

Why don't pesticides feature in the WHO-UNICEF-*Lancet* Commission A future for the world's children?

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"It's ridiculous to talk about freedom in a society dominated by huge corporations. What kind of freedom is there inside a corporation? They're totalitarian institutions - you take orders from above and maybe give them to people below you. There's about as much freedom as under Stalinism."

— Noam Chomsky

Why don't pesticides feature in the WHO-UNICEF-Lancet Commission A future for the world's children?

Professor Anthony Costello
Professor of International Child Health
Director of the UCL Institute for Global Health.

Dear Professor Costello

You are lead author for: **A future for the world's children? A WHO–UNICEF–Lancet Commission**
I quote from your comments in the *Guardian* article:¹

"We also call for greater regulation of marketing of tobacco, alcohol, formula milk, sugar-sweetened beverages and gambling to children, and of social media companies which target children through secret algorithms and the inappropriate use of their personal data."

The report says children are at risk from harmful marketing. *"Evidence suggests that children in some countries see as many as 30,000 advertisements on television alone in a single year, while youth exposure to vaping (e-cigarettes) advertisements increased by more than 250% in the US over two years, reaching more than 24 million young people."*

Forty-two authors, mostly from the World Health Organisation (WHO), United Nations Children's Fund (UNICEF) and the UK, contributed to the Report. Why did none of them mention pesticides?

The UN expert on Toxics, Baskut Tuncak wrote in the *Guardian* on 06/11/2017: The EU and glyphosate: it's time to put children's health before pesticides ²

"A pending decision on Monsanto's ubiquitous weedkiller is a crucial opportunity to protect our children from the toxic cocktail of pesticides polluting their food, water and play areas."

"Our children are growing up exposed to a toxic cocktail of weedkillers, insecticides, and fungicides. It's on their food and in their water, and it's even doused over their parks and playgrounds. Many governments insist that our standards of protection from these pesticides are strong enough. But as a scientist and a lawyer who specialises in chemicals and their potential impact on people's fundamental rights, I beg to differ. Last month it was revealed that in recommending that glyphosate – the world's most widely-used pesticide – was safe, the EU's food safety watchdog copied and pasted pages of a report directly from Monsanto, the pesticide's manufacturer. Revelations like these are simply shocking.

The UN Convention on the Rights of the Child, the most ratified international human rights treaty in the world (only the US is not a party), makes it clear that states have an explicit obligation to protect children from exposure to toxic chemicals, from contaminated food and polluted water, and to ensure that every child can realise their right to the highest attainable standard of health. These and many other rights of the child are abused by the current pesticide regime. These chemicals are everywhere and they are invisible. The only way to protect citizens, especially those disproportionately at risk from exposure, is for governments to regulate them effectively, in large part by adhering to the highest standards of scientific integrity.

Paediatricians have referred to childhood exposure to pesticides as creating a "silent pandemic" of disease and disability. Exposure in pregnancy and childhood is linked to birth defects, diabetes, and cancer. Because a child's developing body is more sensitive to exposure than adults and takes in more of everything – relative to their size, children eat, breathe, and drink much more than adults – they are particularly vulnerable to these toxic chemicals. Increasing evidence shows that even at

¹ <https://www.theguardian.com/global-development/2020/feb/19/the-world-is-failing-to-ensure-children-have-a-liveable-planet-report-finds>

² <https://www.theguardian.com/environment/2017/nov/06/the-eu-and-glyphosate-its-time-to-put-childrens-health-before-pesticides>

“low” doses of childhood exposure, irreversible health impacts can result. But, most victims cannot prove the cause of their disability or disease, limiting our ability to hold those responsible to account. In light of revelations such as the copy-and-paste scandal, a careful re-examination of the performance of states is required. The overwhelming reliance of regulators on industry-funded studies, the exclusion of independent science from assessments, and the confidentiality of studies relied upon by authorities must change.”

The Bill and Melinda Gates Foundation donates money to the WHO

I note, that without exception, the authors have received funding from the above charitable foundations.

Global Justice wrote a Report Gated development. Is Bill Gates always a force for good?³

Analysis of the BMGF’s programmes shows that the foundation, whose senior staff is overwhelmingly drawn from corporate America, is promoting multinational corporate interests at the expense of social and economic justice. Its strategy is deepening – and is intended to deepen – the role of multinational companies in global health and agriculture especially, even though these corporations are responsible for much of the poverty and injustice that already plagues the global south. Indeed, much of the money the BMGF has to spend derives from investments in some of the world’s biggest and most controversial companies; thus, the BMGF’s ongoing work significantly depends on the ongoing profitability of corporate America, something which is not easy to square with genuinely realising social and economic justice in the global south.

In addition, the foundation has become the world’s leading funder of research into the genetic modification (GM) of crops and is funding organisations to push GM crops across Africa and to change national legislation on this issue, in the face of often considerable opposition. It is also leading the push for massive increases in the use of chemicals by African farmers and is promoting the privatisation of seed production to benefit mainly US and European agribusiness. These priorities are a direct challenge to the increasingly popular movements in support of food sovereignty and agroecological farming in Africa. Furthermore, the foundation is also using its funds to promote the increasing privatisation of health services in developing countries.

In health, the BMGF has been the largest or second largest contributor to the **World Health Organisation’s** budget in recent years. The BMGF provided 11 per cent of the WHO’s entire budget in 2015, which is 14 times greater than the UK government’s contribution. The foundation has also become the world’s largest funder of health research for communicable diseases, such as TB, malaria and HIV- financing more than the WHO itself.

The foundation’s close relationship with seed and chemical giant **Monsanto** is best-known. The BMGF, which previously owned shares in the company, promotes several projects in which Monsanto is a beneficiary, notably support for GM research (see section 3). But the BMGF partners with many other multinational corporations, notably in the areas of agriculture – where the BMGF is a heavy pusher of chemicals and patented seeds – and in health – where foundation funds go to projects in which Big Pharma are among the beneficiaries.

Syngenta is being supported by foundation funding of the Innovative Vector Control Consortium (IVCC), which seeks to develop anti-malaria technologies. As part of this programme, Syngenta led a team to develop the Actellic spray, which fights insecticide resistant mosquitoes.

Bayer is being supported through the Better Access to Safe and Effective Contraception project, which aims to increase access to contraception for women in low-income countries. The BMGF is also reported to be collaborating in Bayer’s promotion of “new chemical approaches” and “biological crop protection” (i.e. encouraging agrochemical sales and GM crops) in the global south.

³ <https://www.globaljustice.org.uk/resources/gated-development-gates-foundation-always-force-good>

Gates Foundation in India donated Gardasil (Merck) and Cevaxix (GlaxoSmithKline (GSK) to prevent cervical cancer

Narayana Kumar, Times of India 31 August 2014: 'Controversial vaccine studies: Why is Bill & Melinda Gates Foundation under fire from critics in India?' "Several months after the vaccines were administered, many girls started falling ill and by 2010 five of them died in Andhra Pradesh and two died in Gujarat.⁴ A standing committee on health and family welfare that investigated the irregularities pertaining to the observation studies in India tabled its report a year ago, on August 30. The committee said it was "deeply shocked to find that in Andhra Pradesh out of the 9,543 [consent] forms, 1,948 forms have thumb impressions while hostel wardens have signed 2,763 forms. In Gujarat, out of the 6,217 forms 3,944 have thumb impressions and 5,454 either signed or carried thumb impressions of guardians. The data revealed that a very large number of parents or guardians are illiterate and could not even write in their local languages, Telugu or Gujarati." Earlier this month, taking a serious view of the death of seven tribal girls in the context of the observation studies, the Supreme Court asked the Drug Controller General of India (DCGI) and the Indian Council of Medical Research (ICMR) to explain how permissions were given."

