

## Note

### *Introduzione. Sapere è potere*

<sup>1</sup> Marie-Monique Robin, *Le Monde selon Monsanto. De la dioxine aux Ogm, une multinationale qui vous veut du bien*, La Découverte/Arte Éditions, Paris 2008 [trad. it. *Il mondo secondo Monsanto: storia di una multinazionale che vi vuole bene*, Feltrinelli, Milano 2009].

<sup>2</sup> Marie-Monique Robin, *Les Pirates du vivant e Le blé: chronique d'une mort annoncée?*, Arte, 15 novembre 2005.

<sup>3</sup> Marie-Monique Robin, *Argentine: le soja de la faim*, Arte, 18 ottobre 2005. Con *Les Pirates du vivant*, è disponibile in dvd, nella collana "Alerte verte".

### *1. L'appello di Ruffec e la battaglia di Paul François*

<sup>1</sup> Joël Robin, *Au Nom de la terre. La foi d'un paysan*, Presses de la Renaissance, Paris 2001.

<sup>2</sup> Marie-Monique Robin, *Le Suicide des paysans*, TF1, 1995 (Prix du documentaire de société al Festival international du scoop d'Angers).

<sup>3</sup> Marie-Monique Robin, *Il mondo secondo Monsanto*, cit.

<sup>4</sup> François Veillerette, *Pesticides, le piège se referme*, Terre vivante, Mens 2007; vedi anche: Fabrice Nicolino, François Veillerette, *Pesticides, révélations sur un scandale français*, Fayard, Paris 2007.

<sup>5</sup> [www.victimes-pesticides.org](http://www.victimes-pesticides.org). Vedi anche *Un Nouveau réseau pour défendre les victimes des pesticides*, "Le Monde", 18 giugno 2009.

<sup>6</sup> *Malade des pesticides, je brise la loi du silence*, "Ouest France", 27 marzo 2009.

<sup>7</sup> *Alachlor*, "Who/Fao Data Sheets on Pesticides", n. 86, [www.inchem.org](http://www.inchem.org), luglio 1996.

<sup>8</sup> *Maïs: le désherbage en prélevée est recommandé*, "Le Syndicat agricole", [www.syndicatagricole.com](http://www.syndicatagricole.com), 19 aprile 2007.

<sup>9</sup> *Un Agriculteur contre le géant de l'agrochimie*, [www.viva.presse.fr](http://www.viva.presse.fr), 2 aprile 2009.

<sup>10</sup> Jean-François Barré, *Paul, agriculteur, "gagé" au désherbant!*, "La Charente libre", 17 luglio 2008.

<sup>11</sup> [www.medicchem2004.org/schedule.pdf](http://www.medicchem2004.org/schedule.pdf), pagina non più disponibile.

## 2. Armi chimiche riciclate nell'agricoltura

<sup>1</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène. Lutte-t-on vraiment contre le cancer?*, "Points" Seuil, Paris 2007, p. 51.

<sup>2</sup> Ivi, p. 58.

<sup>3</sup> Pesticide Action Network UK, *Pesticides on a Plate. A Consumer Guide to Pesticide Issues in the Food Chain*, London 2007.

<sup>4</sup> "Safe use of pesticides", Public Service Announcement, 1964 (vedi il mio film *Notre poison quotidien*, Arte, 2011).

<sup>5</sup> "Pesticides et santé des agriculteurs", <http://references-sante-securite.msa.fr>, 26 aprile 2010 (corsivo mio).

<sup>6</sup> Julie Marc, *Effets toxiques d'herbicides à base de glyphosate sur la régulation du cycle cellulaire et le développement précoce en utilisant l'embryon d'oursin*, Université de biologie de Rennes, 10 settembre 2004.

<sup>7</sup> Vedi Marie-Monique Robin, *Les Pirates du vivant*, cit.

<sup>8</sup> Arthur Hurst, "Gas poisoning", in *Medical Diseases of the War*, Edward Arnold, London 1918, pp. 308-316 (cit. in Paul Blanc, *How Everyday Products Make People Sick. Toxins at Home and in the Workplace*, University of California Press, Berkeley/Los Angeles 2007, p. 116).

<sup>9</sup> Hanspeter Witschi, *The story of the man who gave us Haber's law*, "Inhalation Toxicology", vol. 9, n. 3, 1997, pp. 201-209.

<sup>10</sup> Ivi, p. 203.

<sup>11</sup> David Gaylor, *The use of Haber's law in standard setting and risk assessment*, "Inhalation Toxicology", vol. 149, n. 1, 14 agosto 2000, pp. 17-19.

<sup>12</sup> Oms/Unep (United Nations Environment Programme), *Sound Management of Pesticides and Diagnosis and Treatment of Pesticide Poisoning. A Resource Tool*, 2006, p. 58.

<sup>13</sup> Karl Winnacker, Ernst Weingaertner, *Chemische Technologie-Organische Technologie II*, Carl Hanser Verlag, München 1954, pp. 1005-1006.

<sup>14</sup> Vedi la scheda dello Zyklon B nella lista dei "produits phytosanitaires retirés" sul sito del ministero francese dell'Agricoltura, [www.e-phy.agriculture.gouv.fr](http://www.e-phy.agriculture.gouv.fr)

<sup>15</sup> *Ibid.*

<sup>16</sup> Hanspeter Witschi, *The story of the man who gave us Haber's law*, cit., pp. 201-209.

<sup>17</sup> Rachel Carson, *Silent Spring*, First Mariner Books Edition, New York 2002, pp. 7 e 18 [tr. it. *Primavera silenziosa*, Feltrinelli, Milano 1966, pp. 28 e 35].

<sup>18</sup> Vedi il capitolo "PCB: un crimine da colletti bianchi", in Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., pp. 19-40.

<sup>19</sup> William Buckingham Jr., *Operation Ranch Hand. The Air Force and Herbicides in Southeast Asia, 1961-1971*, Office of Air Force History, Washington 1982, p. III.

<sup>20</sup> Georganne Chapin, Robert Wasserstrom, *Agricultural production and malaria resurgence in Central America and India*, "Nature", n. 293, 17 settembre 1981, pp. 181-185.

<sup>21</sup> International Programme on Chemical Safety, *Ddt and its derivatives*, World Health Organization, [www.inchem.org](http://www.inchem.org), Genève 1979.

<sup>22</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 40.

<sup>23</sup> James Troyer, *In the beginning: the multiple discovery of the first hormone herbicides*, in "Weed Science", n. 49, 2001, pp. 290-297.

<sup>24</sup> Vedi Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., pp. 41-81 (capitolo 2, "Diossina: un inquinante al servizio del Pentagono"; e capitolo 3, "Diossina: manipolazioni e corruzione").

<sup>25</sup> Jean-Claude Pomonti, *Vietnam, les oubliés de la dioxine*, "Le Monde", 26 aprile 2005.

<sup>26</sup> Le stime più affidabili sono state pubblicate da Jane Mager Stellman in *The extent and patterns of usage of Agent Orange and other herbicides in Vietnam*, "Nature", 17 aprile 2003.

<sup>27</sup> Paul Blanc, *How Everyday Products Make People Sick*, cit.

<sup>28</sup> Ivi, p. 233.

<sup>29</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 167.

### 3. "Elisir di morte"

<sup>1</sup> Rachel Carson, *Primavera silenziosa*, cit. Roger Heim è noto soprattutto come autore di *Destruction et Protection de la nature*, Armand Colin, Paris 1952.

<sup>2</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 35.

<sup>3</sup> Linda Lear, Rachel Carson, *The Life of the Author of "Silent Spring"*, Henry Holt and Company, New York 1997.

<sup>4</sup> Vedi in particolare Gérard Leblanc, *Are environmental sentinels signaling?*, "Environmental Health Perspectives", vol. 103, n. 10, ottobre 1995, pp. 888-890.

<sup>5</sup> Invito il lettore a scoprire questa intervista, e anche quella concessa da Rachel Carson, un documento raro, sul sito della Bbc: "Clip Bin: Rachel Carson", [www.bbcmotiongallery.com](http://www.bbcmotiongallery.com)

<sup>6</sup> Cit. in Dorothy McLaughlin, "Silent Spring revisited", [www.pbs.org](http://www.pbs.org)

<sup>7</sup> The Monsanto Corporation, *The Desolate Year*, New York 1963.

<sup>8</sup> "Time Magazine", 28 settembre 1962, pp. 45-46.

<sup>9</sup> *The Time 100: Rachel Carson*, "Time Magazine", 29 marzo 1999.

<sup>10</sup> Cit. in Linda Lear, Rachel Carson, *The Life of the Author of "Silent Spring"*, cit., pp. 429-430.

<sup>11</sup> President's Science Advisory Committee, "Use of pesticides", 15 maggio 1963.

<sup>12</sup> David Greenberg, *Pesticides: White House advisory body issues report recommending steps to reduce hazard to public*, "Science", 24 maggio 1963, pp. 878-879.

<sup>13</sup> Epa, "Ddt ban takes effect", [www.epa.gov](http://www.epa.gov), 31 dicembre 1972.

<sup>14</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 114.

<sup>15</sup> *Indien: die chemische Apokalypse*, "Der Spiegel", n. 50, 10 dicembre 1984.

<sup>16</sup> *Ibid.*

<sup>17</sup> Marie-Monique Robin, *Les Pirates du vivant*, cit. Il brevetto infine è stato annullato dall'Ufficio europeo dei brevetti, dopo una battaglia giudiziaria durata più di un decennio.

<sup>18</sup> Oms, "Public health impact of pesticides used in agriculture", Genève 1990.

<sup>19</sup> Vedi Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., p. 308 (dove racconto dei funerali di un contadino indiano che si è suicidato ingerendo un pesticida perché si era coperto di debiti e la sua raccolta di cotone transgenico era stata un fiasco). Vedi anche Ashish Goel, Praveen Aggarwal, *Pesticide poisoning*, "National Medical Journal of India", vol. 20, n. 4, 2002, pp. 182-191.

<sup>20</sup> Jerry Jeyaratnam et al., *Survey of pesticide poisoning in Sri Lanka*, "Bulletin of the World Health Organization", n. 60, 1982, pp. 615-619. Tutti gli studi elencati qui fanno parte del documento citato dell'Oms.

<sup>21</sup> Ania Wasilewski, *Pesticide poisoning in Asia*, "IDRC Report", gennaio 1987. Si legga anche: Jerry Jeyaratnam et al., *Survey of acute pesticide poisoning among agricultural workers in four Asian countries*, "Bulletin of the World Health Organization", n. 65, 1987, pp. 521-527; Robert Levine, *Assessment of mortality and morbidity due to unintentional pesticide poisonings*, documento Oms inedito, WHO/VBC/86 929. Vedi anche il libro di Mohamed Larbi Bouguerra, *Les Poisons du tiers monde*, La Découverte, Paris 1985.

<sup>22</sup> Edward Baker *et al.*, *Epidemic malathion poisoning in Pakistan malaria workers*, "The Lancet", n. 1, 1978, pp. 31-34.

<sup>23</sup> Oms/Unep, *Sound Management of Pesticides and Diagnosis and Treatment of Pesticide Poisoning*, cit.

<sup>24</sup> Pesticide Action Network Europe, Mdrgrf, "Message dans une bouteille". Étude sur la présence de résidus de pesticides dans le vin, [www.mdrgrf.org](http://www.mdrgrf.org), 26 maggio 2008.

<sup>25</sup> Afsset, "L'Afsset recommande de renforcer l'évaluation des combinaisons de protection des travailleurs contre les produits chimiques liquides", [www.afsset.fr](http://www.afsset.fr), 15 gennaio 2010.

<sup>26</sup> Intervista dell'autrice con Jean-Luc Dupupet, Pézenas, 9 febbraio 2010.

#### 4. Ammalati di pesticidi

<sup>1</sup> "Le métier d'Odalis: relier les fournisseurs aux distributeurs et agriculteurs", [www.terrena.fr](http://www.terrena.fr)

<sup>2</sup> "Maladie professionnelle liée aux fongicides: première victoire", [www.nouvelobs.com](http://www.nouvelobs.com), 26 maggio 2005; vedi anche "Santé et Travail", n. 30, gennaio 2000, p. 52.

<sup>3</sup> Brigitte Bègue, *Les Pesticides sur la sellette*, "Viva", 14 agosto 2003.

<sup>4</sup> Intervista dell'autrice con Jean-Luc Dupupet, Pézenas, 9 febbraio 2010.

<sup>5</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 199.

<sup>6</sup> Michel Gérin *et al.*, *Environnement et santé publique. Fondements et pratiques*, Edisem, Montréal 2003.

<sup>7</sup> Ivi, p. 74.

<sup>8</sup> Fabrice Nicolino, François Veillerette, *Pesticides, révélations sur un scandale français*, cit., p. 289.

<sup>9</sup> Inrs, *Tableaux des maladies professionnelles. Guide d'accès et commentaires*, <http://inrsm.konosphere.com>, pp. 216-218.

<sup>10</sup> Alice Hamilton, *Lead poisoning in Illinois*, in American Association For Labor Legislation, *First National Conference on Industrial Diseases*, Chicago, 10 giugno 1910.

<sup>11</sup> Inrs, *Tableaux des maladies professionnelles. Guide d'accès et commentaires*, cit., p. 299.

<sup>12</sup> A new domestic poison, "The Lancet", vol. 1, n. 105, 1862.

<sup>13</sup> *Chronic exposure to benzene*, "The Journal of Industrial Hygiene and Toxicology", ottobre 1939, pp. 321-377.

<sup>14</sup> Estelle Saget, *Le Cancer des pesticides*, "L'Express", 5 gennaio 2007; vedi anche Estelle Saget, *Ces Agriculteurs malades des pesticides*, "L'Express", 25 ottobre 2004.

<sup>15</sup> La lettera fa parte del dossier di Dominique Marchal che ho avuto modo di consultare.

<sup>16</sup> David Michaels, *Doubt is Their Product. How Industry's Assault on Science threatens your Health*, Oxford University Press, New York 2008, p. 64.

<sup>17</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène*, cit., p. 164.

<sup>18</sup> Devra Davis, *The Secret History of the War on Cancer*, Basic Books, New York 2007, p. XII (tr. it., *La storia segreta della guerra al cancro*, Codice, Torino 2008).

<sup>19</sup> Michel Gérin *et al.*, *Environnement et santé publique*, cit., p. 90.

<sup>20</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène*, cit., pp. 163-164.

## 5. Pesticidi e tumori: studi concordanti

<sup>1</sup> Michael Alavanja *et al.*, *Health effects of chronic pesticide exposure: cancer and neurotoxicity*, "Annual Review of Public Health", vol. 25, 2004, pp. 155-197.

<sup>2</sup> David Michaels, *Doubt is Their Product*, cit., p. 61.

<sup>3</sup> Michael Alavanja *et al.*, *Health effects of chronic pesticide exposure: cancer and neurotoxicity*, cit., pp. 155-197.

<sup>4</sup> Margaret Sanborn *et al.*, *Systematic Review of Pesticide Human Health Effects*, The Ontario College of Family Physicians, Toronto 2004.

<sup>5</sup> Lennart Hardell, Mikael Eriksson, *A case-control study of non-Hodgkin lymphoma and exposure to pesticides*, "Cancer", vol. 85, 15 marzo 1999, pp. 1353-1360.

<sup>6</sup> Hoar Zahm *et al.*, *A case-control study of non-Hodgkin's lymphoma and the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) in eastern Nebraska*, "Epidemiology", vol. 1, n. 6, settembre 1990, pp. 349-356. Per questo studio 201 ammalati sono stati posti a confronto con 725 persone non malate.

<sup>7</sup> Eva Hansen *et al.*, *A cohort study on cancer incidence among Danish gardeners*, "American Journal of Industrial Medicine", vol. 21, 1992, n. 5, pp. 651-660.

<sup>8</sup> Julie Agopian *et al.*, *Agricultural pesticide exposure and the molecular connection to lymphomagenesis*, "Journal of Experimental Medicine", vol. 206, n. 7, 6 luglio 2009, pp. 1473-1483.

<sup>9</sup> Aaron Blair *et al.*, *Clues to cancer etiology from studies of farmers*, "Scandinavian Journal of Work & Environment Health", vol. 18, 1992, pp. 209-215; Aaron Blair, Hoar Zahm, *Agricultural exposures and cancer*, "Environmental Health Perspectives", vol. 103, suppl. 8, novembre 1995, pp. 205-208; Aaron Blair, Laura Freeman, *Epidemiologic studies in agricultural populations: observations and future directions*, "Journal of Agromedicine", vol. 14, n. 2, 2009, pp. 125-131.

<sup>10</sup> John Acquavella *et al.*, *Cancer among farmers: a meta-analysis*, "Annals of Epidemiology", vol. 8, n. 1, gennaio 1998, pp. 64-74. L'introduzione dell'articolo indica chiaramente che questa meta-analisi è una risposta a quella di Aaron Blair.

<sup>11</sup> Samuel Milham, *Letter*, "Annual of Epidemiology", vol. 9, 1999, p. 71; Samuel Milham è l'autore di *Leukemia and multiple myeloma in farmers*, "American Journal of Epidemiology", n. 94, 1971, pp. 307-310.

<sup>12</sup> Linda Brown, Aaron Blair *et al.*, *Pesticide exposures and agricultural risk factors for leukemia among men in Iowa and Minnesota*, "Cancer Research", vol. 50, 1990, pp. 6585-6591.

<sup>13</sup> Michael Alavanja *et al.*, *Health effects of chronic pesticide exposure: cancer and neurotoxicity*, cit.; Sadik Khuder, *Meta-analyses of multiple myeloma and farming*, "American Journal of Industrial Medicine", vol. 32, novembre 1997, pp. 510-516.

<sup>14</sup> Isabelle Baldi, Pierre Lebailly, *Cancers et pesticides*, "La Revue du Praticien", vol. 57, suppl., 15 giugno 2007.

