. Studies in Iowa, North Carolina, and Ohio, for example, found 2,4-D in the carpet dust of 83-98 percent of homes sampled, despite the fact that most homeowners reported that they had not used the pesticide recently. These studies imply that 2,4-D is blowing in or being tracked in to homes, and many studies have shown that chemicals – including 2,4-D – in house dust end up on children’s hands and in their bodies.

For all of the above reasons, we urge USDA to deny Dow’s petition to deregulate 2,4-D-resistant corn. At the very least, USDA must conduct a comprehensive Environmental Impact Statement that addresses the serious issues discussed above, meaningfully considers restrictions on this crop system to prevent its foreseeable harms, and then use that EIS to inform its eventual decision, as required by the National Environmental Policy Act.

CC: Administrator Jackson, U.S. Environmental Protection Agency

SIGNED:*

Gina Solomon, MD, MPH
Clinical Professor of Medicine, University of California, San Francisco

Martha Arguello, ED
Physicians for Social Responsibility, Los Angeles Chapter

Toni Bark, MD, MHEM, LEEDap
Boston University, School of Public Health-Healthcare Emergency Management

Alison Bleaney, OBE, MB, ChB, FACRRM
Tasmanian Public and Environmental Health Network

James Brophy, PhD
Adjunct Assistant Professor, University of Windsor, Windsor, Ontario Canada

David O. Carpenter, MD
Director, Institute for Health and the Environment

Margaret Christensen, MD, FACOG
Christensen Center for Whole Life Health

Theo Colborn, PhD
President, TEDX (The Endocrine Disruption Exchange)

Professor Emeritus, University of Florida, Gainesville
Honorary Professor of Science, University of Colorado

Nathan Daley, MD, MPH
Integrative Preventive Medicine, Ecological Medicine
Director of Medical Programs, Leonardi Institute

Rupali Das, MD, MPH
Chief, Exposure Assessment Section, California Department of Public Health

Martin Donohoe, MD
Fellow, American College of Physicians (FACP)
Adjunct Associate Professor, School of Community Health, Portland State University
Member, Board of Advisors, Physicians for Social Responsibility – Oregon Chapter
Senior Physician, Internal Medicine, Kaiser Sunnyside Medical Center

Kathleen Diane Drum, RN, AE-C
Multnomah County Environmental Health

Robert Gould, MD
President, Physicians for Social Responsibility, SF-Bay Area Chapter

Kevin D. Hamilton, RRT, RCP
Deputy Chief of Programs, Clinica Sierra Vista, Inc.

Tyrone B. Hayes, PhD
Professor, University of California, Berkeley

Julie Hohmeister, MS, APRN
Littleton, NH

Richard J. Jackson, MD, MPH
Professor and Chair, Department of Environmental Health Sciences, University of California, Los Angeles

Margaret Keith, PhD
Adjunct Assistant Professor, University of Windsor, Windsor, Ontario Canada

Matt Landos, BVSc (Hons I), MANZCVS
Director, Future Fisheries Veterinary Service Pty Ltd
Honorary Lecturer, Associate Researcher, University of Sydney

Rick Liva, RPh, ND
Chief Medical Officer & Director of Quality, Vital Nutrients, Middletown, CT

Candace Kugel, FNP, CNM, MS
Migrant Clinicians Network, State College, PA

Emily Marquez, PhD
Staff Scientist, Pesticide Action Network North America

Jennie McLaurin, MD, MPH
Migrant Clinicians Network

Rob McConnell, MD
Professor of Preventive Medicine, University of Southern California

James Neal-Kababick
Director, Flora Research Laboratories
Fellow, AOAC International

Peter Orris, MD, MPH
Professor and Chief of Service, Occupational and Environmental Medicine (MC684)
University of Illinois Hospital and Health Science System

John A. Patterson, MD, MSPH
Fellow, American Academy of Family Physicians (FAAFP)
Associate Professor, Community-Based Faculty, Dept of Family and Community Medicine
University of Kentucky College of Medicine, Lexington KY

David Pepper, MD
Board Certified Family Physician
Co-Founder - Medical Advocates for Healthy Air

Joanne Perron, MD
Program on Reproductive Health and the Environment,
University of California at San Francisco

Warren Porter, MD, PhD
University of Wisconsin, Madison

Beth Rosenberg, ScD, MPH
Tufts University School of Medicine, Boston, MA

Lynn Ringenberg, MD
President, Physicians for Social Responsibility, Florida/Tampa
Emeritus Professor of Pediatrics, University of South Florida

Mike Rowland, MD, MPH
Vice President for Medical Affairs
Medical Director, Occupational Medicine, Franklin Memorial Hospital, Farmington, Maine

Salvador Sandoval, MD, MPH
Staff Physician, Golden Valley Health Center

Ted Schettler, MD, MPH
Science Director, Science and Environmental Health Network

Paulette Schreiber, CRNP
Elk Regional Health Center, Saint Marys, PA

Kathleen Schuler, MPH
Institute for Agriculture & Trade Policy

Rosemary Sokas, MD, MOH
Professor and Chair, Department of Human Science School of Nursing and Health Studies
Georgetown University, Washington DC

Ana M. Soto, MD
Professor, Department of Anatomy and Cell Biology
Tufts University School of Medicine, Boston, MA

Sandra Steingraber, PhD
Scholar in Residence, Department of Environmental Studies, Ithaca College, Ithaca, New York

Kristen Stoimenoff, MPH
Deputy Director, Health Outreach Partners

Patrice Sutton, MPH
Research Scientist, Program on Reproductive Health and the Environment
University of California San Francisco, Department of Obstetrics, Gynecology and Reproductive Sciences

Claudia Thomas, MD
Fellow, American Academy of Pediatrics (FAAP)
Fellow, American Academy of Emergency Physicians (FAAEP)

Catherine Thomasson, MD
Executive Director, Physicians for Social Responsibility, Washington DC

Harry Wang, MD
Physicians for Social Responsibility – Sacramento Chapter

David Wallinga, MD
Institute for Agriculture & Trade Policy

Diana Zuckerman, PhD
President, Cancer Prevention and Treatment Fund, Washington, DC

Edward Zuroweste, MD
Assistant Professor of Medicine, Johns Hopkins School of Medicine
Chief Medical Officer, Migrant Clinicians Network, PA

**Institutional affiliation provided for identification purposes only*