Fraud in a German Laboratory casts doubt on the re-approval of glyphosate in 2017

A new study has revealed Laboratory of Pharmacology and Toxicology (LPT) Hamburg was found to commit fraud in a series of regulatory tests, several of which had been carried out as part of the glyphosate re-approval process in 2017.⁵ Even though "Good Laboratory Practice" (GLP) certification is required for such studies, at least 14% of such glyphosate regulatory studies came from LPT Hamburg. The laboratory was caught manipulating GLP toxicity studies by replacing dead animals with living ones, changing tumour data to "inflammations" and generally distorting the data to please its clients. It is highly concerning that GLP studies are still considered the golden scientific standard by regulatory authorities who seem to believe that cheating under GLP is impossible. PAN Europe has asked the European Commission to discard the studies carried out by LPT laboratory from the glyphosate dossier currently undergoing re-evaluation at EU-level, and from any other dossier.

Based on testimonies from LPT's employees and evidence of fraud carried out in LPT Hamburg, a major GLP laboratory in Germany, [the survey](#) carried out by the organisations PAN Germany, Global2000 and Corporate Europe Observatory reveals that at least 14% of the new regulatory studies submitted for the re-approval of glyphosate in 2017 were conducted by LPT Hamburg. The number could be higher, as this information in the dossiers often remains undisclosed to the public. The laboratory is currently facing criminal charges, and although it is impossible to know whether the fraud occurred only in the glyphosate-related studies, any tests delivered by LPT Hamburg must be considered unreliable and thus discarded from the re-assessment procedure.

Good Laboratory Practice is a mandatory standard in regulatory studies obliging laboratories to write down a series of endpoints in a specific format. This system allows for a higher level of standardisation of the reporting and easier control by regulatory authorities.

The LPT scandal raises a number of questions that urgently need to be addressed by the German and European authorities

(1) Why did the alleged fraudulent manipulation of study results go undetected for at least 15 years, and how many years longer would this have continued if the abuse had not been exposed by an undercover animal welfare activist?

⁴ http://articles.economictimes.indiatimes.com/2014-08-31/news/53413161_1_hpv-vaccine-cervarix-human-papilloma-virus

⁵

<https://www.pan-europe.info/press-releases/2020/02/fraud-german-laboratory-casts-additional-doubts-2017-re-approval-glyphosate>

- (2) Which pesticide active substances, medicinal products and other chemicals are in circulation throughout the EU whose marketing authorisation was obtained by means of studies carried out at LPT?
- (3) What measures have the responsible authorities in the German Länder and the Federal Institute for Risk Assessment BfR (Bundesinstitut für Risikobewertung) taken so far in response to the reported manipulations and falsifications of studies? The BfR is responsible for the nationwide coordination of GLP controls.
- (4) According to a reliable source, LPT facilities have been checked by GLP-inspectors up to 2-3 times a year. Have the authorities in northern Germany performed particularly badly or are GLP inspections routinely insufficient throughout Germany? Is this possibly due to under-staffing, insufficient qualifications, or are there other reasons?
- (5) How is the widespread blind acceptance of GLP studies to be assessed in view of the control failure in Germany, which has become apparent with the concrete example of LPT, and in view of the fundamentally inadequate verification of GLP standards in other important regions of the world, such as the USA.
- (6) In view of the apparent inability to ensure compliance with GLP standards, would it not be urgently necessary to eliminate the inherent conflict of interest arising from the fact that the studies are commissioned by manufacturers who have substantial economic interests in the results of these studies?
- (7) What would be more effective: a massive increase in GLP controls or a decoupling of industry from regulatory studies? In other words, it should not be the industry, but the authorities that decide which contract laboratory carries out what study. (the costs would still be borne by the applicant).

The British Government colluded with Monsanto and Bayer from 1949

After WW2, in 1949, following the Nuremberg trials, the Westminster Government invited Monsanto to set up a chemical factory in Newport, Wales, as far away from London as possible. They also worked with Bayer, the former IG Farben, the private chemical company that collaborated with the Nazis.⁶ *“It built a factory next to Auschwitz, Poland, so it could exploit Jewish slave labour in its oil and rubber production plant. In total, some 300,000 detainees from Auschwitz were employed in IG Farben’s workforce, supplying the company with free labour. The company housed the workers in its own concentration camp, with the horrendous conditions there and in the factory leading to an estimated 30,000 deaths. On top of this, an unknown number of workers deemed unfit to continue working at the factory were sent to the death camp at Auschwitz. Alongside the brutal conditions of the labour camp, IG Farben also sanctioned drug experiments on live, healthy inmates. IG Farben was probably the most well-known corporate participant in the Holocaust, and the company’s history sheds a chilling light on how genocide became tied in with economics and business.”*

Both companies used factories that had made chemical weapons in the war to make chemicals for agriculture from the same ingredients. From then on, Monsanto’s factory in Wales manufactured Polychlorinated biphenyls (PCBs) until 1977, and a number of other dangerous chemicals. Monsanto was found to be dumping toxic waste in the River Severn, public waterways and sewerage. After that they paid a contractor to illegally dump *“thousands of tons of cancer-causing chemicals - among them PCBs, dioxins and Agent Orange derivatives”* at two quarries in Wales: Brofiscin (80,000 tonnes) and Maendy (42,000 tonnes) between 1965 and 1972. In 1968 US documents showed that Monsanto tried to decide whether or not to come clean about the dangers of the chemicals. They stopped making PCBs in Anniston US in 1971 because of scandals about PCBs on the health of the population and wildlife. However, the British government led by Ted Heath agreed to ramp up production at the Monsanto plant in Newport. Alabama is more than 50 million square miles: Wales is 8,000 square miles.

⁶ <https://www.newhistorian.com/ig-farben-opens-factory-at-auschwitz/3822/>

In 2003 when toxic effluent from the quarry started leaking into people's streams in Grosfaen just outside Cardiff, the Environment Agency - a government agency concerned with flooding and pollution – was hired to clean up the site in 2005.⁷

“Firstly, the Agency repeatedly failed to hold Monsanto accountable for its role in the pollution (a role that Monsanto denied from the outset). Secondly, the Agency consistently downplayed the dangers of the chemicals themselves, even claiming that they offered no “identifiable harm or immediate danger to human health” in their official report.”

According to engineering company WS Atkins, in a report prepared for the agency and the local authority in 2005 **but never made public**, the site contains at least 67 toxic chemicals. Seven PCBs have been identified, along with vinyl chlorides and naphthalene. The unlined quarry is still leaking, the report says. *“Pollution of water has been occurring since the 1970s, the waste and groundwater has been shown to contain significant quantities of poisonous, noxious and polluting material, pollution of ... waters will continue to occur.*

Fraud in the UK: Cancer Research UK was high-jacked by the Agrochemical Industry

David Cameron appointed Michael Pragnell, founder of Syngenta, to the Board of Cancer Research UK in 2010; he became Chairman in 2011

Michael Pragnell former Chairman of Cancer Research UK (2010-2017), founder of Syngenta and former Chairman of CropLife International was awarded a CBE in 2017 for services to cancer research. CropLife International was founded in 2001.⁸ As of 2015 CropLife International's member list includes the following 8 companies: [BASE](#), [Bayer CropScience](#), [Dow AgroSciences](#), [DuPont](#), [FMC Corp.](#), [Monsanto](#), [Sumitomo](#) and [Syngenta](#). Many of these make their own formulated glyphosate.