<sup>15</sup> Dorothee Provost *et al.*, *Brain tumours and exposure to pesticides: a case-control study in South-Western France*, "The Journal of Occupational and Environmental Medicine", vol. 64, n. 8, 2007, pp. 509-514.

<sup>16</sup> Jean-François Viel *et al.*, *Brain cancer mortality among French farmers: the vineyard pesticide hypothesis*, "Archives of Environmental Health", vol. 53, 1998, pp. 65-70; Jean-François Viel, *Étude des associations géographiques entre mortalité par cancers en milieu agricole et exposition aux pesticides*, tesi di dottorato, Faculté de médecine Paris-Sud, 1992.

<sup>17</sup> André Fougeroux, *Les produits phytosanitaires. Évaluation des surfaces et des tonnages par type de traitement en 1988*, "La Défense des végétaux", vol. 259,

1989, pp. 3-8. André Fougereux oggi è responsabile della biodiversità presso Syngenta, multinazionale svizzera specializzata in pesticidi e sementi transgeniche.

<sup>18</sup> Petter Kristensen *et al.*, *Cancer in offspring of parents engaged in agricultural activities in Norway: incidence and risk factors in the farm environment*, "International Journal of Cancer", vol. 65, 1996, pp. 39-50.

<sup>19</sup> Michael Alavanja, Aaron Blair *et al.*, *Use of agricultural pesticides and prostate cancer risk in the Agricultural Health Study cohort*, "American Journal of Epidemiology", vol. 157, n. 9, 2003, pp. 800-814.

<sup>20</sup> Agricultural Health Study, <http://aghealth.nci.nih.gov>.

<sup>21</sup> Michael Alavanja, Aaron Blair *et al.*, *Cancer incidence in the Agricultural Health Study*, "Scandinavian Journal of Work, Environment & Health", vol. 31, suppl. 1, 2005, pp. 39-45.

<sup>22</sup> Geneviève Van Maele-Fabry, Jean-Louis Willems, *Prostate cancer among pesticide applicators: a meta-analysis*, "International Archives of Occupational and Environmental Health", vol. 77, n. 8, 2004, pp. 559-570. Si noti che gli odds ratio ottenuti nei ventidue studi selezionati variano tra 0,63 e 2,77.

<sup>23</sup> Isabelle Baldi e Pierre Lebaillly, *Cancers et pesticides*, cit.

## 6. Pesticidi e malattie neurodegenerative: l'irresistibile ascesa

<sup>1</sup> Fabrice Nicolino, François Veillerette, *Pesticides, révélations sur un scandale français*, cit., p. 56.

<sup>2</sup> *Le Gaucho retenu tueur officiel des abeilles. 450.000 ruches ont disparu depuis 1996*, "Libération", 9 ottobre 2000.

<sup>3</sup> Per maggiori particolari sulla carriera di Catherine Geslain-Lanéelle, vedi Fabrice Nicolino, François Veillerette, *Pesticides, révélations sur un scandale français*, cit., p. 60.

<sup>4</sup> Michael Alavanja *et al.*, *Health effects of chronic pesticide exposure: cancer and neurotoxicity*, cit., pp. 155-197.

<sup>5</sup> Freya Kamel, Caroline Tanner, Michael Alavanja, Aaron Blair *et al.*, *Pesticide exposure and self-reported Parkinson's disease in the Agricultural Health Study*, "American Journal of Epidemiology", vol. 165, n. 4, 2006, pp. 364-374.

<sup>6</sup> Cit. in Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 243.

<sup>7</sup> *Ibid.*

<sup>8</sup> Louis Casamajor *et al.*, *An unusual form of mineral poisoning affecting the nervous system: manganese*, "The Journal of the American Medical Association", vol. 60, 1913, pp. 646-649 (cit. in Paul Blanc, *ivi*, p. 250).

<sup>9</sup> Hugo Mella, *The experimental production of basal ganglion symptomatology in macacus rhesus*, "Archives of Neurology and Psychiatry", vol. 11, 1924, pp. 405-417 (cit. in Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 251).

<sup>10</sup> Henrique B. Ferraz *et al.*, *Chronic exposure to the fungicide maneb may produce symptoms and signs of CSN manganese intoxication*, "Neurology", vol. 38, 1988, pp. 550-553.

<sup>11</sup> Giuseppe Meco *et al.*, *Parkinsonism after chronic exposure to the fungicide maneb (manganese-ethylene-bis-dithiocarbamate)*, "Scandinavian Journal of Work, Environment & Health", vol. 20, 1994, pp. 301-305.

<sup>12</sup> William Langston, *The aetiology of Parkinson's disease with emphasis on the MPTP story*, "Neurology", vol. 47, 1996, pp. 153-160.

<sup>13</sup> *Maïs: le désherbage en prélevée est recommandé*, cit.

<sup>14</sup> Oms/Unep, *Sound Management of Pesticides and Diagnosis and Treatment of Pesticide Poisoning*, cit., p. 92.

<sup>15</sup> Isabelle Baldi *et al.*, *Neuropsychologic effects of long-term exposure to pesticides: results from the French Phytoner study*, "Environmental Health Perspectives", vol. 109, agosto 2001, n. 8, pp. 839-844.

<sup>16</sup> Isabelle Baldi, Pierre Lebailly *et al.*, *Neurodegenerative diseases and exposure to pesticides in the elderly*, "American Journal of Epidemiology", vol. 1, n. 5, marzo 2003, pp. 409-414.

<sup>17</sup> Caroline Tanner *et al.*, *Occupation and risk of parkinsonism. A multicenter case-control study*, "Archives of Neurology", vol. 66, n. 9, 2009, pp. 1106-1113. Lo studio verteva su 500 soggetti ammalati comparati a un gruppo di controllo equivalente.

<sup>18</sup> Alexis Elbaz *et al.*, *CYP2D6 polymorphism, pesticide exposure and Parkinson's disease*, "Annals of Neurology", vol. 55, marzo 2004, pp. 430-434. Il premio Epidaure è stato creato da "Le Quotidien du Médecin" per stimolare la ricerca in medicina ed ecologia.

<sup>19</sup> Martine Perez, *Parkinson: le rôle des pesticides reconnu*, "Le Figaro", 27 settembre 2006.

<sup>20</sup> Alexis Elbaz *et al.*, *Professional exposure to pesticides and Parkinson's disease*, "Annals of Neurology", vol. 66, ottobre 2009, pp. 494-504.

<sup>21</sup> Sadie Costello *et al.*, *Parkinson's disease and residential exposure to maneb and paraquat from agricultural applications in the Central Valley of California*, "American Journal of Epidemiology", vol. 169, n. 8, 15 aprile 2009, pp. 919-926.

<sup>22</sup> David Pimentel, *Amounts of pesticides reaching target pests: environmental impacts and ethics*, "Journal of Agricultural and Environmental Ethics", vol. 8, 1995, pp. 17-29.

<sup>23</sup> Hayo van der Werf, *Évaluer l'impact des pesticides sur l'environnement*, "Le Courrier de l'environnement", n. 31, agosto 1997 (tr. fr., *Assessing the impact of pesticides on the environment*, "Agriculture, Ecosystems and Environment", n. 60, 1996, pp. 81-96).

<sup>24</sup> *Ibid.* Per maggiori informazioni, vedi Dwight Glotfelty *et al.*, *Volatilization of surface-applied pesticides from fallow soil*, "Journal of Agriculture and Food Chemistry", vol. 32, 1984, pp. 638-643; e Dennis Gregor, William Gummer, *Evidence of atmospheric transport and deposition of organochlorine pesticides and polychlorinated biphenyls in Canadian Arctic snow*, "Environmental Science and Technology", vol. 23, 1989, pp. 561-565.

<sup>25</sup> David Pimentel, *Amounts of pesticides reaching target pests: environmental impacts and ethics*, cit.

<sup>26</sup> Beate Ritz, *Pesticide exposure raises risk of Parkinson's disease*, [www.niehs.nih.gov](http://www.niehs.nih.gov)

<sup>27</sup> Robert Repetto, Sanjay S. Baliga, *Pesticides and the Immune System. The Public Health Risks*, World Resources Institute, Washington 1996.

<sup>28</sup> Intervista telefonica dell'autrice con Robert Repetto, 11 giugno 2009.

<sup>29</sup> Robert Repetto, Sanjay S. Baliga, *Pesticides and the Immune System. The Public Health Risks*, cit., pp. 22-35.

<sup>30</sup> Michel Fournier *et al.*, *Limited immunotoxic potential of technical formulation of the herbicide atrazine (AAtrex) in mice*, "Toxicology Letters", vol. 60, 1992, pp. 263-274.

<sup>31</sup> J. Vos *et al.*, "Methods for testing immune effects of toxic chemicals: evaluation of the immunotoxicity of various pesticides in the rat", in Junshi Miyamoto (a cura di), *Pesticide Chemistry, Human Welfare and the Environment. Proceedings of the 5th International Congress of Pesticide Chemistry*, Pergamon Press, Oxford 1983.

<sup>32</sup> A. Walsh, William E. Ribelin, "The pathology of pesticide poisoning", in William E. Ribelin, George Migaki (a cura di), *The Pathology of Fishes*, The University of Wisconsin Press, Madison 1975, pp. 515-557.

<sup>33</sup> Sylvain De Guise *et al.*, *Possible mechanisms of action of environmental contaminants on St. Lawrence Beluga whales (Delphinapterus leucas)*, "Environmental Health Perspectives", vol. 103, suppl. 4, maggio 1995, pp. 73-77.

<sup>34</sup> Marlise Simons, *Dead Mediterranean dolphins give nations pause*, "The New York Times", 2 febbraio 1992.

<sup>35</sup> Alex Aguilar, *The striped dolphin epizootic in the Mediterranean Sea*, "Ambio", vol. 22, dicembre 1993, pp. 524-528.

<sup>36</sup> Rik De Swart, *Impaired immunity in Harbour seals (Phoca vitulina) exposed to bioaccumulated environmental contaminants: review of a long-term feeding study*, "Environmental Health Perspectives", vol. 104, n. 4, agosto 1996, pp. 823-828.

<sup>37</sup> Arthur Holleb et al., *Principles of tumor immunology*, "The American Cancer Society Textbook of Clinical Oncology", Atlanta 1991, pp. 71-79.

<sup>38</sup> Kenneth Abrams et al., *Pesticide-related dermatoses in agricultural workers*, "Occupational Medicine. State of the Art Reviews", vol. 6, n. 3, luglio-settembre 1991, pp. 463-492.

<sup>39</sup> Oms/Unep, *Sound Management of Pesticides and Diagnosis and Treatment of Pesticides Poisoning*, cit., p. 94.

<sup>40</sup> John Acquavella et al., *A critique of the World Resources Institute's report "Pesticides and the immune system: the public health risks"*, "Environmental Health Perspectives", vol. 106, febbraio 1998, pp. 51-54.

## 7. Il volto funesto del progresso

<sup>1</sup> Intervista dell'autrice con Peter Infante, Washington, 16 ottobre 2009. Tra i suoi lavori, vedi soprattutto: Peter Infante, Gwen K. Pohl, *Living in a chemical world: actions and reactions to industrial carcinogens*, "Teratogenesis, Carcinogenesis and Mutagenesis", vol. 8, n. 4, 1988, pp. 225-249. Qui scrive: "La sintesi di molecole chimiche si è tradotta in benefici tecnologici per la società, ma ha anche accresciuto i rischi cancerogeni dovuti all'esposizione chimica".

<sup>2</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérigène*, cit.

<sup>3</sup> Ivi, p. 16.

<sup>4</sup> Jean Guilaïne (a cura di), *La Préhistoire française. Les civilisations néolithiques et protohistoriques*, t. 2, Éditions du Cnrs, Paris 1976.

<sup>5</sup> John Newby, Vyvyan Howard, *Environmental influences in cancer aetiology*, "Journal of Nutritional & Environmental Medicine", 2006, pp. 1-59.

<sup>6</sup> Ivi, p. 9.

<sup>7</sup> Vilhjalmur Stefansson, *Cancer: Disease of Civilization? An Anthropological and Historical Study*, Hill and Wang, New York 1960; vedi anche Zac Goldsmith, *Cancer: a disease of industrialization*, "The Ecologist", n. 28, marzo-aprile 1998, pp. 93-99.

<sup>8</sup> John Lyman Bulkley, *Cancer among primitive tribes*, "Cancer", vol. 4, 1927, pp. 289-295 (cit. in Vilhjalmur Stefansson, *Cancer: Disease of Civilization?*, cit.).

<sup>9</sup> Zac Goldsmith, *Cancer: a disease of industrialization*, cit., p. 95.

<sup>10</sup> Weston A. Price, "Report of an interview with Dr Joseph Herman Romig: nutrition and physical degeneration", 1939 (cit. in Vilhjalmur Stefansson, *Cancer: Disease of Civilization?*, cit.).

<sup>11</sup> Alexander Berglas, "Cancer: nature, cause and cure", Institut Pasteur, Paris 1957 (cit. in Vilhjalmur Stefansson, *Cancer: Disease of Civilization?*, cit.).

<sup>12</sup> Frederick Hoffman, "Cancer and civilization, speech to Belgian National Cancer Congress at Brussels", 1923 (cit. in Vilhjalmur Stefansson, *Cancer: Disease of Civilization?*, cit.).

<sup>13</sup> Albert Schweitzer, *À l'Orée de la forêt vierge*, La Concorde, Lausanne 1923 (cit. in Geneviève Barbier, Armand Farrachi, *La Société cancérigène*, cit., p. 18).

<sup>14</sup> R. De Bovis, *L'Augmentation de la fréquence des cancers. Sa prédominance dans les villes et sa prédilection pour le sexe féminin sont-elles réelles ou apparentes?*, "La Semaine Médicale", settembre 1902 (cit. in Geneviève Barbier, Armand Farrachi, *La Société cancérigène*, cit., p. 19).

- <sup>15</sup> Giuseppe Tallarico, *La Vie des aliments*, Denoël, Paris 1947, p. 249.
- <sup>16</sup> Pierre Darmon, *Le Mythe de la civilisation cancérrogène (1890-1970)*, "Communications", n. 57, 1993, p. 73.
- <sup>17</sup> Ivi, p. 71.
- <sup>18</sup> Roger Williams, *The continued increase of cancer with remarks as to its causations*, "British Medical Journal", 1896, p. 244 (cit. in Pierre Darmon, *Le Mythe de la civilisation cancérrogène (1890-1970)*, cit., p. 71).
- <sup>19</sup> Pierre Darmon, *Le Mythe de la civilisation cancérrogène (1890-1970)*, cit.
- <sup>20</sup> Ivi, p. 73.
- <sup>21</sup> Bernardino Ramazzini, *Des maladies du travail*, AleXitère, Valergues 1990. Corsivo mio.
- <sup>22</sup> Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 31.
- <sup>23</sup> Karl Marx, *Il capitale. Libro primo*, a cura di Mario Spinella, Alberto Pezzullo Editore, Milano 1979, vol. I, p. 187.
- <sup>24</sup> Kerrie Schoffer, John O'Sullivan, *Charles Dickens: the man, medicine and movement disorders*, "Journal of Clinical Neuroscience", vol. 13, n. 9, 2006, pp. 898-901.
- <sup>25</sup> Alex Wilde, *Charles Dickens could spot the shakes*, "ABC Science Online", 19 ottobre 2006.
- <sup>26</sup> Percivall Pott, *The Chirurgical Works of Percivall Pott*, Hawes, Clarke and Collins, London 1775, vol. 5, pp. 50-54 (cit. in Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 228).
- <sup>27</sup> Henry Butlin, "On cancer of the scrotum in chimney-sweeps and others: three lectures delivered at the Royal College of Surgeons of England", British Medical Association, 1892 (cit. in Paul Blanc, ivi, p. 228).
- <sup>28</sup> Hugh Campbell Ross, John Westray Cropper, "The problem of the gasworks pitch industry and cancer", *The John Howard McFadden Researches*, John Murray, London 1912.
- <sup>29</sup> Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 229.
- <sup>30</sup> Ivi, p. 132.
- <sup>31</sup> Auguste Delpech, *Accidents que développe chez les ouvriers en caoutchouc l'inhalation du sulfure de carbone en vapeur*, "L'Union médicale", vol. 10, n. 60, 31 maggio 1856 (cit. in Paul Blanc, ivi, p. 142).
- <sup>32</sup> Auguste Delpech, *Accidents produits par l'inhalation du sulfure de carbone en vapeur: expériences sur les animaux*, "Gazette hebdomadaire de médecine et de chirurgie", 30 maggio 1856, pp. 384-385 (cit. in Paul Blanc, ivi).
- <sup>33</sup> Auguste Delpech, *Industrie du caoutchouc soufflé: recherches sur l'intoxication spéciale que détermine le sulfure de carbone*, "Annales d'hygiène publique et de médecine légale", vol. 19, 1863, pp. 65-183 (cit. in Paul Blanc, ivi, p. 143).
- <sup>34</sup> *Unhealthy trades*, "London Times", 26 settembre 1863.
- <sup>35</sup> Jean-Martin Charcot, *Leçon de mardi à La Salpêtrière: Policlinique 1888-1889, notes de cours de MM. Blin, Charcot, Henri Colin*, "Le Progrès médical", 1889, pp. 43-53 (cit. in Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 143).
- <sup>36</sup> Thomas Oliver, "Indiarubber: dangers incidental to the use of bisulphide of carbon and naphtha", in *Dangerous Trades*, Éditions Thomas Oliver, London 1902, pp. 470-474 (cit. in Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 151).
- <sup>37</sup> Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 168.
- <sup>38</sup> Isaac Berenblum, *Cancer research in historical perspective: an autobiographical essay*, "Cancer Research", gennaio 1977, pp. 1-7.
- <sup>39</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 18.
- <sup>40</sup> *International cancer congress*, "Nature", vol. 137, 14 marzo 1936, p. 426.
- <sup>41</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., pp. 19-21.

<sup>42</sup> William Cramer, "The Journal of Industrial Hygiene and Toxicology, Report of the Second International Congress of Scientific and Social Campaign against Cancer", Bruxelles 1936 (cit. in Devra Davis,, *The Secret History of the War on Cancer*, cit., p. 21).

<sup>43</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 23.

<sup>44</sup> Bureau International Du Travail, *Cancer of the bladder among workers in aniline factories*, "Studies and Reports", serie F, n. 1, Genève 1921.

<sup>45</sup> David Michaels, *When science isn't enough: Wilhelm Hueper, Robert A. M. Case and the limits of scientific evidence in preventing occupational bladder cancer*, "The International Journal of Occupational and Environmental Health", vol. 1, 1995, pp. 278-288.

<sup>46</sup> Edgar E. Evans, *Causative agents and protective measures in the anilin tumor of the bladder*, "The Journal of Urology", vol. 38, 1936, pp. 212-215.

<sup>47</sup> Wilhelm Hueper, *Autobiographie non publiée*, National Library of Medicine, Washington (cit. in David Michaels, *Doubt is Their Product*, cit., p. 21).

<sup>48</sup> Wilhelm Hueper et al., *Experimental production of bladder tumors in dogs by administration of beta-naphthylamine*, "The Journal of Industrial Hygiene and Toxicology", vol. 20, 1938, pp. 46-84.

<sup>49</sup> Wilhelm Hueper, *Autobiographie non publiée*, cit. (cit. in David Michaels, *When science isn't enough*, cit., p. 283).

<sup>50</sup> David Michaels, *Doubt is Their Product*, cit., p. 24.

<sup>51</sup> Ivi, pp. 19-20. La lettera è consultabile sul sito di David Michaels: [www.defendingscience.org/upload/Evans\\_1947.pdf](http://www.defendingscience.org/upload/Evans_1947.pdf)

<sup>52</sup> Elizabeth Ward et al., *Excess number of bladder cancers in workers exposed to ortho-toluidine and aniline*, "The Journal of the National Cancer Institute", vol. 3, 1991, pp. 501-506.

<sup>53</sup> David Michaels, *When science isn't enough*, cit., p. 286.

## 8. L'industria detta legge

<sup>1</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 78.

<sup>2</sup> Gerald Markowitz, David Rosner, *Deceit and Denial. The Deadly Politics of Industrial Pollution*, University of California Press, Berkeley/Los Angeles 2002, p. 15.

<sup>3</sup> Ivi, p. 137.

<sup>4</sup> William Kovarik, *Ethyl-leaded gasoline, how a classic occupational disease became an international public health disaster*, "International Journal of Occupational and Environmental Health", ottobre-dicembre 2005, pp. 384-439.

<sup>5</sup> Gerald Markowitz, David Rosner, *Deceit and Denial*, cit. Il capitolo 2 è dedicato alla "Case delle farfalle", pp. 12-25.

<sup>6</sup> Gerald Markowitz, David Rosner, *A gift of God? The public health controversy over leaded gasoline in the 1920s*, "American Journal of Public Health", vol. 75, 1985, pp. 344-351.

<sup>7</sup> William Kovarik, *Ethyl-leaded gasoline, how a classic occupational disease became an international public health disaster*, cit., p. 384.

<sup>8</sup> *Bar ethyl gasoline as 5th victim dies*, "New York Times", 31 ottobre 1924.

<sup>9</sup> *Chicago issues ban on leaded gasoline*, "New York Times", 8 settembre 1984.

<sup>10</sup> *Bar ethyl gasoline as 5th victim dies*, cit.

<sup>11</sup> *Use of ethylated gasoline barred pending inquiry*, "The World", 31 ottobre 1924.

<sup>12</sup> *No reason for abandonment*, "New York Times", 28 novembre 1924.

<sup>13</sup> *Kehoe Papers*, University of Cincinnati (cit. in Devra Davis, *The Secret History of the War on Cancer*, cit., p. 81).

<sup>14</sup> Devra Davis, *The Secret History of the War on Cancer*, p. 81.

<sup>15</sup> Ivi, p. 94.

<sup>16</sup> René Allendy, *Paracelse. Le médecin maudit*, Dervy-Livres, Paris 1987.

<sup>17</sup> Paracelsus, "Liber paragraphorum", *Sämtliche Werke*, Éditions K. Sudhoff, t. 4, pp. 1-4.

<sup>18</sup> Andrée Mathieu, *Le 500e anniversaire de Paracelse*, "L'Agora", vol. 1, n. 4, dicembre 1993-gennaio 1994.

<sup>19</sup> Michel Gérin *et al.*, *Environnement et santé publique*, cit., p. 120. Si pensa che i veleni utilizzati dallo sventurato re – che finirà ucciso da un mercenario – in realtà fossero alterati e avessero perso il loro potere...

<sup>20</sup> William Kovarik, *Ethyl-leaded gasoline, how a classic occupational disease became an international public health disaster*, cit., p. 391.

<sup>21</sup> Testimonianza di Robert Kehoe, 8 giugno 1966, *Hearings before a Subcommittee on Air and Water Pollution of the Committee on Public Works*, Gpo, 1966, p. 222 (cit. in William Kovarik, *Ethyl-leaded gasoline*, cit.).

<sup>22</sup> Gerald Markowitz, David Rosner, *Deceit and Denial*, cit., p. 110.

<sup>23</sup> William Kovarik, *Ethyl-leaded gasoline, how a classic occupational disease became an international public health disaster*, cit., p. 391.

<sup>24</sup> Wilhelm Hueper, *Autobiographie non publiée*, cit., pp. 222-223 (cit. in Devra Davis, *The Secret History of the War on Cancer*, cit., p. 98).

<sup>25</sup> Il libro è uscito dopo: Devra Davis, *Disconnect. The Truth about Cell Phone Radiation, What the Industry Has Done to Hide it, and How to Protect Your Family*, Dutton Adult, New York 2010.

<sup>26</sup> Questa esperienza è alla base del suo primo libro: *When Smoke Ran Like Water. Tales of Environmental Deception and the Battle against Pollution*, Basic Books, New York 2002.

<sup>27</sup> Intervista dell'autrice con Devra Davis, Pittsburgh, 15 ottobre 2009.

<sup>28</sup> Si legga in particolare Gérard Dubois, *Le Rideau de fumée. Les méthodes secrètes de l'industrie du tabac*, Seuil, Paris 2003.

<sup>29</sup> John Hill, *Cautions against the Immoderate Use of Snuff*, London 1761, pp. 27-38.

<sup>30</sup> Étienne Frédéric Bouisson, *Tribut à la chirurgie*, Baillière, Paris 1858-1861, vol. 1, pp. 259-303.

<sup>31</sup> Angel Honorio Roffo, *Der Tabak als krebserzeugendes Agens*, "Deutsche medizinische Wochenschrift", vol. 63, 1937, pp. 1267-1271.

<sup>32</sup> Franz Hermann Müller, *Tabakmissbrauch und Lungencarcinom*, "Zeitschrift für Krebsforschung", vol. 49, 1939, pp. 57-85. Per "fortissimi fumatori" Franz Müller intendeva chi fuma quotidianamente "da dieci a quindici sigari, oltre trentacinque sigarette o cinquanta grammi di tabacco da pipa".

<sup>33</sup> Robert N. Proctor, *The Nazi War on Cancer*, Princeton University Press, Princeton 2000; vedi anche Robert N. Proctor, *The Nazi war on tobacco: ideology, evidence and possible cancer consequences*, "Bulletin of the History of Medicine", vol. 71, n. 3, 1997, pp. 435-488.

<sup>34</sup> Eberhard Schairer, Erich Schöniger, *Lungenkrebs und Tabakverbrauch*, "Zeitschrift Notes für Krebsforschung", vol. 54, 1943, pp. 261-269. I risultati di questo studio sono stati rivalutati nel 1995 con strumenti statistici più moderni: la conclusione è stata che la probabilità che fossero dovuti al caso era di 1 su 10 milioni (George Davey *et al.*, *Smoking and death*, "British Medical Journal", vol. 310, 1995, p. 396).

<sup>35</sup> Aneddoto riportato da Richard Doll a Robert Proctor nel 1997 (Robert N. Proctor, *The Nazi War on Cancer*, cit., p. 46).

<sup>36</sup> Richard Doll, Bradford Hill, *Smoking and carcinoma of the lung*, "British Medical Journal", vol. 2, 30 settembre 1950, pp. 739-748.

<sup>37</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 146.

<sup>38</sup> Cuyler Hammond, Daniel Horn, *The relationship between human smoking habits and death rates: a follow-up study of 187,766 men*, "The Journal of the American Medical Association", 7 agosto 1954, pp. 1316-1328. Gli altri studi sono: Ernest Wynder, Evarts Graham, *Tobacco smoking as a possible etiologic factor in bronchiogenic carcinoma*, "The Journal of the American Medical Association", vol. 143, 1950, pp. 329-336; Robert Schrek et al., *Tobacco smoking as an etiologic factor in disease. I. Cancer*, "Cancer Research", vol. 10, 1950, pp. 49-58; Morton Levin et al., *Cancer and tobacco smoking: a preliminary report*, "The Journal of the American Medical Association", vol. 143, 1950, pp. 336-338; Ernest Wynder et al., *Experimental production of carcinoma with cigarette tar*, "Cancer Research", vol. 13, 1953, pp. 855-864.

<sup>39</sup> "Times Magazine", 1937, n. 12.

<sup>40</sup> "US News and World Report", 2 luglio 1954.

<sup>41</sup> Brown & Williamson Tobacco Corp., "Smoking and health proposal", Brown & Williamson document n. 68056, 1969, pp. 1778-1786, <http://legacy.library.ucsf.edu/tid/nvs40f00>. Corsivo dell'autore.

<sup>42</sup> Robert N. Proctor, *Tobacco and health. Expert witness report filed on behalf of plaintiffs in The United States of America, plaintiff, v. Philip Morris, Inc., et al., defendants, Civil Action n. 99-CV-02496 (GK) (Federal case)*, "The Journal of Philosophy, Science & Law", vol. 4, marzo 2004.

<sup>43</sup> "Project Truth: the smoking/health controversy: a view from the other side (prepared for the "Courier-Journal" and "Louisville Times")", 8 febbraio 1971 (documento di Brown & Williamson Tobacco Corp., cit. in David Michaels, *Doubt is Their Product*, cit., p. 3).

<sup>44</sup> "Le Nouvel Observateur", 24 febbraio 1975 (cit. in Gérard Dubois, *Le Rideau de fumée*, cit., p. 290).

<sup>45</sup> Vedi in particolare il film di Nadia Collot, *Tabac: la conspiration*, 2006.

<sup>46</sup> Evarts Graham, *Remarks on the aetiology of bronchogenic carcinoma*, "The Lancet", vol. 263, n. 6826, 26 giugno 1954, pp. 1305-1308.

<sup>47</sup> Christie Todd Whitman, "Effective policy making: the role of good science. Remarks at the National Academy of Science's symposium on nutrient over-enrichment of coastal waters", 13 ottobre 2000 (cit. in David Michaels, *Doubt is Their Product*, cit., p. 6).

<sup>48</sup> Cit. in Elisa Ong, Stanton Glantz, *Constructing "sound science" and "good epidemiology": tobacco, lawyers and public relations firms*, "American Journal of Public Health", vol. 91, n. 11, novembre 2001, pp. 1749-1757 (corsivo mio). Questo documento, come tutti quelli che cito in questa sezione, è accessibile su un sito aperto da Philip Morris in seguito alla sua condanna in tribunale: [www.pmdocs.com/Disclaimer.aspx](http://www.pmdocs.com/Disclaimer.aspx)

<sup>49</sup> Elisa Ong, Stanton Glantz, *Constructing "sound science" and "good epidemiology"*, cit.

<sup>50</sup> André Ciolella, Dorothée Benoît Browaeys, *Alertes santé. Experts et citoyens face aux intérêts privés*, Fayard, Paris 2005, p. 301.

<sup>51</sup> Ivi, p. 299.

<sup>52</sup> David Michaels, *Doubt is Their Product*, cit., p. 9.

## 9. I mercenari della scienza

- <sup>1</sup> Intervista dell'autrice con Peter Infante, Washington, 16 ottobre 2009.
- <sup>2</sup> Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., p. 61.
- <sup>3</sup> David Michaels, *Doubt is Their Product*, cit., p. 60.
- <sup>4</sup> Ivi, p. 66.
- <sup>5</sup> Ivi, pp. 69-70. Corsivo mio.
- <sup>6</sup> Intervista dell'autrice con Devra Davis, Pittsburgh, 15 ottobre 2009.
- <sup>7</sup> William Ruckelshaus, *Risk in a free society*, "Environmental Law Reporter", vol. 14, 1984, p. 10190 (cit. in David Michaels, *Doubt is Their Product*, cit., p. 69).
- <sup>8</sup> *Chronic exposure to benzene*, "The Journal of Industrial Hygiene and Toxicology", ottobre 1939, pp. 321-377.
- <sup>9</sup> Paul Blanc, *How Everyday Products Make People Sick*, cit., p. 62.
- <sup>10</sup> Ivi, p. 67.
- <sup>11</sup> American Petroleum Institute, *API Toxicological review: benzene*, New York 1948 (cit. in David Michaels, *Doubt is Their Product*, cit., p. 70). Raccomando la lettura di questo documento, consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org). Corsivo mio.
- <sup>12</sup> Peter Infante, *The past suppression of industry knowledge of the toxicity of benzene to humans and potential bias in future benzene research*, "The International Journal of Occupational and Environmental Health", vol. 12, 2006, pp. 268-272.
- <sup>13</sup> Dante Picciano, *Cytogenic study of workers exposed to benzene*, "Environmental Research", vol. 19, 1979, pp. 33-38.
- <sup>14</sup> Peter Infante, Robert Rinsky et al., *Leukemia in benzene workers*, "The Lancet", vol. 2, 1977, pp. 76-78.
- <sup>15</sup> "Industrial Union Department v. American Petroleum Institute", 2 luglio 1980, 44 US 607 (consultabile sul sito [www.publichealthlaw.net](http://www.publichealthlaw.net)).
- <sup>16</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 385.
- <sup>17</sup> Robert Rinsky et al., *Benzene and leukemia: an epidemiologic risk assessment*, "The New England Journal of Medicine", vol. 316, n. 17, 1987, pp. 1044-1050. L'équipe di Peter Infante ha determinato quattro livelli di esposizione (per giornata lavorativa): meno di 1 ppm, da 1 a 5 ppm, da 5 a 10 ppm, e oltre 10 ppm. Nell'ultimo livello c'è un numero di leucemie sessanta volte superiore a quello del primo...
- <sup>18</sup> Osha, *Occupational exposure to benzene: final rule*, "Federal Register", vol. 52, 1987, pp. 34460-34578.
- <sup>19</sup> Peter Infante, *Benzene: epidemiologic observations of leukemia by cell type and adverse health effects associated with low level exposure*, "Environmental Health Perspectives", vol. 52, ottobre 1983, pp. 75-82.
- <sup>20</sup> David Michaels, *Doubt is Their Product*, cit., p. 47.
- <sup>21</sup> Exponent, *Rapport annuel 2003*, Form 10-K SEC Filings, 26 giugno 2005.
- <sup>22</sup> Susanna Rankin Bohme, John Zorabedian, David Egilman, *Maximizing profit and endangering health: corporate strategies to avoid litigation and regulation*, "The International Journal of Occupational and Environmental Health", vol. 11, 2005, pp. 338-348.
- <sup>23</sup> *Ibid.*
- <sup>24</sup> Gerald Markowitz, David Rosner, *Deceit and Denial*, cit. Il capitolo 6 è intitolato "Evidence of illegal conspiracy by industry", pp. 168-194.
- <sup>25</sup> *Ibid.*
- <sup>26</sup> Jian Dong Zhang et al., *Chromium pollution of soil and water in Jinzhou*, "Chinese Journal of Preventive Medicine", vol. 2, n. 5, 1987, pp. 262-264.
- <sup>27</sup> Jiandong Zhang et al., *Cancer mortality in a Chinese population exposed to hexavalent chromium*, "Journal of Occupational and Environmental Medicine", vol. 39, n. 4, 1997, pp. 315-319.

<sup>28</sup> *Study tied pollutant to cancer; then consultants got hold of it*, in "Wall Street Journal", 23 dicembre 2005.

<sup>29</sup> Paul Brandt-Rauf, *Editorial retraction*, in "Journal of Occupational and Environmental Medicine", vol. 48, n. 7, 2006, p. 749.

<sup>30</sup> Richard Hayes, Yin Song-Nian *et al.*, *Benzene and the dose-related incidence of hematologic neoplasm in China*, in "Journal of the National Cancer Institute", vol. 89, n. 14, 1997, pp. 1065-1071.

<sup>31</sup> Pamela Williams, Dennis Paustenbach, *Reconstruction of benzene exposure for the Pliofilm cohort (1936-1976) using Monte Carlo techniques*, "Journal of Toxicology and Environmental Health", vol. 66, n. 8, 2003, pp. 677-781.

<sup>32</sup> David Michaels, *Doubt is Their Product*, cit., p. 46.

<sup>33</sup> Susanna Rankin Bohme, John Zorabedian, David Egilman, *Maximizing profit and endangering health*, cit.

<sup>34</sup> Gerald Markowitz, David Rosner, *Deceit and Denial*, cit.

<sup>35</sup> Qinq Lan, Luoping Zhang *et al.*, *Hematotoxicity in workers exposed to low levels of benzene*, "Science", vol. 306, 3 dicembre 2004, pp. 1774-1776.