The CRUK website denies that there is any link between pesticides and cancer. *“For now, the evidence is not strong enough to give us any clear answers. But for individual pesticides, the evidence was either too weak to come to a conclusion, or only strong enough to suggest a “possible” effect. The scientific evidence on pesticides and cancer is still uncertain and more research is needed in this area.”*⁹ CRUK, the Chief Medical Officer for England and Public Health England, linked cancer to alcohol, obesity and smoking. They all blamed the people for 'lifestyle choices'. Where is the scientific evidence for this?

In 2011 CRUK started donating money (£450 million/year) to the Government's Strategy for UK Life Sciences and AstraZeneca (Syngenta's parent company) was providing 22 compounds to academic research to develop medicines in the UK. One Corporation promotes cancer and other diseases; the other Corporation tries to cure them with synthetic chemicals. A lucrative relationship between the British government, the European Regulators, the pesticides industry, the pharmaceutical corporations and the Chief Executive Officer and Co-Founder, [Chemical Watch](#), began.

Chemical Watch is a global industry that has emerged to advise on Biocides Regulation: Biocides Regulations in the European Union makes a lot of money for European Regulators and for Britain REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances): The Biocidal Product Regulation (BPR, Regulation (EU) 528/2012) concerns the placing on the market and use of biocidal products, which are used to protect humans, animals, materials or articles against harmful organisms, like pests or bacteria, by the action of the active substances contained in the biocidal product. *“REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while **enhancing the competitiveness of the EU chemicals industry**. It also promotes alternative methods for the hazard*

⁷ <https://theecologist.org/2007/oct/11/burying-truth-origanal-ecologist-investigation-monsanto-and-brofiscin-quarry>

⁸ https://www.vinci.com/vinci.nsf/en/management-board-directors/pages/michael_pragnell.htm

⁹ <http://www.cancerresearchuk.org/cancer-info/healthyliving/cancercontroversies/pesticides/>

assessment of substances in order to reduce the number of tests on animals.”

The British Government is making a lot of money out of it because BiocidesHub and the Yordas Groups are both based in the UK.

Biocides Symposia are held regularly around the world to “*get up-to-speed on all that’s new in biocidal products regulation*” to “*stay one step ahead.*” Courses are from £300-400 per day to \$1585 for a Symposium. A multitude of firms have clients from ‘*industry, crop protection and government*’. Chemical Watch **BiocidesHub** (Shrewsbury) offered 13 Events on Biocides Regulation in 2016, ranging from beginners’ courses to advanced courses. There are far more courses in 2019.

There appears to be so much demand for places on REACH training courses that a new centre has been set up in Lancaster Environment Centre. “*Originally founded as ‘The REACH Centre’ in 2007, the Company was set up to meet the needs of industry to comply with the EU REACH Regulation. From its inception, substantial re-investment allowed the business to rapidly expand and develop capacity in a wealth of new scientific and regulatory disciplines. Chemtrac, our globally renowned on-line product stewardship management system was introduced in 2011. In order to reflect the increasingly diverse nature of our business and research activities, the Company was re-branded as ‘Yordas Group’ from 1st November 2017 based in Lancaster Environment Centre.*”¹⁰ **BIOCIDES HAVE NO PLACE IN AGRICULTURE.**

Health inequality in the UK greater than previously thought: in the poorest areas, women are getting their first long-term illness at just 47 and men at 49

The report, The Health of the Nation: A Strategy for Healthier Longer Lives, has been written by the All-Party Parliamentary Group (APPG) for Longevity. It found that women in the UK are living for 29 years in poor health and men for 23 years: an increase of 50% for women and 42% for men on previous estimates based on self-reported data.¹¹

The report found that as our population ages there will be very large increases in the number of cases of ill-health over the next 15 years. In 2035 there will be around 16 million cases of dementia, arthritis, type 2 diabetes and cancers in people aged 65 and over – twice as many as in 2015. In ten years, there will be 5.5 million people with type 2 diabetes while 70% of people aged 55+ will have at least one obesity-related disease.

The APPG for Longevity has spent nine months working with a range of cross-party politicians, the government’s Behavioural Insight Team and Public Health England, as well as experts including the King’s Fund and the Health Foundation on how to improve the nation’s health.

Their report found that the number of major illnesses suffered by older people will increase by 85% between 2015 and 2035. It also found older people in the poorest areas have 35% more spent on them by the NHS than older people in the richest areas.

But the report also found that up to 75% of new cases of heart disease, stroke and type 2 diabetes, 40% of cancer incidence and dementia risks could be reduced if we cut smoking, unhealthy diet, harmful consumption of alcohol and insufficient physical activity.

Weedkiller found in 43 out of 45 popular breakfast cereals marketed for US children

Significant levels of the weedkilling chemical glyphosate have been found in an array of popular breakfast cereals, oats and snack bars marketed to US children, a new study has found.¹² Tests revealed glyphosate, the active ingredient in the popular weedkiller brand Roundup, present in all but two of the 45 oat-derived products that were sampled by the Environmental Working Group, a public health organization. Nearly three in four of the products exceeded what the EWG classes safe for children to consume. Products with some of the highest levels of glyphosate include granola,

¹⁰ <https://www.yordasgroup.com/about-us>

¹¹ <https://www.theguardian.com/society/2020/feb/12/health-inequality-greater-than-previously-thought-report-finds>

¹² <https://www.theguardian.com/environment/2018/aug/16/weedkiller-cereal-monsanto-roundup-childrens-food>

oats and snack bars made by leading industry names Quaker, Kellogg's and General Mills, which makes Cheerios. In April, internal emails obtained from the Food and Drug Administration (FDA) showed that scientists have found glyphosate on a wide range of commonly consumed food, to the point that they were finding it difficult to identify a food without the chemical on it. The FDA has yet to release any official results from this process. **The UK Guardian reported:** "There was no indication that the claims related to products sold outside the US."

Weedkiller found in popular breakfast cereals marketed for UK children

In view of this statement by the *Guardian*, we sent samples of four oat-based breakfast cereals marketed for children in the UK to the Health Research Institute, Fairfield, Iowa, an accredited laboratory for glyphosate testing. Kellogg No added sugar granola with apricot and pumpkin seeds Barley Flakes 27% Oats 23% Rye 13% Wheat flour Oat flour; Quaker Oat so Simple: Quaker Whole Grain Rolled Oats; Weetabix Oatibix 100% wholegrain oats; Nestle Multigrain Cheerios: Whole Grain Oat Flour 29.6% Whole Grain Wheat 29.6% Whole Grain Barley Flour 17.9% Whole Grain Corn Flour 2.1% Whole Grain Rice Flour 2.1%.

Dr Fagan the Director said: "These results are consistently concerning. The levels consumed in a single daily helping of any one of these cereals, even the one with the lowest level of contamination, is sufficient to put the person's glyphosate levels above the levels that cause fatty liver disease in rats (and likely in people). He wrote that they were "shockingly high levels". And he said, "to think they are being given to children."