<sup>36</sup> Benzene Health Research Consortium, "The Shanghai Health Study (Power-Point presentation)", 1° febbraio 2003 (cit. in Lorraine Twerdok, Patrick Beatty, "Proposed studies on the risk of benzene-induced diseases in China: costs and funding"; documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>37</sup> Craig Parker, "Memorandum to manager of toxicology and product safety (Marathon Oil). Subject: International leveraged research proposal", 2000 (documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>38</sup> Susanna Rankin Bohme, John Zorabedian, David Egilman, *Maximizing profit and endangering health*, cit.

<sup>39</sup> Arnold Relman, *Dealing with conflicts of interest*, "The New England Journal of Medicine", vol. 310, 1984, pp. 1182-1183.

<sup>40</sup> International Committee of Medical Journal Editors, "Uniform requirements for manuscripts submitted to biomedical journals. Ethical considerations in the conduct and reporting of research: conflicts of interest", 2001 (vedi Frank Davidoff *et al.*, *Sponsorship, authorship and accountability*, "The Lancet", vol. 358, 15 settembre 2001, pp. 854-856).

<sup>41</sup> Merrill Goozner, *Unrevealed: non-disclosure of conflicts of interest in four leading medical and scientific journals*, "Integrity in Science. Project of the Center of Science in the Public Interest", 12 luglio 2004.

<sup>42</sup> *Ibid.*

<sup>43</sup> Catherine DeAngelis *et al.*, *Reporting financial conflicts of interest and relationships between investigators and research sponsors*, "The Journal of the American Medical Association", vol. 286, 2001, pp. 89-91.

<sup>44</sup> Catherine DeAngelis, *The influence of money on medical science*, "The Journal of the American Medical Association", vol. 296, 2006, pp. 996-998.

<sup>45</sup> Phil Fontanarosa, Annette Flanagan, Catherine DeAngelis, *Reporting conflicts of interest, financial aspects of research and role of sponsors in funded studies*, "The Journal of the American Medical Association", vol. 294, n. 1, 2005, pp. 110-111.

<sup>46</sup> Catherine DeAngelis, *The influence of money on medical science*, cit.

<sup>47</sup> David Michaels, *Science and government: disclosure in regulatory science*, in "Science", vol. 302, n. 5653, 19 dicembre 2003, p. 2073.

<sup>48</sup> Justin Bekelman, Yan Li, Cary Gross, *Scope and impact of financial conflicts of interest in biomedical research. A systematic review*, "The Journal of the American Medical Association", vol. 289, 2003, pp. 454-465.

<sup>49</sup> Astrid James, "The Lancet's policy on conflicts of interest", "The Lancet", vol. 363, 2004, pp. 2-3.

<sup>50</sup> Wendy Wagner, Thomas McGarity, *Regulatory reinforcement of journal conflict of interest disclosures: how could disclosure of interests work better in medicine, epidemiology and public health?*, "Journal of Epidemiology and Community Health", vol. 6, 2009, pp. 606-607.

<sup>51</sup> David Michaels, *Science and government: disclosure in regulatory science*, cit.

<sup>52</sup> Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., pp. 341-344.

<sup>53</sup> David Michaels, *Doubt is Their Product*, cit., pp. 256-257.

## 10. Bugie istituzionali

<sup>1</sup> President's Cancer Panel, *Reducing Environmental Cancer Risk. What We Can Do Now. 2008-2009 Annual Report*, U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, aprile 2010.

<sup>2</sup> *Les Causes du cancer en France*, rapporto pubblicato dall'Académie nationale de médecine, l'Académie nationale des sciences/Institut de France, il Centre international de recherche sur le cancer (Oms-Lyon), la Fédération nationale des centres de lutte contre le cancer, con la collaborazione dell'Institut national du cancer e dell'Institut national de veille sanitaire, 2007. La versione francese, in tutto, è composta da 48 pagine e quella integrale in inglese da 275. Gli estratti che utilizzo provengono dalla versione francese.

<sup>3</sup> Ivi, p. 4. Corsivo mio.

<sup>4</sup> Ivi, p. 6.

<sup>5</sup> Sul sito dell'Uipp, cliccare sulla rubrica "Infos pesticides", poi "santé et pesticides" e "produits pharmaceutiques et cancers".

<sup>6</sup> *Les Causes du cancer en France*, cit., p. 42. Il corsivo è sempre mio.

<sup>7</sup> Intervista dell'autrice con Richard Clapp, Boston, 29 ottobre 2009.

<sup>8</sup> André Cicoella, Dorothée Benoît Browaeys, *Alertes santé*, cit., p. 155.

<sup>9</sup> Académie des Sciences/Comité des Applications de l'Académie des Sciences, *La Dioxine et ses analogues. Rapport commun n. 4*, Institut de France, settembre 1994.

<sup>10</sup> Intervista dell'autrice con André Picot, Parigi, 2 giugno 2009.

<sup>11</sup> "Circulaire du 30 mai 1997 relative aux dioxines et furanes" inviata dal ministro dell'Ambiente ai prefetti di dipartimento.

<sup>12</sup> Centre international de recherche sur le cancer, *Monographie sur l'évaluation de l'effet cancérigène chez l'homme: PCDD et PCDF*, vol. 69, luglio 1997.

<sup>13</sup> Vedi in particolare Roger Lenglet, *L'Affaire de l'amianto*, La Découverte, Paris 1996.

<sup>14</sup> Frédéric Denhez, *Les Pollutions invisibles. Quelles sont les vraies catastrophes écologiques?*, Delachaux et Niestlé, Paris 2006, p. 220.

<sup>15</sup> Gérard Dériot, Jean-Pierre Godefroy, *Le Drame de l'amianto en France: comprendre, mieux réparer, en tirer des leçons pour l'avenir*, Rapport d'information n. 37, Sénat, Paris, 26 ottobre 2005.

<sup>16</sup> Étienne Fournier, *Amiante et protection de la population exposée à l'inhalation de fibres d'amianto dans les bâtiments publics et privés*, "Bulletin de l'Académie nationale de médecine", vol. 180, nn. 4-16, 30 aprile 1996.

<sup>17</sup> Inserm, *Effets sur la santé des principaux types d'exposition à l'amianto*, La Documentation française, Paris, gennaio 1997.

<sup>18</sup> Joseph Ladou, *The asbestos cancer epidemic*, "Environmental Health Perspective", vol. 112, n. 3, marzo 2004, pp. 285-290. Si calcola che 30 milioni di tonnellate di amianto sono state utilizzate nel corso del Ventesimo secolo.

<sup>19</sup> *Les Causes du cancer en France*, cit., p. 24.

<sup>20</sup> Intervista dell'autrice con Vincent Cogliano, Lione, 10 febbraio 2010.

<sup>21</sup> *Ibid.* Mentre scrivo queste righe, nel dicembre 2010, mi giunge notizia

che Vincent Coglianò ha ripreso il suo posto originario all'agenzia di protezione dell'ambiente statunitense.

<sup>22</sup> Paolo Bofetta, Maurice Tubiana, Peter Boyle *et al.*, *The causes of cancer in France*, "Annals of Oncology", vol. 20, n. 3, marzo 2009, pp. 550-555.

<sup>23</sup> Intervista dell'autrice con Christopher Wild, Lione, 10 febbraio 2010.

<sup>24</sup> *Les Causes du cancer en France*, cit., p. 47.

<sup>25</sup> *Time to strengthen public confidence at IARC*, "The Lancet", vol. 371, n. 9623, 3 maggio 2008, p. 1478.

<sup>26</sup> *Transparency at IARC*, "The Lancet", vol. 361, n. 9353, 18 gennaio 2003, p. 189.

<sup>27</sup> Lorenzo Tomatis, *The IARC monographs program: changing attitudes towards public health*, "The International Journal of Occupational and Environmental Health", vol. 8, n. 2, aprile-giugno 2002, pp. 144-152. Lorenzo Tomatis è deceduto nel 2007.

<sup>28</sup> *Letter to Dr Gro Harlem Brundtland, Director General WHO*, 25 febbraio 2002, pubblicata in "The International Journal of Occupational and Environmental Health", vol. 8, n. 3, luglio-settembre 2002, pp. 271-273.

<sup>29</sup> James Huff *et al.*, *Multiple-site carcinogenicity of benzene in Fischer 344 rats and B6C3F1 mice*, "Environmental Health Perspectives", vol. 82, 1989, pp. 125-163; James Huff, *National Toxicology Program. NTP toxicology and carcinogenesis studies of benzene (CAS n. 71-43-2) in F344/N rats and B6C3F1 mice (gavage studies)*, National Toxicology Program, "Technical Report Series", vol. 289, 1986, pp. 1-277.

<sup>30</sup> Intervista dell'autrice con James Huff, Research Triangle Park, North Carolina, 27 ottobre 2009.

<sup>31</sup> Dan Ferber, *NIEHS toxicologist receives a "gag order"*, "Science", vol. 297, 9 agosto 2002, p. 215.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Ibid.*

<sup>34</sup> Intervista dell'autrice con James Huff, Research Triangle Park, North Carolina, 27 ottobre 2009.

<sup>35</sup> James Huff, *IARC monographs, industry influence, and upgrading, downgrading, and under-grading chemicals. A personal point of view*, "The International Journal of Occupational and Environmental Health", vol. 8, n. 3, luglio-settembre 2002, pp. 249-270.

<sup>36</sup> Intervista dell'autrice con Vincent Coglianò, Lione, 10 febbraio 2010.

<sup>37</sup> André Cicoella, Dorothée Benoit Browaeys, *Alertes santé*, cit., p. 203.

<sup>38</sup> James Huff, *IARC and the Dehp quagmire*, "The International Journal of Occupational and Environmental Health", vol. 9, n. 4, ottobre-dicembre 2003, pp. 402-404 (National Toxicology Program, "Carcinogenesis bioassay of di (2-ethylhexyl) phthalate (CAS n. 117-81-7) in F344 rats and B6C3F1 mice (feed studies)", Ntp Tr 217, Research Triangle Park, 1982); William Kluwe, James Huff *et al.*, *The carcinogenicity of dietary di-2-ethylhexyl phthalate (Dehp) in Fischer 344 rats and B6C3F1 mice*, "Journal of Toxicology and Environmental Health", vol. 10, 1983, pp. 797-815.

<sup>39</sup> Raymond David *et al.*, *Chronic toxicity of di (2-ethylhexyl) phthalate in rats*, "Toxicological Sciences", vol. 55, 2000, pp. 433-443.

<sup>40</sup> Ronald Melnick, *Suppression of crucial information in the IARC evaluation of Dehp*, "The International Journal of Occupational and Environmental Health", vol. 9, ottobre-dicembre 2003, pp. 84-85.

<sup>41</sup> Cit. in Ronald Melnick, James Huff, Charlotte Brody, Joseph DiGangi, *The IARC evaluation of Dehp excludes key papers demonstrating carcinogenic effects*, "The International Journal of Occupational and Environmental Health", vol. 9, ottobre-dicembre 2003, pp. 400-401.

- <sup>42</sup> Intervista dell'autrice con Devra Davis, Pittsburgh, 15 ottobre 2009.
- <sup>43</sup> Intervista dell'autrice con Peter Infante, Washington, 16 ottobre 2009.
- <sup>44</sup> David Michaels, *Doubt is Their Product*, cit., pp. 60-61.
- <sup>45</sup> Intervista dell'autrice con Vincent Coglianò, Lione, 10 febbraio 2010. Per maggiori informazioni su questo argomento fondamentale, vedi: Ronald Melnick, Kristina Thayer, John Bucher, *Conflicting views on chemical carcinogenesis arising from the design and evaluation of rodent carcinogenicity studies*, "Environmental Health Perspectives", vol. 116, n. 1, gennaio 2008, pp. 130-135.

## 11. Un'epidemia di malattie croniche

- <sup>1</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 262.
- <sup>2</sup> Ivi, p. 146.
- <sup>3</sup> Ivi, p. 255.
- <sup>4</sup> Richard Doll, Richard Peto, *The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today*, "Journal of the National Cancer Institute", vol. 66, n. 6, giugno 1981, pp. 1191-1308.
- <sup>5</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérigène*, cit., p. 49.
- <sup>6</sup> Lucien Abenham, *Rapport de la Commission d'orientation sur le cancer*, La Documentation française, Paris 2003.
- <sup>7</sup> *Les Causes du cancer en France*, cit., p. 7.
- <sup>8</sup> Rory O'Neill, Simon Pickvance, Andrew Watterson, *Burying the evidence: how Great Britain is prolonging the occupational cancer epidemic*, "The International Journal of Occupational and Environmental Health", vol. 13, 2007, pp. 432-440.
- <sup>9</sup> André Cicoella, *Le Défi des épidémies modernes. Comment sauver la Sécurité en changeant le système de santé*, La Découverte, Paris 2007, p. 48.
- <sup>10</sup> Eva Steliarova-Foucher et al., *Geographical patterns and time trends of cancer incidence and survival among children and adolescents in Europe since the 1970s (The ACCIS project): an epidemiological study*, "The Lancet", vol. 364, n. 9451, 11 dicembre 2004, pp. 2097-2105.
- <sup>11</sup> Questa intervista è stata filmata il 13 gennaio 2010. La traduzione è letterale...
- <sup>12</sup> Intervista dell'autrice con Devra Davis, Pittsburgh, 15 ottobre 2009.
- <sup>13</sup> Devra Davis, Joel Schwartz, *Trends in cancer mortality: US white males and females, 1968-1983*, "The Lancet", vol. 331, n. 8586, 1988, pp. 633-636.
- <sup>14</sup> Devra Davis, David Hoel, *Trends in cancer in industrial countries*, "Annals of the New York Academy of Sciences", vol. 609, 1990.
- <sup>15</sup> Devra Davis, *The Secret History of the War on Cancer*, cit., p. 257.
- <sup>16</sup> Devra Davis, Abraham Lilienfeld, Allen Gittelsohn, *Increasing trends in some cancers in older Americans: fact or artifact?*, "Toxicology and Industrial Health", vol. 2, n. 1, 1986, pp. 127-144.
- <sup>17</sup> President's Cancer Panel, *Reducing Environmental Cancer Risk*, cit., p. 4.
- <sup>18</sup> Philippe Irigaray, John Newby, Richard Clapp, Lennart Hardell, Vyvyan Howard, Luc Montagnier, Samuel Epstein, Dominique Belpomme, *Lifestyle-related factors and environmental agents causing cancer: an overview*, "Biomedicine & Pharmacotherapy", vol. 61, 2007, pp. 640-658.
- <sup>19</sup> Vedi Johannes Botha et al., *Breast cancer incidence and mortality trends in 16 European countries*, "European Journal of Cancer", vol. 39, 2003, pp. 1718-1729.
- <sup>20</sup> Dominique Belpomme et al., *The growing incidence of cancer: role of life-style and screening detection (review)*, "International Journal of Oncology", vol. 30, n. 5, maggio 2007, pp. 1037-1049.

<sup>21</sup> John Newby *et al.*, *The cancer incidence temporality index: an index to show temporal changes in the age of onset of overall and specific cancer (England and Wales, 1971-1999)*, "Biomedicine & Pharmacotherapy", vol. 61, 2007, pp. 623-630.

<sup>22</sup> André Cicoletta, *Le Défi des épidémies modernes*, cit., pp. 21-22. Il rischio di cancro allo stomaco è stato diviso per cinque per le donne e per 2,5 per gli uomini. Si attribuisce questa diminuzione all'uso del frigorifero, che ha portato con sé un minor consumo di prodotti salati e affumicati, responsabili dei tumori allo stomaco.

<sup>23</sup> Dominique Belpomme *et al.*, *The growing incidence of cancer: role of life-style and screening detection (review)*, cit.

<sup>24</sup> Catherine Hill, Agnès Laplanche, *Tabagisme et mortalité: aspects épidémiologiques*, "Bulletin épidémiologique hebdomadaire", nn. 22-23, 27 maggio 2003.

<sup>25</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène*, cit., p. 38.

<sup>26</sup> Lucien Abenhaim, *Rapport de la Commission d'orientation sur le cancer*, cit.

<sup>27</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène*, cit., p. 35.

<sup>28</sup> Geoffrey Tweedale, *Hero or Villain? Sir Richard Doll and occupational cancer*, "The International Journal of Occupational and Environmental Health", vol. 13, 2007, pp. 233-235.

<sup>29</sup> Lennart Hardell, Anita Sandstrom, *Case-control study: soft tissue sarcomas and exposure to phenoxyacetic acids or chlorophenols*, "British Journal of Cancer", vol. 39, 1979, pp. 711-717; Mikael Eriksson, Lennart Hardell *et al.*, *Soft tissue sarcoma and exposure to chemical substances: a case referent study*, "British Journal of Industrial Medicine", vol. 38, 1981, pp. 27-33; Lennart Hardell, Mikael Eriksson *et al.*, *Malignant lymphoma and exposure to chemicals, especially organic solvents, chlorophenols and phenoxy acids*, "British Journal of Cancer", vol. 43, 1981, pp. 169-176; Lennart Hardell, Mikael Eriksson, *The association between soft-tissue sarcomas and exposure to phenoxyacetic acids: a new case referent study*, "Cancer", vol. 62, 1988, pp. 652-656.

<sup>30</sup> Royal Commission on the Use and Effects of Chemical Agents on Australian Personnel in Vietnam, *Final Report*, voll. 1-9, Australian Government Publishing Service, Canberra 1985.

<sup>31</sup> *Agent Orange: the new controversy*. Brian Martin looks at the Royal Commission that acquitted Agent Orange, "Australian Society", vol. 5, n. 11, novembre 1986, pp. 25-26.

<sup>32</sup> Monsanto Australia Ltd., "Axelson and Hardell. The odd men out. Submission to the Royal Commission on the use and effects of chemical agents on Australian personnel in Vietnam", 1985.

<sup>33</sup> Cit. in Lennart Hardell, Mikael Eriksson, Olav Axelson, *On the misinterpretation of epidemiological evidence, relating to dioxin-containing phenoxyacetic acids, chlorophenols and cancer effects*, "New Solutions", primavera 1994.