Type of breakfast cereal marketed for children Product description	Glyphosate level ng/g	AMPA ng/g	Effective glyphosate level ng/g
Kelloggs No added sugar granola with Apricot & pumpkin seeds	499.90	ND	499.90
Quaker/Oat So simple/Original Microwaveable Oats	464.23	24.04	500.28
Weetabix Oatibix 100% wholegrain oats	318.85	16.96	344.28
Nestle Multigrain Cheerios Whole Grain Oat Flour 29.6% Whole Grain Wheat 29.6% Whole Grain Barley Flour 17.9% Whole Grain Corn Flour 2.1% Whole Grain Rice Flour 2.1%.	137.29	ND	137.29

The *Daily Mail* published the figures but the *Guardian* didn't, although they published US figures. ¹³

Severe obesity in children in the UK at the end of primary school: more than a thousand children in Wales starting school are classed as "severely obese," according to public health officials. ¹⁴

For the first time, the child measurement programme has a category for super-obese four and five-year-olds. Latest figures show 3.3% of children are severely obese, described as "very worrying" by Public Health Wales (PHW). It was highest for boys and those living in the most deprived areas.

The UK Department of Health's School Fruit and Vegetable Scheme (SFVS) has residues of 123 different pesticides analysed by PAN-UK

Pesticide Action Network UK's analysis of the last 12 years of residue data published by the Expert Committee on Pesticide Residues in Food (PRiF) shows that there are unacceptable levels of pesticides present in the food provided through the Department of Health's School Fruit and

¹³ <https://www.dailymail.co.uk/health/article-6315209/Revealed-UK-cereals-contain-potentially-harmful-amounts-WEEDKILLER.html>

¹⁴ <https://www.bbc.co.uk/news/uk-wales-47483203>

Vegetable Scheme (SFVS).¹⁵ **Residues of 123 different pesticides were found**, some of which are linked to serious health problems such as cancer and disruption of the hormone system.

In many cases, multiple residues were found on the produce. This is another area of serious concern as the scientific community has little understanding about the complex interaction of different chemicals in what is termed the 'cocktail' effect. We have also found that the levels of residues contained on SFVS produce are higher than those in produce tested under the national residue testing scheme (mainstream produce found on supermarket shelves). When PAN-UK sent its 2017 findings to the Department of Health, it was told that **pesticides are not the concern of the DoH**.

The gut microbiome; the collective genome of organisms inhabiting our body. Obesity is associated with low bacterial richness in the gut.

We can only absorb nutrients via trillions of bacteria in our gut, the gut microbiome

This is the term for the collective genome of organisms inhabiting our bodies. Glyphosate disrupts the shikimate pathway within these gut bacteria, without which humans cannot survive. Glyphosate is a strong chelator of essential minerals, such as cobalt, zinc, manganese, calcium, molybdenum and sulphate. In addition, it kills off beneficial gut bacteria and allows toxic bacteria such as *Clostridium difficile* to flourish. Two key problems caused by glyphosate residues in our diet are nutritional deficiencies, especially minerals and essential amino-acids, and systemic toxicity.¹⁶

Richness of human gut microbiome correlates with metabolic markers: we are facing a global metabolic health crisis provoked by an obesity epidemic

Chatelier, E.L. *et al.* Richness of human gut microbiome correlates with metabolic markers *Nature* 29 August 2013; 500: 541-550.¹⁷

"We are facing a global metabolic health crisis provoked by an obesity epidemic." In a multi-author study of obese and non-obese individuals, those with "low bacterial richness in the gut (23% of the population) are characterized by more marked overall adiposity, insulin resistance and dyslipidaemia and a more pronounced inflammatory phenotype when compared with those with high bacterial richness. Low richness of gut microbiota has been reported in patients with inflammatory bowel disorder. Also, notable diversity differences were observed between the urban US population and rural populations from two developing countries."

The microbiome of uncontacted Amerindians has the highest diversity of bacteria¹⁸

"We characterize the fecal, oral, and skin bacterial microbiome and resistome of members of an isolated Yanomami Amerindian village with no documented previous contact with Western people. These Yanomami harbor a microbiome with the highest diversity of bacteria and genetic functions ever reported in a human group."

Many young children become obese when they leave primary school because they are being poisoned by the Department of Health's School Fruit and Vegetable Scheme (SFVS)

Thousands of UK children, mainly in deprived city areas, are already classed as severely obese when they leave primary school.¹⁹ The UK is the most obese country in western Europe, according to the Organisation for Economic Co-operation and Development.²⁰ Its annual [Health at a Glance report](#), published on Friday, shows that 26.9% of the UK population had a body mass index of 30 and above,

¹⁵ <http://www.pan-uk.org/food-for-thought/>

¹⁶ <https://www.mdpi.com/1099-4300/15/4/1416>

¹⁷ <http://www.nature.com/nature/journal/v500/n7464/abs/nature12506.html>

¹⁸ <http://advances.sciencemag.org/content/1/3/e1500183.short>

¹⁹ <https://www.childinthecity.org/2018/06/07/uk-child-obesity-worst-in-poorest-cities/?gdp=accept>

²⁰ <https://www.theguardian.com/society/2017/nov/10/uk-most-obese-country-in-western-europe-oecd-report-finds>

the official definition of obesity, in 2015. Only five of the OECD's 35 member-states had higher levels of obesity, with four outside Europe and one in eastern Europe. The OECD's report, which says obesity in the UK has increased by 92% since the 1990s, illustrates the scale of the public health challenge, [with fears it could bankrupt the NHS](#)

Glyphosate causes epigenetic changes in humans and animals: diseases skip a generation²¹

Washington State University researchers have found a variety of diseases and other health problems in the second- and third-generation offspring of rats exposed to glyphosate, the world's most popular weed killer. In the first study of its kind, the researchers saw descendants of exposed rats developing **prostate, kidney and ovarian diseases, obesity and birth abnormalities**.

Michael Skinner, a WSU professor of biological sciences, and his colleagues exposed pregnant rats to the herbicide between their eighth and 14th days of gestation. The dose -- half the amount expected to show no adverse effect -- produced no apparent ill effects on either the parents or the first generation of offspring.

But writing in the journal *Scientific Reports*, the researchers say they saw "*dramatic increases*" in several pathologies affecting the second and third generations. The second generation had "*significant increases*" in **testis, ovary and mammary gland diseases**, as well as **obesity**. In third-generation males, the researchers saw a 30 percent incidence of **prostate disease** -- three times the rate of a control population. The third generation of females had a 40 percent incidence of **kidney disease**, or four times the rate of the controls.

More than one-third of the second-generation mothers **had unsuccessful pregnancies**, with most of those affected dying. Two out of five males and females in the third generation were **obese**.

Skinner and his colleagues call this phenomenon "generational toxicology" and they've seen it over the years in fungicides, pesticides, jet fuel, the plastics compound bisphenol A, the insect repellent DEET and the herbicide atrazine. At work are epigenetic changes that turn genes on and off, often because of environmental influences.

Skinner said he decided to study glyphosate "*due to it being one of the most commonly used compounds worldwide*."

The chemical has been the subject of numerous studies about its health effects. The Skinner study is the third in the past few months out of Washington alone. A University of Washington study published in February found the chemical increased the risk of **non-Hodgkin lymphoma** by as much as 41 percent. A Washington State University study published in December found state residents living close to areas subject to treatments with the herbicide are one-third more likely to die an early death from **Parkinson's disease**.

The chemical's generational toxicology represents a new downside that Skinner and his colleagues said should be incorporated into estimates of its risk. "*The ability of glyphosate and other environmental toxicants to impact our future generations needs to be considered*," they write, "*and is potentially as important as the direct exposure toxicology done today for risk assessment*."

Prime Minister David Cameron ignored the Open Letter from America warning the UK against GM crops: hand delivered November 2014 Living with GMOs: Citizen to Citizen²²

From more than 60 million citizens in the US to citizens, politicians, and regulators in the UK and the rest of the EU about the hazards of genetically modified crops.