<sup>34</sup> Chris Beckett, *Illustrations from the Wellcome Library. An epidemiologist at work: the personal papers of Sir Richard Doll*, "Medical History", vol. 46, 2002, pp. 403-421.

<sup>35</sup> Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., p. 72.

<sup>36</sup> Sarah Boseley, *Renowned cancer scientist was paid by chemical firm for 20 years*, "The Guardian", 8 dicembre 2006.

<sup>37</sup> Cristina Odone, *Richard Doll was a hero, not a villain*, "The Observer", 10 dicembre 2006.

<sup>38</sup> Geoffrey Tweedale, *Hero or Villain?*, cit.

<sup>39</sup> Richard Peto, "The Times", 9 dicembre 2006.

<sup>40</sup> Richard Stott, *Cloud over Sir Richard*, "The Sunday Mirror", 10 dicembre 2006.

<sup>41</sup> Julian Peto, Richard Doll, *Passive smoking*, "British Journal of Cancer", vol. 54, 1986, pp. 381-383. Julian Peto è il fratello di Richard Peto.

<sup>42</sup> Elizabeth Fontham, Michael J. Thun *et al.*, in nome dell'Acs Cancer and the Environment Subcommittee, *American Cancer Society perspectives on environmental factors and cancer*, "A Cancer Journal for Clinicians", vol. 59, 2009, pp. 343-351.

<sup>43</sup> Intervista dell'autrice con Michael Thun, Atlanta, 25 ottobre 2009.

<sup>44</sup> Gerald Markowitz, David Rosner, *Deceit and Denial*, cit., p. 168.

<sup>45</sup> Cit. in Marie-Monique Robin, *Il mondo secondo Monsanto*, cit., p. 19.

<sup>46</sup> Henry Smyth a T.W. Nale, 24 novembre 1959 (cit. in Gerald Markowitz e David Rosner, *Deceit and Denial*, cit., p. 172).

<sup>47</sup> Cit. in Gerald Markowitz, David Rosner, *Deceit and Denial*, cit., p. 173.

<sup>48</sup> Lettera di Robert Kehoe a R. Emmet Kelly, 2 febbraio 1965, archivi della Manufacturing Chemists' Association (cit. in *ivi*, p. 174).

<sup>49</sup> Lettera di R. Emmet Kelly ad A.G. Erdman (Pringfield), "Pvc Exposure", 7 gennaio 1966, archivi dell'Mca (cit. in *ibid.*).

<sup>50</sup> Lettera di Rex Wilson al dottor J. Newman, "Confidential", 6 gennaio 1966, archivi dell'Mca (cit. in *ibid.*).

<sup>51</sup> Rex Wilson, John Creech *et al.*, *Occupational acroosteolysis: report of 31 cases*, in "The Journal of the American Medical Association", vol. 201, 1967, pp. 577-581.

<sup>52</sup> Lettera di Verald Rowe (Biochemical Research Laboratory) a William McCormick, direttore del Department of Industrial Hygiene and Toxicology della B.F. Goodrich Company, 12 maggio 1959.

<sup>53</sup> Pierluigi Viola, *Carcinogenic effect of vinyl chloride*, articolo presentato al x Congresso internazionale sul cancro, 22-29 maggio 1970, Houston; Pierluigi Viola *et al.*, *Oncogenic response of rats, skin, lungs and bones to vinyl chloride*, "Cancer Research", vol. 31, maggio 1971, pp. 516-522.

<sup>54</sup> Promemoria di L.B. Crider a William McCormick (Goodrich) "Some new information on the relative toxicity of vinyl chloride monomer", 24 marzo 1969, archivi dell'Mca (cit. in Gerald Markowitz, David Rosner, *Deceit and Denial*, cit., p. 184). Lo studio di Maltoni sarà pubblicato nel 1975, nonostante il divieto dei suoi finanziatori: Cesare Maltoni *et al.*, *Carcinogenicity bioassays of vinyl chloride: current results*, in "Annals of the New York Academy of Sciences", vol. 246, 1975, pp. 195-218.

<sup>55</sup> Promemoria di A.C. Siegel (Tenneco Chemicals, Inc.) a G.I. Rozland (Tenneco Chemicals, Inc.), "Subject: vinyl chloride technical task group meeting", 16 novembre 1972 (documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>56</sup> Lettera di D.M. Elliott (General Manager, Production, Solvents and Monomers Group, Imperial Chemical Industries Limited, Mond Division) a G.E. Best (Manufacturing Chemists' Association), 30 ottobre 1972; "Meeting minutes: Manufacturing Chemists' Association, vinyl chloride research coordinators", 30 gennaio 1973 (documenti consultabili sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>57</sup> Le riunioni sono presiedute da Theodore Torkelson di Dow Chemicals. Sono rappresentate Union Carbide, Uniroyal, Ethyl Corporation, Goodrich, Shell Oil Company, Exxon Corporation, Tenneco Chemicals, Diamond Shyroch Corporation, Allied Chemical Corporation, Firestone Plastics Company, Continental Oil Company, Air Products & Chemicals, Inc.

<sup>58</sup> "Meeting minutes: Manufacturing Chemists' Association, vinyl chloride research coordinators", 21 maggio 1973, archivio dell'Mca (documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>59</sup> H.L. Kusnetz (Manager of Industrial Hygiene, Head Office, Shell Oil Co.), "Notes on the meeting of the VC committee", 17 luglio 1973, archivi dell'Mca (*ibid.*).

<sup>60</sup> R.N. Wheeler (Union Carbide), "Memorandum to Carvajal JL, Dernehl CU, Hanks GJ, Lane KS, Steele AB, Zutty NL. Subject: vinyl chloride research: Mca report to Niosh", 19 luglio 1973, archivi dell'Mca (*ibid.*).

<sup>61</sup> John Creech *et al.*, *Angiosarcoma of the liver among polyvinyl chloride workers*, "Morbidity and Mortality Weekly Report", vol. 23, n. 6, 1974, pp. 49-50.

<sup>62</sup> Osha, "Press release. News: Osha investigating Goodrich cancer fatalities", 24 gennaio 1974 (documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>63</sup> Marcus, Key. "Deposition in the United States District Court for the Western District of New York, in the matter of Holly M. Smith v. the Dow Chemical Company; PPG Industries, Inc., and Shell Oil Company v. the Goodyear Tire and Rubber Company". CA no. 94-CV-0393, 19 settembre 1995 (*ibid.*).

<sup>64</sup> David Michaels, *Doubt is Their Product*, cit., p. 36.

<sup>65</sup> Invito il lettore a consultare il sito assai istruttivo della filiale francese di Hill and Knowlton: [www.hillandknowlton.fr](http://www.hillandknowlton.fr)

<sup>66</sup> Hill and Knowlton, "Recommendations for public affairs program for Spi's vinyl chloride committee. Phase 1: preparation for Osha hearings", giugno 1974 (documento consultabile sul sito di David Michaels, [www.defendingscience.org](http://www.defendingscience.org)).

<sup>67</sup> Paul H. Weaver, *On the horns of vinyl chloride dilemma*, "Fortune", n. 150, ottobre 1974.

<sup>68</sup> *Pvc rolls out of jeopardy, into jubilation*, "Chemical Week", 5 settembre 1977.

<sup>69</sup> Chlorure de polyvinyle (Pvc) [9002-86-2] (vol. 19, suppl. 7, 1987).

<sup>70</sup> Richard Doll, *Effects of exposure to vinyl chloride: an assessment of the evidence*, "Scandinavian Journal of Work, Environment & Health", vol. 14, 1988, pp. 61-78. Nel 1981 anche Peter Infante aveva condotto una meta-analisi sul cloruro di vinile nella quale era pervenuto a conclusioni opposte a quelle di Richard Doll: Peter Infante, *Observations of the site-specific carcinogenicity of vinyl chloride to humans*, "Environmental Health Perspectives", vol. 41, ottobre 1981, pp. 89-94.

<sup>71</sup> Jennifer Beth Sass, Barry Castleman, David Wallinga, *Vinyl chloride: a case study of data suppression and misrepresentation*, "Environmental Health Perspectives", vol. 113, n. 7, luglio 2005, pp. 809-812.

<sup>72</sup> Richard Doll, "Deposition of William Richard Shaboe Doll, Ross v. Conoco, Inc.", Case n. 90-4837, LA 14th Judicial District Court, Londra, 27 gennaio 2000.

<sup>73</sup> Dominique Belpomme, *Ces Maladies créées par l'homme. Comment la dégradation de l'environnement met en péril notre santé*, Albin Michel, Paris 2004.

<sup>74</sup> Geneviève Barbier, Armand Farrachi, *La Société cancérogène*, cit., p. 114.

<sup>75</sup> Jacques Ferlay, Philippe Autier, Mathieu Boniol *et al.*, *Estimates of the cancer incidence and mortality in Europe in 2006*, "Annals of Oncology", vol. 3, marzo 2007, pp. 581-592.

<sup>76</sup> Eva Steliarova-Foucher *et al.*, *Geographical patterns and time trends of cancer incidence and survival among children and adolescents in Europe since the 1970s (The ACCIS project): an epidemiological study*, cit.

<sup>77</sup> Bureau Régional de L'Oms pour L'Europe, "Des maladies chroniques qu'il est généralement possible de prévenir causent 86 pour cent des décès en Europe", comunicato stampa Euro/05/06, Copenaghen, 11 settembre 2006. Cor-sivo mio.

<sup>78</sup> Afsset/Inserm, *Cancers et Environnement. Expertise collective*, ottobre 2008.

<sup>79</sup> Suketami Tominaga, *Cancer incidence in Japan, Hawaii, and Western United States*, "National Cancer Institute Monograph", vol. 69, dicembre 1985, pp.

83-92; vedi anche Gertraud Maskarinec, *The effect of migration on cancer incidence among Japanese in Hawaii*, "Ethnicity & Disease", vol. 14, n. 3, 2004, pp. 431-439.

<sup>80</sup> André Cicoellella, Dorothée Benoît Browaeys, *Alertes santé*, cit., p. 25.

<sup>81</sup> Ivi, p. 23.

<sup>82</sup> Paul Lichtenstein et al., *Environmental and heritable factors in the causation of cancer analyses of cohorts of twins from Sweden, Denmark and Finland*, "The New English Journal of Medicine", vol. 343, n. 2, 13 luglio 2000, pp. 78-85.

<sup>83</sup> "Action against cancer", European Parliament resolution on the Commission communication on action against cancer: European Partnership, 6 maggio 2010.

## 12. Il formidabile inganno scientifico della "dose giornaliera accettabile" di veleno

<sup>1</sup> Intervista dell'autrice a Erik Millstone, Brighton, 12 gennaio 2010.

<sup>2</sup> Intervista dell'autrice a Herman Fontier, Parma, 19 gennaio 2010.

<sup>3</sup> Bruno Latour, *La scienza in azione*, Edizioni di Comunità, Torino 1998.

<sup>4</sup> Léopold Molle, *Éloge du professeur René Truhaut*, "Revue d'histoire de la pharmacie", vol. 72, n. 262, 1984, pp. 340-348.

<sup>5</sup> Jean Lallier, *Le Pain et le vin de l'an 2000*, documentario trasmesso su Ortf il 17 dicembre 1964.

<sup>6</sup> René Truhaut, *Le concept de la dose journalière acceptable*, "Microbiologie et Hygiène alimentaire", vol. 3, n. 6, 1991, pp. 13-20.

<sup>7</sup> René Truhaut, *25 years of Jecfa achievements*, Rapporto presentato alla 25ª sessione del Jecfa, 23 marzo-1º aprile 1981, Oms Ginevra (archivi dell'Oms).

<sup>8</sup> René Truhaut, *Le Concept de la dose journalière acceptable*, cit.

<sup>9</sup> *Ibid.*

<sup>10</sup> Intervista trasmessa al telegiornale di Ortf del 3 giugno 1974.

<sup>11</sup> René Truhaut, *Le Concept de la dose journalière acceptable*, cit.

<sup>12</sup> *Ibid.*

<sup>13</sup> René Truhaut, *25 years of Jecfa achievements*, cit.

<sup>14</sup> *Ibid.*

<sup>15</sup> René Truhaut, *Le Concept de la dose journalière acceptable*, cit.

<sup>16</sup> *Ibid.*

<sup>17</sup> *The ADI concept. A tool for insuring food safety*, Ilsi Workshop, Limelette, Belgio, 18-19 ottobre 1990.

<sup>18</sup> *Who shuts Life Sciences Industry Group out of setting health standards*, "Environmental News Service", 2 febbraio 2006.

<sup>19</sup> Who/Fao, *Carbohydrates in human nutrition*, Fao Food and Nutrition Paper, 66, Roma 1998.

<sup>20</sup> Tobacco Free Initiative, *The tobacco industry and scientific groups. Ilsi: a case study*, www.who.int, febbraio 2001.

<sup>21</sup> Derek Yach, Stella Aquinaga Bialous, *Junking science to promote tobacco*, "American Journal of Public Health", 91, 2001, pp. 1745-1748.

<sup>22</sup> *Who shuts Life Sciences Industry Group out of setting health standards*, cit.

<sup>23</sup> Environmental Working Group, *Epa fines Teflon maker DuPont for chemical cover-up*, www.ewg.org, Washington, 14 dicembre 2006. Si veda anche: Amy Cortese, *DuPont, now in the frying pan*, "The New York Times", 8 agosto 2004.

<sup>24</sup> Michael Jacobson, *Lifting the veil of secrecy from industry funding of nonprofit health organizations*, "The International Journal of Occupational and Environmental Health", vol. 11, 2005, pp. 349-355.

<sup>25</sup> Diane Benford, *The acceptable daily intake, a tool for ensuring food safe-*

ty, Ilsi Europe Concise Monograph Series, International Life Sciences Institute, 2000.

<sup>26</sup> *Ibid.*

<sup>27</sup> René Truhaut, *Principles of toxicological evaluation of food additives*, Joint Fao/Who Expert Committee on Food Additives, Oms, Ginevra, 4 luglio 1973.

<sup>28</sup> Intervista dell'autrice a Diane Benford, Londra, 11 gennaio 2010.

<sup>29</sup> House of Representatives, *Problems Plague the Epa Pesticide Registration Activities*, U.S. Congress, House Report 98-1147, 1984.

<sup>30</sup> Office of Pesticides and Toxic Substances, *Summary of the Ibt Review Program*, Epa, Washington, luglio 1983.

<sup>31</sup> *Data validation. Memo from K. Locke, Toxicology Branch, to R. Taylor, Registration Branch*, Epa, Washington, 9 agosto 1978.

<sup>32</sup> Communications and Public Affairs, *Note to correspondents*, Epa, Washington, 1° marzo 1991.

<sup>33</sup> "The New York Times", 2 marzo 1991.

<sup>34</sup> Diane Benford, *The acceptable daily intake, a tool for ensuring food safety*, cit.

<sup>35</sup> René Truhaut, *Principles of toxicological*, cit.

<sup>36</sup> Intervista dell'autrice a Ned Groth, Washington, 17 ottobre 2009.

<sup>37</sup> René Truhaut, *Principles of toxicological evaluation*, cit.

<sup>38</sup> Diane Benford, *The acceptable daily intake, a tool for ensuring food safety*, cit.

<sup>39</sup> Intervista dell'autrice a Erik Millstone, Brighton, 12 gennaio 2010.

<sup>40</sup> Intervista dell'autrice a James Turner, Washington, 17 ottobre 2009.

<sup>41</sup> Intervista dell'autrice ad Angelika Tritscher, Ginevra, 21 settembre 2009.

<sup>42</sup> Intervista dell'autrice a Herman Fontier, Parma, 19 gennaio 2010.

<sup>43</sup> Rachel Carson, *Primavera Silenziosa*, cit., p. 250.

<sup>44</sup> Ulrick Beck, *La società del rischio. Verso una seconda modernità*, Carocci, Roma 2000, p. 25.

<sup>45</sup> *Ivi*, pp. 64-65.

<sup>46</sup> *Ivi*, p. 53.

<sup>47</sup> *Ivi*, pp. 5-26.

<sup>48</sup> Diane Benford, *The acceptable daily intake, a tool for ensuring food safety*, cit.

<sup>49</sup> René Truhaut, *Principles of toxicological evaluation*, cit.

<sup>50</sup> Direttiva 91/414/Cee del Consiglio, 15 luglio 1991, sulla messa in vendita dei prodotti fitofarmaceutici, "Journal officiel", n. L 230, 19 agosto 1991, pp. 1-32.

<sup>51</sup> Éliane Patriarca, *Le texte des rapporteurs Ump est révélateur du rétropédalage de la droite sur les objectifs du Grenelle*, "Libération", 4 maggio 2010.

<sup>52</sup> Claude Gagnon, Jean-Claude Étienne, *Pesticides et Santé, Office parlementaire des choix scientifiques et technologiques*, Paris, 27 aprile 2010.

<sup>53</sup> Federal Insecticide, Fungicide, and Rodenticide Act (Fifra), 3 (b) (5).

<sup>54</sup> Michel Gérin et al., *Environnement et santé publique*, cit., p. 371.

### 13. L'insolubile rompicapo dei "limiti massimi di residui"

<sup>1</sup> Health & Consumer Protection Directorate General, *Review Report for the Active Substance Chlorpyrifos-Methyl*, European Commission, SANCO/3061/99, 3 giugno 2005.

<sup>2</sup> Intervista dell'autrice a Bernadette Ossendorp, Ginevra, 22 settembre 2009.

<sup>3</sup> Intervista dell'autrice a James Huff, Research Triangle Park, North Carolina, 27 ottobre 2009.

<sup>4</sup> Ulrich Beck, *La società del rischio*, cit., p. 78.

- <sup>5</sup> Ivi, pp. 84, 85, 90.
- <sup>6</sup> Ivi, pp. 86, 90.
- <sup>7</sup> Health & Consumer Protection Directorate General, *Review Report for the Active Substance Chlorpyrifos-Methyl*, cit.
- <sup>8</sup> R. Teasdale, *Residues of chlorpyrifos-methyl in tomatoes at harvest and processed fractions (canned tomatoes, juice and puree) following multiple applications of Reldan 22 (EF-1066)*, Italy 1999, R99-106/Ghe-P-8661, 2000, Dow GIp (non pubblicato).
- <sup>9</sup> A. Doran, A.B. Clements, *Residues of chlorpyrifos-methyl in wine grapes at harvest following two applications of EF-1066 (Reldan 22) or GF-71, Southern Europe 2000*, (N137) 19952/Ghe-P-9441, 2002, Dow GIp (non pubblicato).
- <sup>10</sup> Intervista dell'autrice ad Angelo Moretto, Ginevra, 21 settembre 2009.
- <sup>11</sup> Intervista dell'autrice a Erik Millstone, Brighton, 12 gennaio 2010.
- <sup>12</sup> Joint Fao/Who Meeting on Pesticide Residues 2009, *List of substances scheduled for evaluation and request for data. Meeting Geneva, 16-25 September 2009*, ottobre 2009.
- <sup>13</sup> Si veda Thomas Zeltner, *Tobacco companies strategies to undermine tobacco control activities at the World Health Organization*, Report of the Committee of Experts on Tobacco Industry Documents, Oms, luglio 2000. Si veda anche Sheldon Krimsky, *The funding effect in science and its implications for the judiciary*, "Journal of Law and Policy", 16 dicembre 2005.
- <sup>14</sup> Intervista dell'autrice ad Angelika Tritscher, Ginevra, 21 settembre 2009.
- <sup>15</sup> Tutte queste citazioni sono tratte da scambi di posta elettronica che ho accuratamente conservato.
- <sup>16</sup> Intervista telefonica dell'autrice a Jean-Charles Bocquet, 11 febbraio 2010.
- <sup>17</sup> Secondo il messaggio di posta elettronica inviatomi da Sue Breach il 24 febbraio 2010, non è precisato il nome dell'autore della "risposta scritta".
- <sup>18</sup> Per maggiori precisazioni si veda: Deborah Cohen, Philip Carter, *Who and the pandemic flu "conspiracies"*, "British Medical Journal", 3 giugno 2010.
- <sup>19</sup> Intervista dell'autrice a Ned Groth, Washington, 17 ottobre 2009.
- <sup>20</sup> Erik Millstone, Eric Brunner, Ian White, *Plagiarism or protecting public health?*, "Nature", vol. 371, 20 ottobre 1994, pp. 647-648.
- <sup>21</sup> Erik Millstone, *Science in trade disputes related to potential risks: comparative case studies*, European Commission, Joint Research Centre Institute for Prospective Technological Studies, Eur21301/EN, agosto 2004; Erik Millstone, *Risk-assessment policies: differences across jurisdictions*, European Commission, Joint Research Centre Institute for Prospective Technological Studies, gennaio 2008.
- <sup>22</sup> Fao/Who, *Principles and methods for the risk assessment of chemicals in food*, "Environmental Health Criteria," n. 240, 2009.
- <sup>23</sup> René Truhaut, *Principles of toxicological evaluation*, cit.
- <sup>24</sup> *Reasoned opinion of Efsa prepared by the Pesticides Unit (PRAPeR) on MRLs of concern for the active substance procymidone (revised risk assessment)*, Efsa Scientific Report, n. 227, 21 gennaio 2009, pp. 1-26.
- <sup>25</sup> Intervista dell'autrice ad Angelo Moretto, Ginevra, 21 settembre 2009.
- <sup>26</sup> Ulrich Beck, *La società del rischio*, cit., p. 91.
- <sup>27</sup> Intervista dell'autrice a Herman Fontier, Parma, 19 gennaio 2010.
- <sup>28</sup> Eurobarometer, *Risk issues. Executive summary on food safety*, febbraio 2006.
- <sup>29</sup> *Official Journal of the European Communities*, n. L 225/263, 21 agosto 2001.
- <sup>30</sup> Intervista dell'autrice a Manfred Krautter, Amburgo, 5 ottobre 2009.
- <sup>31</sup> Lars Neumeister, *Die unsicheren Pestizidhöchstmenge in der Eu. Überprüfung der harmonisierten Eu-Höchstmenge hinsichtlich ihres potenziellen akuten und chronischen Gesundheitsrisikos*, Greenpeace e Global 2000, Amici della Terra/Austria, marzo 2008.

- <sup>32</sup> Intervista dell'autrice a Herman Fontier, Parma, 19 gennaio 2010.
- <sup>33</sup> 2007 annual report on pesticide residues, Efsa Scientific Report (2009), n. 305, 10 giugno 2009.
- <sup>34</sup> Intervista dell'autrice a Eberhard Schüle, Stoccarda, 6 ottobre 2009.
- <sup>35</sup> Intervista dell'autrice a Herman Fontier, Parma, 19 gennaio 2010.

#### 14. Aspartame, ovvero come l'industria orchestra la regolamentazione

<sup>1</sup> Edgar Monsanto Queeny, *The Spirit of Enterprise*, Charles Scribner's Sons, New York 1943.

<sup>2</sup> D.R. Lucas, J.P. Newhouse, *The toxic effect of sodium L-glutamate on the inner layers of the retina*, "AMA Archivs of Ophthalmology", vol. 58, n. 2, agosto 1957, pp. 193-201.

<sup>3</sup> Dale Purves, George J. Augustine, David Fitz-Patrick, William C. Hall, Anthony-Samuel Lamantia, James O. McNamara, Leonard E. White, *Neurosciences*, De Boeck, Bruxelles 2005, p. 145.

<sup>4</sup> John Olney, *Brain lesions, obesity, and other disturbances in mice treated with monosodium glutamate*, "Science", vol. 164, n. 880, maggio 1969, pp. 719-721; John Olney et al., *Glutamate-induced brain damage in infant primates*, "Journal of Neuropathology and Experimental Neurology", vol. 31, n. 3, luglio 1972, pp. 464-488; John Olney, *Excitotoxins in foods*, "Neurotoxicology", vol. 15, n. 3, 1994, pp. 535-544.

<sup>5</sup> Intervista dell'autrice a John Olney, New Orleans, 20 ottobre 2009.

<sup>6</sup> Directive 89/107/CEE du Conseil du 21 décembre 1988 relative au rapprochement des législations des États membres concernant les additifs pouvant être employés dans les denrées destinées à l'alimentation humaine, Journal officiel, n. L 040, 11 febbraio 1989, pp. 27-33.

<sup>7</sup> Directive 95/2/CE du Parlement européen et du Conseil concernant les additifs alimentaires autres que les colorants et les édulcorants, 20 febbraio 1995, Journal officiel de l'Union européenne, n. L 61, 18 marzo 1995.

<sup>8</sup> Bbc, *The early show, artificial sweeteners, new sugar substitute*, 28 settembre 1982.

<sup>9</sup> Pat Thomas, *Bestselling sweetener*, "The Ecologist", settembre 2005, pp. 35-51.

<sup>10</sup> John Henkel, *Sugar substitutes: Americans opt for sweetness and lite*, "Fda Consumer Magazine", novembre-dicembre 1999.

<sup>11</sup> Si veda il sito di Mission Possible, l'associazione creata da Betty Martini: [www.dorway.com](http://www.dorway.com)

<sup>12</sup> Ulrich Beck, *La società del rischio*, cit.

<sup>13</sup> Robert Ranney, *Comparative metabolism of aspartame in experimental animals and humans*, "Journal of Toxicology and Environmental Health", vol. 2, 1976, pp. 441-451.

<sup>14</sup> Herbert Helling, *"Food and drug sweetener strategy". Memorandum confidential-Trade Secret Information to Dr. Buzard, Dr. Onien, Dr. Jenkins, Dr. Moe, Mr. O'Brien*, 28 dicembre 1970.

<sup>15</sup> John Olney, *Brain damage in infant mice following oral intake of glutamate, aspartate or cysteine*, "Nature", 227, n. 5258, 8 agosto 1970, pp. 609-611; Bruce Schainker, John Olney, *Glutamate-type hypothalamic-pituitary syndrome in mice treated with aspartate or cysteine in infancy*, "Journal of Neural Transmission", 35, 1974, pp. 207-215; John Olney et al., *Brain damage in mice from voluntary ingestion of glutamate and aspartate*, "Neurobehavioral Toxicology and Teratology", n. 2, 1980, pp. 125-129.

<sup>16</sup> James Turner, *Il cibo che uccide*, Bompiani, Milano 1974. Con un'introduzione di Ralph Nader; ed. italiana a cura di Giorgio Nebbia. Ralph Nader è un celebre avvocato impegnato nella difesa dei diritti dei consumatori, candidato quattro volte alle presidenziali americane, due delle quali con il partito dei Verdi degli Stati Uniti.

<sup>17</sup> Intervista dell'autrice a James Turner, Washington, 17 ottobre 2009.

<sup>18</sup> Lettere di Adrian Gross al senatore Howard M. Metzenbaum, 30 ottobre e 3 novembre 1987 (consultabili sul sito [www.dorway.com](http://www.dorway.com)).

<sup>19</sup> Committee on Labor and Public Health, *Record of hearings of April 8-9 and July 10, 1976, held by Sen. Edward Kennedy, Chairman, Subcommittee on Administrative Practice and Procedure, Committee on the Judiciary, and Chairman, Subcommittee on Health*, pp. 3-4.

<sup>20</sup> Fda, *Bressler Report*, 1° agosto 1977.

<sup>21</sup> Intervista dell'autrice a John Olney, New Orleans, 20 ottobre 2009.

<sup>22</sup> Andy Pastzor, Joe Davidson, *Two ex-US prosecutors roles in case against Searle are questioned in probe*, "The Wall Street Journal", 7 febbraio 1986.

<sup>23</sup> John Olney, *Aspartame board of inquiry. Prepared statement*, University School of Medicine St. Louis, Missouri, 30 settembre 1980.

<sup>24</sup> *Ibid.*

<sup>25</sup> Department of Health and Human Services, *Aspartame: decision of the Public Board of Inquiry*, Food and Drug Administration, docket n. 75F-0355, 30 settembre 1980.

<sup>26</sup> Medical professor at Pennsylvania State is nominated to head Food and Drug Agency, "The New York Times", 3 aprile 1981.

<sup>27</sup> Florence Graves, *How safe is your diet soft drink?*, "Common Cause Magazine", luglio-agosto 1984.

<sup>28</sup> Food additives permitted for direct addition to food for human consumption: *Aspartame*, Federal Register, 8 luglio 1983, docket n. 82F-0305.

<sup>29</sup> Lettera di Adrian Gross al senatore Howard M. Metzenbaum, 3 novembre 1987.

<sup>30</sup> Organizzazione mondiale della sanità, *Évaluation de certains additifs alimentaires (colorants, épaississants et autres substances). 19<sup>e</sup> rapport du comité mixte Fao/Oms d'experts des additifs alimentaires*, Série de rapports techniques, n. 576, 1975.

<sup>31</sup> Organizzazione mondiale della sanità, *20<sup>e</sup> rapport du comité mixte Fao/Oms d'experts des additifs alimentaires*, Série de rapports techniques, n. 599, 1976.

<sup>32</sup> Organizzazione mondiale della sanità, *21<sup>e</sup> rapport du comité mixte Fao/Oms d'experts des additifs alimentaires*, Série de rapports techniques, n. 617, 1977.

<sup>33</sup> Organizzazione mondiale della sanità, *24<sup>e</sup> rapport du comité mixte Fao/Oms d'experts des additifs alimentaires*, Série de rapports techniques, n. 653, 1980.

<sup>34</sup> Hiroyuki Ishii et al., *Toxicity of aspartame and its diketopiperazine for Wistar rats by dietary administration for 104 weeks*, "Toxicology", vol. 21, n. 2, 1981, pp. 91-94.

<sup>35</sup> Organizzazione mondiale della sanità, *25<sup>e</sup> rapport du comité mixte Fao/Oms d'experts des additifs alimentaires*, Série de rapports techniques, n. 669, 1981.

<sup>36</sup> Intervista dell'autrice a Hugues Kenigswald, Parma, 19 gennaio 2010.

## 15. I pericoli dell'aspartame e il silenzio delle autorità pubbliche

<sup>1</sup> Congressional Record, *Proceedings and debates of the 99th Congress, first session*, 131, Washington, 7 maggio 1985.

<sup>2</sup> *Hearing before the Committee on Labor and Human Resources United States Senate One Hundredth Congress. Examining the Health and Safety Concerns of NutraSweet (Aspartame)*, 3 novembre 1987.

<sup>3</sup> Per maggiori informazioni sulla pratica delle "porte girevoli" legate all'aspartame si veda: Gregory Gordon, *NutraSweet: questions swirl*, "United Press International Investigative Report", 12 ottobre 1987.

<sup>4</sup> *Fda handling of research on NutraSweet is defended*, "The New York Times", 18 luglio 1987.

<sup>5</sup> Richard Wurtman, Timothy Maher, *Possible neurologic effects of aspartame, a widely used food additive*, "Environmental Health Perspectives", 75, novembre 1987, pp. 53-57; Richard Wurtman, *Neurological changes following high dose aspartame with dietary carbohydrates*, "The New England Journal of Medicine", vol. 309, n. 7, 1983, pp. 429-430.

<sup>6</sup> Richard Wurtman, *Aspartame: possible effects on seizures susceptibility*, "The Lancet", vol. 2, n. 8463, 1985, p. 1060.

<sup>7</sup> La lettera è stata pubblicata in Gregory Gordon, *NutraSweet: questions swirl*, cit.

<sup>8</sup> *Ibid.*

<sup>9</sup> Jacqueline Verrett, Jean Carper, *Eating may be hazardous to your health*, Simon and Schuster, New York 1994, pp. 19-21.

<sup>10</sup> Ivi, pp. 42 e 48.

<sup>11</sup> Intervista dell'autrice a David Hattan, Washington, 19 ottobre 2009.

<sup>12</sup> Il 38,3 per cento dei reclami era legato al consumo di bibite gassate, il 21,7 per cento a dolcificanti, il 4 per cento a gomme da masticare.

<sup>13</sup> Hyman J. Roberts, *Aspartame (NutraSweet), Is it Safe?*, The Charles Press, Philadelphia 1990, p. 4.

<sup>14</sup> Hyman J. Roberts, *Reactions attributed to aspartame-containing products: 551 cases*, "Journal of Applied Nutrition", vol. 40, n. 2, 1988, pp. 85-94.

<sup>15</sup> Hyman J. Roberts, *Aspartame Disease. An Ignored Epidemic*, Sunshine Sentinel Press, West Palm Beach 2001.

<sup>16</sup> Lettera di John Olney a Howard Metzenbaum, 8 dicembre 1987.

<sup>17</sup> Richard Wurtman, *Dietary Phenylalanine and Brain Function*, Birkhäuser, Boston 1988.

<sup>18</sup> Ralph Walton, Robert Hudak, Ruth Green-Waite, *Adverse reactions to aspartame: double-blind challenge in patients from vulnerable population*, "Biological Psychiatry", vol. 34, n. 1, luglio 1993, pp. 13-17.

<sup>19</sup> Intervista dell'autrice a Ralph Walton, New York, 30 ottobre 2009.

<sup>20</sup> John Olney et al., *Increasing brain tumor rates: is there a link to aspartame?*, "Journal of Neuropathology and Experimental Neurology", vol. 55, n. 11, 1996, pp. 1115-1123.

<sup>21</sup> David Michaels, *Doubt is Their Product*, cit., p. 143.

<sup>22</sup> Paula Rochon et al., *A study of manufacturer-supported trials of nonsteroidal anti-inflammatory drugs in the treatment of arthritis*, "Archives of Internal Medicine", vol. 154, n. 2, 1994, pp. 157-163. Si veda anche: Sheldon Krinsky, *The funding effect in science and its implications for the judiciary*, "Journal of Law Policy", 13, n. 1, 2005, pp. 46-68.

<sup>23</sup> Henry Thomas Stelfox et al., *Conflict of interest in the debate over calcium-channel antagonists*, "The New England Journal of Medicine", vol. 338, n. 2, 1998, pp. 101-106.

<sup>24</sup> Justin Bekelman *et al.*, *Scope and impact of financial conflicts of interest in biomedical research*, "The Journal of the American Medical Association", 289, 2003, pp. 454-465; Valerio Gennaro, Lorenzo Tomatis, *Business bias: how epidemiologic studies may underestimate or fail to detect increased risks of cancer and other diseases*, "The International Journal of Occupational and Environmental Health", vol. 11, 2005, pp. 356-359.

<sup>25</sup> Bruno Latour, *La scienza in azione*, cit.

<sup>26</sup> Harriett Butchko, Frank Kotsonis, *Acceptable daily intake vs actual intake: the aspartame example*, "Journal of the American College of Nutrition", vol. 10, n. 3, 1991, pp. 258-266.

<sup>27</sup> Lewis Stegink, Jack Filer, *Repeated ingestion of aspartame-sweetened beverage: effect on plasma amino acid concentrations in normal adults*, "Metabolism", vol. 37, n. 3, marzo 1988, pp. 246-251.

<sup>28</sup> Richard Smith, *Peer review: reform or revolution?*, "British Medical Journal", vol. 315, n. 7111, 1997, pp. 759-760. Si veda anche: Richard Smith, *Medical journals are an extension of the marketing arm of pharmaceutical companies*, "PLOS Medicine", vol. 2, n. 5, 2005, p. 138.

<sup>29</sup> Intervista dell'autrice a James Huff, Research Triangle Park, North Carolina, 27 ottobre 2009.

<sup>30</sup> Citato da Greg Gordon, *Fda resisted proposals to test aspartame for years*, "Star Tribune", 22 novembre 1996.