We, the undersigned, are sharing our experience and what we have learned with you so that you don't make our mistakes. Signatories include NGOs, groups, academics, scientists, farmers, food manufactures, and high-profile individuals representing some 60 million Americans.

Extracts: "A recent review found that between 1996 and 2011, farmers who planted Roundup Ready crops used 24% more herbicide than non-GMO farmers planting the same crops. This pesticide

²¹ <https://www.sciencedaily.com/releases/2019/04/190423133807.htm>

²² <http://www.theletterfromamerica.org/>

treadmill means that in the last decade in the US at least 14 new glyphosate-resistant weed species have emerged, and over half of US farms are plagued with herbicide-resistant weeds.” **They outlined eight independent papers describing Environmental Harm and six about the Threat to Human Health.** “Americans are reaping the detrimental impacts of this risky and unproven agricultural technology. **EU countries should take note: there are no benefits from GM crops great enough to offset these impacts. Officials who continue to ignore this fact are guilty of a gross dereliction of duty.**

We strongly urge you to resist the approval of genetically modified crops, to refuse to plant those crops that have been approved, to reject the import and/or sale of GM-containing animal feeds and foods intended for human consumption, and to speak out against the corporate influence over politics, regulation and science.”

David Cameron ignored it and kept it secret from the public. The Open Letter from America was passed from the Prime Minister’s Office to Defra.

Extracts from the reply from Lord de Mauley, Defra Minister, “to Directors of Beyond GM.”

It was clear that the Minister hadn’t read the letter, or realised that it was an Open Letter from 60 million citizens from the US, but relied on blindly signing Defra’s letter of denial ²³

*Extract: “However, to pick up on your point on contamination, cross-pollination is, again, a normal process between compatible plant species and there is nothing different about GM crops in this respect... The UK Government regards safety as paramount and we will only agree to planting of GM crops or the marketing of GM foods **if it is clear that people and the environment will not be harmed.**”*

The European Food Safety Authority and the European Commission ignored the advice and have continued to authorize GM crops for food and feed.

Syngenta is a member of the European Glyphosate Task Force ²⁴

The GTF is described as “a consortium of companies joining resources and efforts in order to renew the European glyphosate registration with a joint submission.”

CRUK invented causes of cancer and put the blame on the people for lifestyle choices

Cancer Research UK colluded with the four Chief Medical Officers, Public Health England, the Committee on Carcinogenicity and the media. Collectively, they blamed the people for their lifestyle choices: alcohol, obesity and smoking. But the corporations are responsible.

The Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment (COC) agreed with the CMOs and made the bold statement in support of industry: ²⁵

“Overall, our findings support the view that drinking alcohol increases the risk of getting cancers of the mouth and throat, voice box, gullet, large bowel, liver, of breast cancer in women, and probably also of cancer of the pancreas.”

A red-herring fabricated by industry and ‘top’ doctors in Britain: alcohol was claimed to be linked to seven forms of cancer: this ‘alleged fact’ was endlessly reinforced by the UK media until people in the UK were brainwashed

An article was published in the *British Medical Journal* on 9 April 2016²⁶ reporting a survey commissioned by **Cancer Research UK** ‘People lack awareness of link between alcohol and cancer.’

²³ http://beyond-gm.org/wp-content/uploads/2015/01/BGM_Defra-letter_151214.pdf

²⁴ <http://www.glyphosatetaskforce.org/>

²⁵

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/490584/COC_2015_S2_Alcohol_and_Cancer_statement_Final_version.pdf

²⁶ <http://www.bmj.com/content/353/bmj.i1881>

The Report produced by researchers at the University of Sheffield ‘comes ahead of the consultation closing on how well new drinking guidelines proposed by the UK’s Chief Medical Officer in January 2016, are communicated.’²⁷

“Almost 90 per cent of people in England don’t associate drinking alcohol with an increased risk of cancer” Alison Cox, **Cancer Research UK’s** Director of Cancer Prevention. She said: “The link between alcohol and cancer is now well established, and it’s not just heavy drinkers who are at risk. Drinking alcohol is linked to an increased risk of seven different cancers - liver, breast, bowel, mouth, throat, oesophageal (food pipe), laryngeal (voice box) - but when people were asked “which, if any, health conditions do you think can result from drinking too much alcohol?” just 13 per cent of adults mentioned cancer.” Dr Penny Buykx, a senior research fellow at The University of Sheffield and lead-author of the report, said: “We’ve shown that public awareness of the increased cancer risk from drinking alcohol remains worryingly low. People link drinking and liver cancer, but most still don’t realise that cancers including breast cancer, mouth and throat cancers and bowel cancer are also linked with alcohol, and that risks for some cancers go up even by drinking a small amount.” In fact, drinking alcohol and smoking decreased, so they had to think of something different.

By 2018 CRUK was claiming that obesity caused 13 different cancers

Dr Margaret McCartney wrote in the BMJ on 17 March 2018:²⁸ Cancer patients should not be shamed: “The charity Cancer Research UK has gone large on its publicity campaign about obesity. Bus stops and advertising hoardings are replete with black text on a white background. The adverts invite us to fill in the blanks and spell out OBESITY, asking us to “Guess what is the biggest preventable cause of cancer after smoking.” The charity has also said, as part of the campaign, that “being overweight or obese causes 13 different types of cancer.”² But the vast majority of studies on this have found an association, not causation.³”

What credible scientific evidence is there that alcohol causes seven different types of cancer and that obesity causes 13 different types of cancer? None

Professor Sir [David Spiegelhalter](#), Winton Professor of the Public Understanding of Risk at the [University of Cambridge](#), revealed that drinking the maximum allowance set by Davies would be no more dangerous than eating bacon sandwiches or watching films.

In the *Observer* and the *Guardian* 20 and 21 July 2019 CRUK took out half-page advertisements. **Obesity** (in huge letters) is a cause of cancer too. In a smaller box, it states Like smoking, obesity puts millions of adults at greater risk of cancer. And at the bottom, barely visible: cruk.org/EndJunkFoodAdsToKids.

CRUK has paid for many adverts on ITV and Channel 4 describing how it looks after people with cancer and encourages donations from the public. It claims to have spent £42 million on information and influencing in 2018. Its executives paid themselves between £60,000 and £250,000 in 2016. This was just about the highest pay of any charity.²⁹

CRUK’s vision ‘is to bring forward the days when all cancers are cured’ is complete fraud by the pesticides industry

Cancer Research UK is the world's leading charity dedicated to cancer research

Michelle Mitchell OBE said: “It’s a privilege to be appointed as CEO of the world’s leading charity dedicated to beating cancer through research. Like many people, I have family who have been

²⁷ <http://www.cancerresearchuk.org/about-us/cancer-news/press-release/2016-04-01-9-in-10-dont-link-alcohol-and-cancer>

²⁸ <https://www.bmj.com/content/360/bmj.k1139>

²⁹ <https://www.ten-percent.co.uk/10-percent-campaign/>

*affected by cancer and I'm passionate about Cancer Research UK's goal to speed up impact on survival."*³⁰

Press Release: "Cancer Research UK's research is funded entirely by the public, whose donations support over 4,000 scientists, doctors and nurses across the UK. Several hundred of these scientists worked at Cancer Research UK's London Research Institute at Lincoln's Inn Fields and Clare Hall (LRI), which became part of the Crick on 1 April 2015. The LRI had an international reputation for cancer biology research and was the source of many significant breakthroughs.

Its vision is to bring forward the day when all cancers are cured."