<sup>31</sup> National Toxicology Program, *Toxicology Studies of Aspartame (CAS No. 22839-47-0) in Genetically Modified (FVB Tg.AC Hemizygous) and B6.129-Cdkn2atm1Rdp (N2) deficient Mice and Carcinogenicity Studies of Aspartame in Genetically Modified [B6.129-Trp53tm1Brd (N5) Haploinsufficient] Mice (Feed Studies)*, ottobre 2005.

<sup>32</sup> Cesare Maltoni, *The Collegium Ramazzini and the primacy of scientific truth*, "European Journal of Oncology", vol. 5, suppl. 2, 2000, pp. 151-152.

<sup>33</sup> Morando Soffritti, Cesare Maltoni *et al.*, *Mega-experiments to identify and assess diffuse carcinogenic risks*, "Annals of the New York Academy of Sciences", 895, dicembre 1999, pp. 34-55.

<sup>34</sup> Si veda Morando Soffritti, Cesare Maltoni *et al.*, *History and major projects, life-span carcinogenicity bioassay design, chemicals studied, and results*, "Annals of the New York Academy of Sciences", 982, 2002, pp. 26-45; Cesare Maltoni, Morando Soffritti, *The scientific and methodological bases of experimental studies for detecting and quantifying carcinogenic risks*, "Annals of the New York Academy of Sciences", 895, 1999, pp. 10-26.

<sup>35</sup> Morando Soffritti *et al.*, *First experimental demonstration of the multi-potential carcinogenic effects of aspartame administered in the feed to Sprague-Dawley rats*, "Environmental Health Perspectives", vol. 114, n. 3, marzo 2006, pp. 379-385; Fiorella Belpoggi, Morando Soffritti *et al.*, *Results of long-term carcinogenicity bioassay on Sprague-Dawley rats exposed to Aspartame administered in feed*, "Annals of the New York Academy of Sciences", 1076, 2006, pp. 559-577.

<sup>36</sup> Center for Food Safety and Applied Nutrition, *Fda Statement on European Aspartame Study*, 20 aprile 2007.

<sup>37</sup> *Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) related to a new long-term carcinogenicity study on aspartame*, Efsa-Q-2005-122, 3 maggio 2006.

<sup>38</sup> Morando Soffritti *et al.*, *Life-Span exposure to low doses of aspartame beginning during prenatal life increases cancer effects in rats*, "Environmental Health Perspectives", 115, 2007, pp. 1293-1297.

<sup>39</sup> *Mise à Jour de l'avis formulé à la demande de la Commission européenne sur la seconde étude de carcinogénicité de l'ERF menée sur l'aspartame, tenant compte de données de l'étude soumises par la Fondation Ramazzini en février 2009*, Efsa-Q-2009-00474, 19 marzo 2009.



<sup>40</sup> *Brèves et dépêches technologies et sécurité*, 23 aprile 2009. Mentre scrivo queste pagine apprendo che l'Istituto Ramazzini ha pubblicato un nuovo studio su topi in stato di gravidanza che ha messo in evidenza come l'aspartame causi tumori al fegato e ai polmoni nei discendenti maschi (Morando Soffritti *et al.*, *Aspartame administered in feed, beginning prenatally through life-span, induces cancers of the liver and lung in male Swiss mice*, "American Journal of Industrial Medicine", vol. 53, n. 12, dicembre 2010, pp. 1197-1206).

<sup>41</sup> Vedi William Reymond, *Coca-Cola, serait-il bon pour la santé?*, www.bakchich.info, 19-20 aprile 2008.

<sup>42</sup> *Les Boissons light? C'est le sucré... sans sucres*, "La Dépêche", 29 settembre 2009; *Souvent accusé, le faux sucre est blanchi*, Libération.fr, 14 settembre 2009.

<sup>43</sup> Intervista dell'autrice a Catherine Geslain-Lanéelle, Parma, 19 gennaio 2010.

## 16. "Maschi in pericolo": la specie umana è a rischio?

<sup>1</sup> Intervista dell'autrice ad Ana Soto e Carlos Sonnenschein, Tufts University, Boston, 28 ottobre 2009.

<sup>2</sup> Ana Soto, Carlos Sonnenschein *et al.*, *P-Nonyl-phenol: an estrogenic xenobiotic released from "modified" polystyrene*, "Environmental Health Perspectives", 92, maggio 1991, pp. 167-173.

<sup>3</sup> Intervista dell'autrice ad Ana Soto e Carlos Sonnenschein, Tufts University, Boston, 28 ottobre 2009.

<sup>4</sup> Rachel Carson, *Primavera silenziosa*, cit., p. 223.

<sup>5</sup> *Rachel Carson talks about effects of pesticides on children and future generations*, Bbc Motion Gallery, 1° gennaio 1963.

<sup>6</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future. Are We Threatening our Fertility, Intelligence and Survival? A Scientific Detective Story*, Plume, New York 1996.

<sup>7</sup> Ivi, p. 145.

<sup>8</sup> Ivi, p. 106.

<sup>9</sup> Ivi, p. 91.

<sup>10</sup> Éric Dewailly *et al.*, *High levels of PCBs in breast milk of Inuit women from Arctic Quebec*, "Bulletin of Environmental Contamination and Toxicology", vol. 43, n. 5, novembre 1989, pp. 641-646.

<sup>11</sup> Joseph Jacobson *et al.*, *Prenatal exposure to an environmental toxin: a test of the multiple effects model*, "Developmental Psychology", vol. 20, n. 4, luglio 1984, pp. 523-532.

<sup>12</sup> Joseph Jacobson, Sandra Jacobson, *Intellectual impairment in children exposed to polychlorinated biphenyls in utero*, "New England Journal of Medicine", 335, n. 12, settembre 1996, pp. 783-789.

<sup>13</sup> Intervista dell'autrice a Theo Colborn, Paonia, 10 dicembre 2009.

<sup>14</sup> Tra i numerosi studi di Louis Guillette, consiglio: Louis Guillette *et al.*, *Developmental abnormalities of the gonad and abnormal sex hormone concentrations in juvenile alligators from contaminated and control lakes in Florida*, "Environmental Health Perspectives", vol. 102, n. 8, agosto 1994, pp. 680-688.

<sup>15</sup> André Cicoella, Dorotheé Benoît Browaeys, *Alertes Santé*, cit., p. 231.

<sup>16</sup> Bernard Jégou, Pierre Jouannet, Alfred Spira, *La Fertilité est-elle en danger?*, La Découverte, Paris 2009, p. 54.

<sup>17</sup> Ivi, p. 147.

<sup>18</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 82.

<sup>19</sup> Bernard Jégou, Pierre Jouannet, Alfred Spira, *La Fertilité est-elle en danger?*, cit., p. 60.



<sup>20</sup> Elisabeth Carlsen, Niels Skakkebaek *et al.*, *Evidence for decreasing quality of semen during past 50 years*, "British Medical Journal", vol. 305, n. 6854, 12 settembre 1992, pp. 609-613.

<sup>21</sup> Jacques Auger, Pierre Jouannet *et al.*, *Decline in semen quality among fertile men in Paris during the last 20 years*, vol. "The New England Journal of Medicine", 332, 1995, pp. 281-285.

<sup>22</sup> Bernard Jégou, Pierre Jouannet, Alfred Spira, *La Fertilité est-elle en danger?*, cit., p. 61.

<sup>23</sup> Shanna Swan, *The question of declining sperm density revisited: an analysis of 101 studies published 1934-1996*, "Environmental Health Perspectives", vol. 108, n. 10, ottobre 2000, pp. 961-966.

<sup>24</sup> Bernard Jégou, Pierre Jouannet, Alfred Spira, *La Fertilité est-elle en danger?*, cit., pp. 71-74.

<sup>25</sup> Richard Sharpe, Niels Skakkebaek, *Are oestrogens involved in falling sperm counts and disorders of the male reproductive tract?*, "The Lancet", vol. 29, n. 341, 29 maggio 1993, pp. 1392-1395.

<sup>26</sup> Niels Skakkebaek *et al.*, *Testicular dysgenesis syndrome: an increasingly common developmental disorder with environmental aspects*, "Human Reproduction", vol. 16, n. 5, maggio 2001, pp. 972-978.

<sup>27</sup> Katharina Main, Niels Skakkebaek *et al.*, *Human breast milk contamination with phthalates and alterations of endogenous reproductive hormones in infants three months of age*, "Environmental Health Perspectives", vol. 114, n. 2, febbraio 2006, pp. 270-276. Numerosi studi hanno presentato questo legame, tra gli altri: Shanna Swan *et al.*, *Decrease in anogenital distance among male infants with prenatal phthalate exposure*, "Environmental Health Perspectives", vol. 113, n. 8, agosto 2005, pp. 1056-1061.

<sup>28</sup> *Alerte aux poêles à frêre*, Libération.fr, 30 settembre 2009. DuPont de Nemours, proprietario del marchio Teflon dal 1954 ha annunciato che avrebbe cessato di usare Pfoa da oggi al 2015.

<sup>29</sup> Ulla Nordström, Niels Skakkebaek *et al.*, *Do perfluoroalkyl compounds impair human semen quality?*, "Environmental Health Perspectives", vol. 117, n. 6, giugno 2009, pp. 923-927.

<sup>30</sup> Gli autori di questa "bozza" sono: Dave Fischer (Bayer), Richard Balcomb (American Cyanamid), C. Holmes (BASF), T. Hall (Sandoz), K. Reinert e V. Kramer (Rohm & Haas), Ellen Mihaich (Rhône-Poulenc), R. McAllister e J. McCarthy (Acpa).

<sup>31</sup> Si tratta del Food Quality Protection Act (Fqpa) e degli emendamenti del 1996 al Safe Drinking Water Act (Sdwa). Nel 2010, l'amministrazione Obama avrebbe chiesto all'Epa di accelerare il programma. Sul proprio sito, l'Agenzia per la protezione dell'ambiente scriveva nel 1998 che il suo problema era la "mancanza di dati scientifici, per la gran parte (87.000) dei prodotti chimici e dei loro derivati", che permetterebbero di valutare i rischi legati al sistema endocrino (Edstac Final Report, [www.epa.gov](http://www.epa.gov), cap. 4, agosto 1998).

## 17. Distilbene, ovvero il "modello perfetto"

<sup>1</sup> Niehs News, *Women's health research at Niehs*, "Environmental Health Perspectives", vol. 101, n. 2, giugno 1993.

<sup>2</sup> Edward Charles Dodds *et al.*, *Estrogenic activity of certain synthetic compounds*, "Nature", n. 141, febbraio 1938, pp. 247-248.

<sup>3</sup> Howard Burlington, Verlus Franklin-Derman, *Effect of Ddt on testes and secondary sex characters of white leghorn cockerels*, "Proceedings of the Society for Experimental Biology and Medicine", vol. 74, n. 1, maggio 1950, pp. 48-51.

<sup>4</sup> È quanto ha scritto Kehoe in un rapporto del gennaio 1947 (citato da Devra Davis, *The Secret History of the War on Cancer*, cit., p. 91).

<sup>5</sup> Ivi, p. 90.

<sup>6</sup> Alan Parkes, Edward Charles Dodds, R.L. Noble, *Interruption of early pregnancy by means of orally active oestrogens*, "British Medical Journal", vol. 2, n. 4053, 10 settembre 1938, pp. 557-559.

<sup>7</sup> Sidney John Folley et al., *Induction of abortion in the cow by injection with stilboestrol dipropionate*, "The Lancet", vol. 2, 1939.

<sup>8</sup> Antoine Lacassagne, *Apparition d'adénocarcinomes mammaires chez des souris mâles traitées par une substance œstrogène synthétique*, "Comptes rendus des séances de la Société de biologie", 129, 1938, pp. 641-643.

<sup>9</sup> R. Greene et al., *Experimental intersexuality. The paradoxical effects of estrogens on the sexual development of the female rat*, "The Anatomical Record", vol. 74, n. 4, agosto 1939, pp. 429-438.

<sup>10</sup> *Estrogen therapy. A warning*, "The Journal of the American Medical Association", vol. 113, n. 26, 23 dicembre 1939, pp. 2323-2324.

<sup>11</sup> Citato da Jacqueline Verrett, Jean Carper, *Eating may be hazardous to your health*, cit., p. 167. L'uso del distilbene viene poi vietato nel 1959 per i volatili e nel 1980 per il bestiame.

<sup>12</sup> Olive Smith, George Smith, *Diethylstilbestrol in the prevention and treatment of complications of pregnancy*, "American Journal of Obstetrics and Gynecology", vol. 56, n. 5, 1948, pp. 821-834; Olive Smith, George Smith, *The influence of diethylstilbestrol on the progress and outcome of pregnancy as based on a comparison of treated with untreated primigravidas*, "American Journal of Obstetrics & Gynecology", 58, n. 5, 1949, pp. 994-1009.

<sup>13</sup> Susan E. Bell, *Des Daughters. Embodied Knowledge and the Transformation of Women's Health Politics*, Temple University Press, Philadelphia 2009, p. 16.

<sup>14</sup> James Ferguson, *Effect of stilbestrol on pregnancy compared to the effect of a placebo*, "American Journal of Obstetrics and Gynecology", vol. 65, n. 3, marzo 1953, pp. 592-601.

<sup>15</sup> William Dieckmann et al., *Does the administration of diethylstilbestrol during pregnancy have therapeutic value?*, "American Journal of Obstetrics & Gynecology", vol. 66, n. 5, novembre 1953, pp. 1062-1081.

<sup>16</sup> Yvonne Brackbill et al., *Dangers of diethylstilbestrol: review of a 1953 paper*, "The Lancet", vol. 2, n. 8088, 1978, p. 520.

<sup>17</sup> Pat Cody, *Des Voices. From Anger to Action*, Des Action, Columbus 2008, p. 13.

<sup>18</sup> William Gardner, *Experimental induction of uterine cervical and vaginal cancer in mice*, "Cancer Research", 19, n. 2, febbraio 1959, pp. 170-176.

<sup>19</sup> Alfred Bongiovanni et al., *Masculinization of the female infant associated with estrogenic therapy alone during gestation: four cases*, "Journal of Clinical Endocrinology and Metabolism", 19, agosto 1959, p. 1004.

<sup>20</sup> Norman M. Kaplan, *Male pseudohermaphroditism: report of a case, with observations on pathogenesis*, "The New England Journal of Medicine", 261, 1959, p. 641.

<sup>21</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 49.

<sup>22</sup> Ivi, p. 50.

<sup>23</sup> *Ibid.*

<sup>24</sup> *The full story of the drug Thalidomide*, "Life Magazine", 10 agosto 1962.

<sup>25</sup> Rachel Carson talks about effects of pesticides on children and future generations, Bbc Motion Gallery, 1° gennaio 1963.

<sup>26</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 50.

<sup>27</sup> Arthur Herbst, Howard Ulfelder, David Poskanzer, *Adenocarcinoma of the vagina. Association of maternal stilbestrol therapy with tumor appearance in young women*, "The New England Journal of Medicine", vol. 284, n. 15, 22 aprile 1971, pp. 878-881.

<sup>28</sup> Jacqueline Verrett, Jean Carper, *Eating may be hazardous to your health*, cit., p. 163.

<sup>29</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 53.

<sup>30</sup> Susan E. Bell, *Des Daughters*, cit., p. 1.

<sup>31</sup> Pat Cody, *Des Voices. From Anger to Action*, cit., p. 4.

<sup>32</sup> Ivi, p. 43.

<sup>33</sup> Ivi, p. 93.

<sup>34</sup> Ivi, p. 95.

<sup>35</sup> Ivi, p. 90.

<sup>36</sup> Ivi, p. 97.

<sup>37</sup> Ivi, p. 96.

<sup>38</sup> Susan E. Bell, *Des Daughters*, cit., p. 23.

<sup>39</sup> Ivi, p. 27.

<sup>40</sup> Sheldon Krimsky, *Hormonal Chaos. The Scientific and Social Origins of the Environmental Hypothesis*, Johns Hopkins University Press, Baltimore 2002, p. 2.

<sup>41</sup> Ivi, p. 11.

<sup>42</sup> Susan E. Bell, *Des Daughters*, cit., p. 27.

<sup>43</sup> È impossibile citare in questa sede tutti gli studi condotti da John McLachlan sul Des, segnaliamo solo: Retha Newbold, John McLachlan, *Vaginal adenosis and adenocarcinoma in mice exposed prenatally or neonatally to diethylstilbestrol*, "Cancer Research", vol. 42, n. 5, maggio 1982, pp. 2003-2011; John McLachlan, Retha Newbold, *Reproductive tract lesions in male mice exposed prenatally to diethylstilbestrol*, "Science", vol. 190, n. 4218, 5 dicembre 1975, pp. 991-992.

<sup>44</sup> Intervista dell'autrice a John McLachlan, New Orleans, 22 ottobre 2009.

<sup>45</sup> Retha Newbold, John McLachlan, *Vaginal adenosis and adenocarcinoma in mice exposed prenatally or neonatally to diethylstilbestrol*, cit.

<sup>46</sup> Retha Newbold, *Cellular and molecular effects of developmental exposure to diethylstilbestrol: implications for other environmental estrogens*, "Environmental Health Perspectives", 103, ottobre 1995, pp. 83-87.

<sup>47</sup> Retha Newbold et al., *Increased tumors but uncompromised fertility in the female descendants of mice exposed developmentally to diethylstilbestrol*, "Carcinogenesis", vol. 19, n. 9, settembre 1998, pp. 655-663.

<sup>48</sup> Retha Newbold et al., *Proliferative lesions and reproductive tract tumors in male descendants of mice exposed developmentally to diethylstilbestrol*, "Carcinogenesis", vol. 21, n. 7, 2000, pp. 1355-1363.

<sup>49</sup> Retha Newbold et al., *Adverse effects of the model environmental estrogen diethylstilbestrol are transmitted to subsequent generations*, "Endocrinology", 147, suppl. 6, giugno 2006, pp. 11-17; Retha Newbold, *Lessons learned from perinatal exposure to diethylstilbestrol*, in "Toxicology and Applied Pharmacology", vol. 199, n. 2, 1° settembre 2004, pp. 142-150.