Has Michelle Mitchell seen the numbers of cancers in the UK?

Progress of Monsanto Trials in the US for Roundup causing cancer – Trial tracker

Monsanto's German owner Bayer AG has confirmed that more than 42,700 people have filed suit against Monsanto alleging that exposure to Roundup herbicide caused them or their loved ones to develop non-Hodgkin lymphoma, and that Monsanto covered up the risks. The current tally of plaintiffs is reportedly well more than 80,000 and perhaps as many as 100,000. As part of the discovery process, Monsanto has had to turn over millions of pages of its internal records. The Monsanto Papers and other court records are shared here.³¹

Each year there are steady increases in the numbers of new cancers in the UK and increases in deaths from the same cancers, with no treatments making any difference to the numbers.

In the UK there were 13,605 new cases of Non-Hodgkin Lymphoma in 2015 (and 4,920 deaths in 2016)³²; there were 41,804 new cases of bowel cancer in 2015 (and 16,384 deaths in 2016); 12,547 new cases of kidney cancer in 2015 (and 4,619 deaths in 2016); 5,736 new cases of liver cancer in 2015 (5,417 deaths in 2016); 15,906 new cases of melanoma in 2015 (2,285 deaths in 2016); 3,528 new cases of thyroid cancer in 2015 (382 deaths in 2016); 10,171 new cases of bladder cancer in 2015 (5,383 deaths in 2016); 8,984 new cases of uterine cancer in 2015 (2,360 deaths in 2016); 7,270 cases of ovarian cancer in 2015 (4,227 deaths in 2016); 9,900 new cases of leukaemia in 2015 (4,712 deaths in 2016); 55,122 new cases of invasive breast cancer in 2015 (11,563 deaths in 2016); 47,151 new cases of prostate cancer in 2015 (11,631 deaths in 2016); 9,211 new cases of oesophageal cancer in 2015 (8,004 deaths in 2016); and 5,540 new cases of myeloma in 2015 (3,079 deaths in 2016); 2,288 new cases of testicular cancer in 2015 (57 deaths in 2016); 9,921 new cases of pancreatic cancer in 2015 (9,263 deaths in 2016); 11,432 new cases of brain cancer in 2015 (5,250 deaths in 2016); 46,388 new cases of lung cancer in 2015 (and 35,620 deaths in 2016). In the US in 2014 there were 24,050 new cases of myeloma.

The Francis Crick Institute with its 'world class resources' is failing to improve people's lives with its treatments, but is definitely strengthening the economy of the pesticides industry and the pharmaceutical industry

Report: "The Francis Crick Institute is a biomedical discovery institute dedicated to understanding the fundamental biology underlying health and disease. Its work is helping to understand why disease develops and to translate discoveries into new ways to prevent, diagnose and treat illnesses such as cancer, heart disease, stroke, infections, and neurodegenerative diseases."³³

An independent organisation, its founding partners are the Medical Research Council (MRC), **Cancer Research UK**, Wellcome, UCL (University College London), Imperial College London and King's College London. The Crick was formed in 2015, and in 2016 it moved into a brand-new state-of-the-art

³⁰ <https://www.cancerresearchuk.org/about-us/cancer-news/press-release/2018-05-01-cancer-research-uk-appoints-new-chief-executive-1>

³¹ <https://usrtk.org/monsanto-papers/>

³² <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/non-hodgkin-lymphoma>

³³ <https://www.crick.ac.uk/about-us/>

building in central London which brings together 1500 scientists and support staff working collaboratively across disciplines, making it the biggest biomedical research facility under a single roof in Europe. The Francis Crick Institute will be world-class with a strong national role. Its distinctive vision for excellence includes commitments to collaboration; to developing emerging talent and exporting it to the rest of the UK; to public engagement; and to helping turn discoveries into treatments as quickly as possible to improve lives and strengthen the economy."

Cancer Genetics and Genomes Project: public promises of jam tomorrow but not jam today³⁴

Hannah Devlin for the *Guardian* said: Early signs of cancer can appear years or even decades before diagnosis, according to the most comprehensive investigation to date of the genetic mutations that cause healthy cells to turn malignant. The findings, based on samples from more than 2,500 tumours and 38 cancer types, reveal a longer-than-expected window of opportunity in which patients could potentially be tested and treated at the earliest stages of the disease. The work was carried out as part of the Pan-Cancer Analysis of Whole Genomes project, the most comprehensive study of cancer genetics to date. *"What's extraordinary is how some of the genetic changes appear to have occurred many years before diagnosis, long before any other signs that a cancer may develop, and perhaps even in apparently normal tissue,"* said Clemency Jolly, a co-author of the research based at the Francis Crick Institute in London. *"Unlocking these patterns means it should now be possible to develop new diagnostic tests that pick up signs of cancer much earlier,"* said Peter Van Loo, co-lead author, also of the Crick Institute. *"There is a window of opportunity."*

Saskia Sanderson, CRUK researcher, wrote an article in the *Guardian* promoting the research.³⁵

"An ounce of prevention is worth a pound of cure": a phrase beloved of medical professionals – largely because it's true. When it comes to cancer, you could readily add *"an ounce of early diagnosis"*. Cancers that are diagnosed early can often be cured. This knowledge has spurred efforts among my colleagues in the research community to develop new, more sophisticated ways to detect early signs of the disease. Those efforts are beginning to bear fruit, one example being the recent announcement by an international team of scientists that the disease's tell-tale DNA mutations can crop up many years – even decades – before a person notices symptoms of the disease. We're learning more and more about the slow accumulation of genetic damage that ultimately leads to cancer. In fact, it could be argued that some of these early signs aren't even "cancer" at all – rather, they are hallmarks of an earlier, pre-cancerous state – and identifying them can allow the cancer itself to be prevented.

These cancers are not inherited. The genetic damage is caused by mutations secondary to a lifetimes' exposure to thousands of synthetic chemicals that contaminate the blood and urine of nearly every person tested - a global mass poisoning according to Gross and Birnbaum.³⁶

Five biggest pesticide manufacturers are selling chemicals that poison human health and the environment

The world's five biggest pesticide manufacturers are making more than a third of their income from leading products selling chemicals that pose serious hazards to human health and the environment, a joint investigation by *Unearthed* and Public Eye has found.³⁷

³⁴ <https://www.theguardian.com/science/2020/feb/05/signs-of-cancer-can-appear-long-before-diagnosis-study-shows>

³⁵ <https://www.theguardian.com/commentisfree/2020/feb/14/test-detect-cancer-advance-research-symptoms>

³⁶ <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2004814>

³⁷ <https://unearthed.greenpeace.org/2020/02/20/pesticides-croplife-hazardous-bayer-syngenta-health-bees/>

Analysis of a huge database of 2018's top-selling "crop protection products" has revealed the world's **leading agrochemical companies** made more than 35% of their sales from pesticides classed as "highly hazardous" to people, animals or ecosystems.

The investigation identified billions of dollars of income for agrochemical giants BASF, Bayer, Corteva, FMC and Syngenta from chemicals found by regulatory authorities to pose health hazards like cancer or reproductive failure.

It also found more than a billion dollars of their sales came from chemicals – some now banned in European markets – that are highly toxic to bees. Over two thirds of these sales were made in low- and middle-income countries like Brazil and India.

By far the most valuable markets for the highly hazardous pesticides sold by these companies were the commodity crops soya and corn, grown in large part to provide animal feed for the meat industry.

However, Baskut Tuncak, the United Nations' **special rapporteur on toxic substances** and human rights, rejected the idea that the risks posed by HHPs could be managed safely.

The impacts are unquestionable, but the system is rigged so that they are also unprovable.

"There is nothing sustainable about the widespread use of highly hazardous pesticides for agriculture," Tuncak told Unearthed. "Whether they poison workers, extinguish biodiversity, persist in the environment, or accumulate in a mother's breast milk, these are unsustainable, cannot be used safely, and should have been phased out of use long ago."

This investigation is based on analysis of a huge dataset of pesticide sales from the agribusiness intelligence company Phillips McDougall. This company conducts detailed market research all over the world and sells databases and intelligence to pesticide companies. The data covers around 40% of the **\$57.6bn global market** for agricultural pesticides in 2018. It covers 43 countries, which between them represent more than 90% of the global pesticide market by value. And it focuses on sales of leading products in the most valuable "market segments" (an example of a market segment would be insecticides for cotton in India).

We used the same methodology that pesticide industry analysts use to break up the value of product sales by active ingredient (in cases where a product included more than one active chemical), and we then established which of these chemicals had been classified by recognised authorities as posing environmental hazards like toxicity to bees, or hazards to humans, like acute toxicity, or chronic exposure risks like cancer.

Infertility caused by endocrine disrupting chemicals will wipe out humans ³⁸

Jeremy Bentham, a well-respected CEO of an asset management company said: *"In today's society people are choosing to have fewer children, and delaying having children at all into later, less fertile years. These two factors have driven fertility rates below replacement level in most of the world, but a crucial third factor gets little attention and is having a profound impact on fertility: toxicity. The economic and social ramifications will be severe. A profound and largely unexpected phenomenon is occurring: we are choosing to have fewer children. The most significant drivers of this choice appear to be higher income and better education, especially for women. At the same time, we are choosing to postpone these fewer births into our later, less fertile years. Because of these two factors, fertility rates are below replacement level almost everywhere in the developed world and China. This development, despite its economic and social importance, is not yet receiving as much attention as it deserves, but now there is a new third factor that gets almost none: toxicity.*

Human "fecundity" (the number of children you are able to have) is being affected by endocrine-disrupting chemicals, which interfere with hormones. This interference is growing at such a rapid rate that if left alone it is likely to leave us sterile in a few decades with only the rich able to easily afford the healthy lifestyles and the exotic medical help required to have babies.

³⁸ <https://sustainablepulse.com/2020/02/11/chemical-toxicity-and-the-baby-bust-high-profile-investor-jeremy-grantham/#.Xkj3CC10efW>

One of the most measurable and most nerve-racking results of increased chemical damage is our very rapid decline in sperm quality and concentration, which appears to have fallen to one-third of its probable pre-industrial level. If we do not ban whole classes of chemicals in the next 10 years, we will face a crash in the number of new births. The effects of this will be felt to very different degrees by country: those countries that do not act will quickly fall behind in both births and general health. There are in fact indications that health and longevity in the U.S. are already being affected by high levels of toxicity. It is important both for society and the economy that this new information be correctly and quickly processed and that the back-up medical data, which is thin in parts, be supported by new and larger studies. Time is not on our side."

Roundup caused a 50% decrease in sperm count in males: Levine found sperm counts declined between 1973 and 2011 with no evidence of leveling off in recent years

Researchers from Brazil where babies who are lactose intolerant drink GM soy milk found that in rats fed soy milk it elicits endocrine-disrupting effects, by decreasing serum testosterone levels, decreased Sertoli cell numbers and increased percentage of degenerated Sertoli and Leydig cells.³⁹ Prof Hagai Levine from the Hebrew University of Jerusalem undertook a rigorous and comprehensive meta-analysis of data collected between 1973 and 2011 finds that among men from Western countries, sperm concentration declined by more than 50 percent, with no evidence of a 'leveling off' in recent years.⁴⁰ Prof Levine suggested endocrine disruption from chemical exposures "during critical windows of male reproductive development may play a role in prenatal life" and "exposure to pesticides may play a role in adult life. Thus, a decline in sperm count might be considered as a 'canary in the coal mine' for male health across the lifespan."

Roundup disrupts male reproductive functions by triggering calcium-mediated cell death in rat testis and Sertoli cells⁴¹

Abstract

Glyphosate is the primary active constituent of the commercial pesticide Roundup. The present results show that acute Roundup exposure at low doses (36 ppm, 0.036 g/L) for 30 min induces oxidative stress and activates multiple stress-response pathways leading to Sertoli cell death in prepubertal rat testis. The pesticide increased intracellular Ca^{2+} concentration by opening L-type voltage-dependent Ca^{2+} channels as well as endoplasmic reticulum IP_3 and ryanodine receptors, leading to Ca^{2+} overload within the cells, which set off oxidative stress and necrotic cell death. Similarly, 30 min incubation of testis with glyphosate alone (36 ppm) also increased $^{45}\text{Ca}^{2+}$ uptake.

Neurotransmitter changes in the brain from exposure to glyphosate-based herbicides

Many papers come from Latin American countries where they grow almost exclusively GM Roundup Ready Crops that Monsanto forced on them in 1996. Here are three papers. The European Glyphosate Task Force excluded scientific papers from South America in their re-assessment of glyphosate.

Behavioral impairments following repeated intranasal glyphosate-based herbicide administration in mice.⁴²

Taken together, our findings demonstrate that intranasal (IN) exposure to commercial Gly-BH produces alterations in locomotor activity, anxiety and memory in adult mice. These observations could be a consequence of alterations in neurotransmission systems comprising the GABAergic, dopaminergic, serotonergic and/or cholinergic systems." In this research paper there are references to many papers from around the world that confirm the glyphosate-based herbicides are

³⁹ <http://www.sciencedirect.com/science/article/pii/S0278691516304896>

⁴⁰ <https://academic.oup.com/humupd/article/doi/10.1093/humupd/dmx022/4035689/Temporal-trends-in-sperm-count-a-systematic-review>

⁴¹ <https://www.sciencedirect.com/science/article/pii/S0891584913003262>

⁴² <https://www.sciencedirect.com/science/article/pii/S0892036217301526>

damaging to the development of the foetal brain and that repeated exposure is toxic to the adult human brain and may result in alterations in locomotor activity, feelings of anxiety and memory impairment.

Martínez, M. A., Ares, I., Rodríguez, J. L., Martínez, M., Martínez-Larrañaga, M. R., & Anadón, A. (2018). Neurotransmitter changes in rat brain regions following glyphosate exposure. *Environmental Research*, 161, 212-219. ⁴³

Highlights:

- Glyphosate oral exposure caused neurotoxicity in rats.
- Brain regions were susceptible to changes in CNS monoamine levels.
- Glyphosate reduced 5-HT, DA, NE levels in a brain regional- and dose-related manner.
- Glyphosate altered the serotonergic, dopaminergic and noradrenergic systems.

Mechanisms underlying the neurotoxicity induced by glyphosate-based herbicide in immature rat hippocampus: Involvement of glutamate excitotoxicity. ⁴⁴

This is why there are so many mental health and psychiatric disorders, depression, suicides, anxiety and violence among children and adults.

A Global Perspective on Firefly Extinction Threats⁴⁵

Globally, pesticides were rated as the third most serious threat to fireflies (table 1), with some variation among geographic regions (table 2). Common agricultural insecticides include various organochlorines, organophosphates and, more recently, neonicotinoids (Simon-Delso et al. 2015). Although only a few studies have investigated their direct effects on fireflies (see below), such broad-spectrum insecticides are known to adversely affect numerous nontarget insects and other taxa (reviewed by Sanchez-Bayo 2011, Pisa et al. 2015). Mechanisms of insecticide exposure include aerial spraying, contact with insecticide-containing soil or water, or ingestion of contaminated prey. For fireflies, high insecticide concentrations in water and soil may be particularly harmful, because the larval stage lives and develops for months to years either underwater (e.g., aquatic fireflies such as *Aquatica* and *Sclerotia*), among the roots of riparian mangroves and in vegetation behind adult display trees (*Pteroptyx* fireflies), or in soil (e.g., terrestrial fireflies such as *Lampyrus*, *Photinus*, and *Photuris*). Other firefly life stages may also be exposed, because eggs are laid in soil, moss, or rotting wood, and pupae develop underground or on tree trunks. Adults may also be exposed to insecticide residues when resting on treated soil or foliage.

The public has been conned by the chemical company Syngenta (AKA Cancer Research UK) into contributing to ‘cancer research’

The public has been conned by the chemical company Syngenta into contributing to ‘cancer research’ with the fraudulent promise of one day the investigation of their family DNA will allow them to tailor specific drugs for their cancer needs.

“Cancer Research UK’s research is funded entirely by the public, whose donations support over 4,000 scientists, doctors and nurses across the UK. Several hundred of these scientists worked at Cancer Research UK’s London Research Institute at Lincoln’s Inn Fields and Clare Hall (LRI), which became part of the Crick on 1 April 2015.”

Why has the WHO, UNICEF and many of the Universities in the UK and Ireland allowed the Bill and Melinda Gates Foundation to fund their research when they knew it had teamed up with the Corporations?

⁴³ <https://www.sciencedirect.com/science/article/pii/S0013935117316730>

⁴⁴ <https://www.sciencedirect.com/science/article/pii/S0300483X14000493>

⁴⁵ <https://academic.oup.com/bioscience/article/70/2/157/5715071#192204015>

Microsoft billionaire Bill Gates wrote about global disease elimination and eradication in the Chief Medical Officer's Report 2019 but both were silent on the effects of pesticides

The former CMO for England ignored the increases in cancer and other diseases in the UK in her Annual Report 2019 and asked Bill Gates to write about global disease elimination and eradication.⁴⁶

"Dear Dame Sally,

I am delighted that you are focusing your annual report this year on global health. Thank you for inviting me to contribute some thoughts on why eradicating certain diseases should be one of our shared goals. The progress we've made toward disease eradication is a remarkable story, and I wish more people knew about it – and about the important role the UK has played. Our generation has witnessed an incredible improvement in the human condition. My favourite graph begins in the year 1990 and shows a line steadily dropping downwards: Over the past three decades, the number of children who die before their fifth birthday has fallen by half, even as the number of children being born has increased. This progress hasn't happened because we're lucky. It's been because of a global effort to deliver vaccines and other building blocks of primary healthcare around the world – an effort in which the UK has played an indispensable part. As a result, we have made dramatic advances against many of the diseases that used to cut short children's lives – or limited their potential. In fact, now some diseases can be defeated once and for all. Take polio as an example. In 1988, there were 350,000 people in 125 countries being paralysed every year by polio. But that same year the world established the Global Polio Eradication Initiative to immunize children against the disease. Since then, we've seen a 99.99% reduction in cases, down to 33 cases of wild poliovirus last year. Today, the virus is endemic in just three nations – Nigeria, Afghanistan and Pakistan. Polio isn't the only disease on the verge of eradication. There are more that realistically could be ended within our lifetimes. Malaria, guinea worm and sleeping sickness are all within our ability to wipe off the face of the earth, if we can unlock the innovations, the resources and the political will to do so.

Eradicating a human illness isn't an easy job. The world has only done it once before, with smallpox, which was declared gone from the planet in 1980 after decades of tireless immunization campaigns. Consigning other illnesses to the dustbin of history will require efforts of similar scale and skill: It will take more rigorous surveillance systems, more efficient supply chains, and more and better trained health workers. These workers will also have to travel to some of the hardest- to-reach parts of the world because that is where the last few cases of a disease tend to be.

For those diseases where it is feasible, I believe that eradication is worth the effort. For one thing, it's the right thing to do. Many of the diseases we're talking about – like polio and malaria – were eliminated long ago in nations like the US and the UK. And if we've eliminated them here, I don't think it's right to argue that we shouldn't do it everywhere; where you live shouldn't determine whether you live. But the argument for eradication is not simply a moral one. These diseases take a huge financial toll too, in the cost to health systems, and the days of school and work that are lost to sickness. So, eradicating a disease helps grow economies. The global effort to eradicate polio has saved more than US\$27 billion in health costs since 1988, and generated billions more in economic development. Eradicating one disease also helps us fight others. Malaria is a good example. It makes people more susceptible to other illnesses, and by removing malaria from the equation in one area we can disproportionately lower mortality there. In some cases, eradication initiatives can even help us to respond to new threats. The polio programme set up an Emergency Operations Centre in Nigeria with the goal of helping with eradication efforts. Neither the polio team nor the Nigerian government expected the centre's resources would be used to fight a different kind of outbreak, but that's exactly what happened during the 2014 West Africa Ebola outbreak when cases started appearing in the country. The Nigerian government used the centre to stop the disease in its tracks. The outbreak was confined to just 19 cases.

⁴⁶

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832948/annual-report-of-the-chief-medical-officer-2019.pdf

Most importantly, we need to pursue eradication where it's a feasible target because it will be the most cost-effective way in the long-term to fight a disease. Diseases like malaria don't stay the same. They evolve and mutate, developing resistance to the treatments we currently use. If we don't eradicate them, eventually we'll need to find new ways and new tools to fight them – and that will take even more effort and money – and in the meantime, those diseases have a potential to spread with a vengeance. Fighting a disease, after all, is sort of like fighting a fire:

If you only put out some of it, the rest will come roaring back. Projections show what would happen if we stopped trying to eradicate polio today: By the year 2029, as many as 200,000 children would be infected annually. In other words, the number of new cases would be back where it was 30 years before. Countries most affected by these diseases are increasingly leading eradication efforts, but the scientific expertise of nations like the UK is still very much needed to stay ahead of these diseases. The UK is a hub of health research, and at the forefront of the genome revolution. Your researchers are developing the new drugs, vaccines, diagnostics, vector control products and disease modelling that we need.

The UK's political and financial support are also essential. Over the past 20 years, this nation has been one of the biggest contributors to the health organisations that have marshalled the world's resources to buy medical supplies – and then built the global network to deliver the goods.

For example, the UK Government has recently announced renewed funding for the Global Fund to Fight AIDS, Tuberculosis and Malaria that will help save 16 million lives over the next three years. The UK's funding will distribute 92 million mosquito nets to protect children and families from malaria – an essential tool to save lives while we develop the innovations that will allow us to reach our goal of eradication. The UK has been at the forefront of fighting disease for centuries. On May 14, 1796, a doctor in Gloucester, England inoculated a local eight-year-old boy – the son of his gardener – with a disease called cowpox. For many years, the doctor, Edward Jenner, had suspected that catching cowpox might prevent someone from catching the much deadlier smallpox, and he was right. The gardener's son was Jenner's first documented vaccination – a phrase and process he invented – and two hundred years later, smallpox was gone from the world.

Eradicating the first disease in history started here in the UK, with a bit of inventiveness and hard work. I believe eradicating the next diseases will happen in the same way, with UK science, innovation and financial leadership at the forefront.

*Sincerely,
Bill Gates"*

Rosemary Mason

24 February 2020