<sup>50</sup> Tra gli studi realizzati dall'Istituto dei tumori olandese: Helen Klip et al., *Hypospadias in sons of women exposed to diethylstilbestrol in utero: a cohort study*, "The Lancet", vol. 359, n. 9312, 30 marzo 2002, pp. 1101-1107.

<sup>51</sup> Felix Grün, Bruce Blumberg, *Environmental obesogens: organotins and endocrine disruption via nuclear receptor signaling*, "Endocrinology", 47, n. 6, 2006, pp. 50-55.

<sup>52</sup> Retha Newbold et al., *Effects of endocrine disruptors on obesity*, in "International Journal of Andrology", vol. 31, n. 2, aprile 2008, pp. 201-208; Retha New-

bold et al., *Developmental exposure to endocrine disruptors and the obesity epidemic*, "Reproductive Toxicology", vol. 23, n. 3, aprile-maggio 2007, pp. 290-296.

## 18. Il caso del bisfenolo A, ovvero il vaso di Pandora

<sup>1</sup> www.bisphenol-a.org

<sup>2</sup> Aruna Krishnan, David Feldman et al., *Bisphenol-A: an estrogenic substance is released from polycarbonate flasks during autoclaving*, "Endocrinology", 132, n. 6, giugno 1993, pp. 2279-2286.

<sup>3</sup> Citato da Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 130.

<sup>4</sup> Liza Gross, *The toxic origins of disease*, "PLoS Biology", vol. 5, n. 7, 26 giugno 2007, p. 193. La sindrome di Down è chiamata anche trisomia 21.

<sup>5</sup> Patricia Hunt et al., *Bisphenol A exposure causes meiotic aneuploidy in the female mouse*, "Current Biology", vol. 13, n. 7, aprile 2003, pp. 546-553; Martha Susiarjo, Patricia Hunt et al., *Bisphenol A exposure in utero disrupts early oogenesis in the mouse*, "PLoS Genetics", vol. 3, n. 1, 12 gennaio 2007, p. 5.

<sup>6</sup> Nena Baker, *The Body Toxic*, North Point Press, New York 2008, p. 151.

<sup>7</sup> Elizabeth Grossman, *Two words: bad plastic*, Salon.com, 2 agosto 2007.

<sup>8</sup> Caroline Markey, Enrique Luque, Monica Muñoz de Toro, Carlos Sonnenschein, Ana Soto, *In utero exposure to bisphenol A alters the development and tissue organization of the mouse mammary gland*, "Biology of Reproduction", vol. 65, n. 4, 1 ottobre 2001, pp. 1215-1223.

<sup>9</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 30.

<sup>10</sup> Ivi, p. 31.

<sup>11</sup> Frederick vom Saal, Franklin Bronson, *Sexual characteristics of adult female mice are correlated with their blood testosterone levels during prenatal development*, "Science", vol. 208, n. 4444, 9 maggio 1980, pp. 597-599 (citato da Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 34).

<sup>12</sup> Frederick vom Saal et al., *The intra-uterine position (Iup) phenomenon*, in Ernst Knobil e Jimmy Neill (a cura di), *Encyclopedia of Reproduction*, Academic Press, New York 1999, vol. 2, pp. 893-900; *Science watch: prenatal womb position and supermasculinity*, in "The New York Times", 31 marzo 1992.

<sup>13</sup> Theo Colborn, Dianne Dumanoski, John Peterson Myers, *Our Stolen Future*, cit., p. 35.

<sup>14</sup> Ivi, p. 38.

<sup>15</sup> Ivi, p. 39.

<sup>16</sup> Ivi, p. 42.

<sup>17</sup> Bernard Jégou, Pierre Jouannet, Alfred Spira, *La Fertilité est-elle en danger?*, cit., pp. 10-12.

<sup>18</sup> Center for Disease Control and Prevention, *Fourth National Report on Human Exposure to Environmental Chemicals*, www.cdc.gov, Atlanta 2009.

<sup>19</sup> Antonia Calafat, *Exposure of the U.S. population to bisphenol A and 4-tertiary-octylphenol: 2003-2004*, "Environmental Health Perspectives", vol. 116, 2008, pp. 39-44.

<sup>20</sup> Antonia Calafat et al., *Exposure to bisphenol A and other phenols in neonatal intensive care unit premature infants*, "Environmental Health Perspectives", vol. 117, n. 4, aprile 2009, pp. 639-644.

<sup>21</sup> Intervista dell'autrice a Frederick vom Saal, New Orleans, 22 ottobre 2009.

<sup>22</sup> Frederick vom Saal et al., *Prostate enlargement in mice due to foetal expo-*

sure to low doses of estradiol or diethylstilbestrol and opposite effects at low doses, "Proceedings of the National Academy of Sciences of the Usa", vol. 94, n. 5, marzo 1997, pp. 2056-2061.

<sup>23</sup> Susan Nagel, Frederick vom Saal *et al.*, *Relative binding affinity-serum modified access (Rba-Sma) assay predicts the relative in vivo bioactivity of the xenoestrogens bisphenol A and octylphenol*, "Environmental Health Perspectives", vol. 105, n. 1, gennaio 1997, pp. 70-76.

<sup>24</sup> Liza Gross, *The toxic origins of disease*, "PLoS Biology", vol. 5, n. 7, 2007, p. 193.

<sup>25</sup> Frederick vom Saal *et al.*, *A physiologically based approach to the study of bisphenol A and other estrogenic chemicals on the size of reproductive organs, daily sperm production, and behavior*, "Toxicology and Industrial Health", vol. 14, nn. 1-2, gennaio-aprile 1998, pp. 239-260.

<sup>26</sup> Liza Gross, *The toxic origins of disease*, cit.

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

<sup>29</sup> Channda Gupta, *Reproductive malformation of the male offspring following maternal exposure to estrogenic chemicals*, "Proceedings of the Society for Experimental Biology and Medicine", 224, 1999, pp. 61-68. Poco dopo la pubblicazione di questo studio, la stessa rivista ha pubblicato un editoriale in cui si indicava che i risultati iniziali di Frederick vom Saal "erano stati confermati": Daniel Sheehan, *Activity of environmentally relevant low doses of endocrine disruptors and the bisphenol A controversy: initial results confirmed*, "Proceedings of the Society for Experimental Biology and Medicine", 224, n. 2, 2000, pp. 57-60.

<sup>30</sup> Liza Gross, *The toxic origins of disease*, cit.

<sup>31</sup> Barbara Elswick, Frederick Miller, Frank Welsch, *Comments to the editor concerning the paper entitled "Reproductive malformation of the male offspring following maternal exposure to estrogenic chemicals" by C. Gupta*, "Proceedings of the Society for Experimental Biology and Medicine", 226, 2001, pp. 74-75.

<sup>32</sup> Channda Gupta, *Response to the letter by B. Elswick et alii from the Chemical Industry Institute of Toxicology*, "Proceedings of the Society for Experimental Biology and Medicine", 226, 2001, pp. 76-77.

<sup>33</sup> Si veda: Derek Yach, Stella Aguinaga Bialous, *Tobacco, lawyers and public health, junking science to promote tobacco*, "American Journal of Public Health", 91, n. 11, novembre 2001, pp. 1745-1748.

<sup>34</sup> Citato da Cindy Skrzycki, *Nominee's business ties criticized*, "The Washington Post", 15 maggio 2001.

<sup>35</sup> George M. Gray, [www.sourcewatch.org](http://www.sourcewatch.org)

<sup>36</sup> Lorenz Rhomberg, *Needless fear drives proposed plastics ban*, "San Francisco Chronicle", 17 gennaio 2006.

<sup>37</sup> George M. Gray *et al.*, *Weight of the evidence evaluation of low-dose reproductive and developmental effects of bisphenol A*, "Human and Ecological Risk Assessment", 10, ottobre 2004, pp. 875-921.

<sup>38</sup> Frederick vom Saal, Claude Hughes, *An extensive new literature concerning low-dose effects of bisphenol A shows the need for a new risk assessment*, "Environmental Health Perspectives", 113, agosto 2005, pp. 926-933.

<sup>39</sup> Si veda John Peterson Myers, Frederick vom Saal, *Should public health standards for endocrine-disrupting compounds be based upon 16th century dogma or modern endocrinology?*, "San Francisco Medicine", vol. 81, n. 1, 2008, pp. 30-31.

<sup>40</sup> Evanthia Diamanti-Kandarakis *et al.*, *Endocrine-disrupting chemicals: an Endocrine Society scientific statement*, "Endocrine Reviews", vol. 30, n. 4, giugno 2009, pp. 293-342.

<sup>41</sup> *Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food on a request from the Commission related to 2,2-bis (4-hydroxyphenyl) propane (bisphenol A)*, Question n. Efsa-Q-2005-100, 29 novembre 2006.

<sup>42</sup> Rochelle Tyl *et al.*, *Three-generation reproductive toxicity study of dietary bisphenol A in CD Sprague-Dawley rats*, "Toxicological Sciences", 68, 2002, pp. 121-146.

<sup>43</sup> Al momento della sua valutazione Efsa disponeva solo di un rapporto preliminare dello studio di Rochelle Tyl ("Draft final report") pubblicato nel 2008: Rochelle Tyl *et al.*, *Two-generation reproductive toxicity evaluation of bisphenol A in CD-1 (Swiss mice)*, "Toxicological Sciences", 104, n. 2, 2008, pp. 362-384.

<sup>44</sup> John Peterson Myers *et al.*, *Why public health agencies cannot depend on good laboratory practices as a criterion for selecting data: the case of bisphenol A*, "Environmental Health Perspectives", vol. 117, n. 3, marzo 2009, pp. 309-315. Tra gli autori figurano: Ana Soto, Carlos Sonnenschein, Louis Guillette, Theo Colborn e John McLachlan.

<sup>45</sup> Meg Kissinger, Susanne Rust, *Consortium rejects Fda claim of Bpa's safety. Scientists say 2 studies used by U.S. agency overlooked dangers*, "Journal Sentinel", 11 aprile 2009.

<sup>46</sup> John Peterson Myers *et al.*, *Why public health agencies cannot depend on good laboratory practices*, cit.

<sup>47</sup> L'aneddoto è stato riportato da John Peterson Myers che ha partecipato all'audizione (John Peterson Myers, *The missed electric moment*, "Environmental Health News", 18 settembre 2008).

<sup>48</sup> Meg Kissinger, Susanne Rust, *Consortium rejects Fda claim of Bpa's safety*, cit.

<sup>49</sup> *Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food on a request from the Commission related to 2,2-bis (4-hydroxyphenyl) propane (bisphenol A)*, cit.

<sup>50</sup> John Peterson Myers *et al.*, *Why public health agencies cannot depend on good laboratory practices*, cit.

<sup>51</sup> *Ibid.*

<sup>52</sup> Frederick vom Saal *et al.*, *Chapel Hill bisphenol A expert panel consensus statement: integration of mechanisms, effects in animals and potential to impact human health at current levels of exposure*, "Reproductive Toxicology", 24, 2007, pp. 131-138. Tra i firmatari figurano Ana Soto, Carlos Sonnenschein, Retha Newbold, John Peterson Myers, Louis Guillette e John McLachlan.

<sup>53</sup> National Toxicology Program, *Ntp-Cerhr monograph on the potential human reproductive and developmental effects of bisphenol A*, settembre 2008.

<sup>54</sup> Santé Canada, *Draft screening assessment for phenol, 4,4'-(1-methylethylidene) bis-(80-05-7)*, aprile 2008.

<sup>55</sup> Xu-Liang Cao, *Levels of bisphenol A in canned liquid infant formula products in Canada and dietary intake estimates*, "Journal of Agricultural and Food Chemistry", vol. 56, n. 17, 2008, pp. 7919-7924; Xu-Liang Cao, Jeannette Coriveau, *Migration of bisphenol A from polycarbonate baby and water bottles into water under severe conditions*, "Journal of Agricultural and Food Chemistry", vol. 56, n. 15, 2008, pp. 6378-6381. Un terzo studio ha dimostrato lo stesso fenomeno di migrazione dalle bibite gassate: Xu-Liang Cao *et al.*, *Levels of bisphenol A in canned soft drink products in Canadian markets*, "Journal of Agricultural and Food Chemistry", 57, n. 4, 2009, pp. 1307-1311.

<sup>56</sup> *Toxicokinetics of bisphenol A. Scientific opinion of the Panel on food additives, flavourings, processing aids and materials in contact with food (Afc)*, Question n. Efsa-Q-2008-382, 9 luglio 2008.

<sup>57</sup> Afssa, *Avis de l'Agence française de sécurité sanitaire des aliments relatif au*

bisphénol A dans les biberons en polycarbonate susceptibles d'être chauffés au four à micro-ondes. Saisine no 2008-SA-0141, 24 ottobre 2008.

<sup>58</sup> [www.plasticseurope.org](http://www.plasticseurope.org)

## 19. Effetto cocktail

<sup>1</sup> WuQiang Fan, Tyrone Hayes *et al.*, *Atrazine-induced aromatase expression is SF-1 dependent: implications for endocrine disruption in wildlife and reproductive cancers in humans*, "Environmental Health Perspectives", 115, maggio 2007, pp. 720-727.

<sup>2</sup> Decisione 2004/141/Cee del 12 febbraio 2004.

<sup>3</sup> *Pesticide atrazine can turn male frogs into females*, "Science Daily", 1° marzo 2010.

<sup>4</sup> Nena Baker, *The Body Toxic*, cit., p. 67.

<sup>5</sup> Wwf, *Gestion des eaux en France et politique agricole: un long scandale d'État*, 15 giugno 2010.

<sup>6</sup> *Regulators plan to study risks of atrazine*, "New York Times", 7 ottobre 2009.

<sup>7</sup> Nena Baker, *The Body Toxic*, cit., p. 67.

<sup>8</sup> A. Donna *et al.*, *Carcinogenicity testing of atrazine: preliminary report on a 13-month study on male Swiss albino mice treated by intraperitoneal administration*, "Giornale italiano di medicina del lavoro", 8, nn. 3-4, maggio-luglio 1986, pp. 119-121; A. Donna *et al.*, *Preliminary experimental contribution to the study of possible carcinogenic activity of two herbicides containing atrazine-simazine and trifluralin as active principles*, "Pathologica", vol. 73, n. 1027, settembre-ottobre 1981, pp. 707-721.

<sup>9</sup> A. Pinter *et al.*, *Long-term carcinogenicity bioassay of the herbicide atrazine in F344 rats*, "Neoplasma", vol. 37, n. 5, 1990, pp. 533-544.

<sup>10</sup> *Occupational exposures in insecticide application and some pesticides*, Iarc Monographs on the Evaluation of Carcinogenic Risks to Humans, vol. 53, Who/Iarc, 1991.

<sup>11</sup> Lawrence Wetzel, *Chronic effects of atrazine on estrus and mammary tumor formation in female Sprague-Dawley and Fischer 344 rats*, "Journal of Toxicology and Environmental Health", vol. 43, n. 2, 1994, pp. 169-182; James Stevens, *Hypothesis for mammary tumorigenesis in Sprague-Dawley rats exposed to certain triazine herbicides*, "Journal of Toxicology and Environmental Health", vol. 43, n. 2, 1994, pp. 139-153; J. Charles Eldridge, *Factors affecting mammary tumor incidence in chlorotriazine-treated female rats: hormonal properties, dosage, and animal strain*, "Environmental Health Perspectives", 102, suppl. 1, dicembre 1994, pp. 29-36.

<sup>12</sup> M. Kettles *et al.*, *Triazine exposure and breast cancer incidence: an ecologic study of Kentucky counties*, "Environmental Health Perspectives", vol. 105, n. 11, 1997, pp. 1222-1227.

<sup>13</sup> *Some chemicals that cause tumors of the kidney or urinary bladder in rodents and some other substances*, Iarc Monographs on the Evaluation of Carcinogenic Risks to Humans, vol. 73, Who/Iarc, 1999. Quando ho incontrato nel febbraio 2010 Vincent Coglianò, direttore delle monografie del Circ, mi ha comunicato che l'atrazina figurava nella lista dei prodotti da sottoporre a rivalutazione in modo prioritario.

<sup>14</sup> Paul MacLennan, *Cancer incidence among triazine herbicide manufacturing workers*, "Journal of Occupational and Environmental Medicine", vol. 44, n. 11, novembre 2002, pp. 1048-1058. Si osservi che due anni dopo alcuni scienziati di Exponent (capitolo 9) hanno pubblicato nella stessa rivista uno studio che

mostrava che non c'era legame tra l'esposizione all'atrazina nella fabbrica e i tumori alla prostata! (Patrick Hessel *et al.*, *A nested case-control study of prostate cancer and atrazine exposure*, "Journal of Occupational and Environmental Medicine", vol. 46, n. 4, 2004, pp. 379-385).

<sup>15</sup> Tyrone Hayes *et al.*, *Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses*, "Proceedings of the National Academy of Sciences Usa", 99, 2002, pp. 5476-5480; Tyrone Hayes *et al.*, *Feminization of male frogs in the wild*, "Nature", vol. 419, 2002, pp. 895-896; Tyrone Hayes *et al.*, *Atrazine-induced hermaphroditism at 0.1 ppb in American leopard frogs (Rana pipiens): laboratory and field evidence*, "Environmental Health Perspectives", 111, 2002, pp. 568-575.

<sup>16</sup> William Brand, *Research on the effects of a weedkiller on frogs pits hip Berkeley professor against agribusiness conglomerate*, "Oakland Tribune", 21 luglio 2002.

<sup>17</sup> Epa, *Potential for atrazine to affect amphibian gonadal development*, ottobre 2007 (Docket ID: EPA-HQ-OPP-2007-0498).

<sup>18</sup> Tyrone Hayes, *There is no denying this: defusing the confusion about atrazine*, "BioScience", vol. 5, n. 12, 2004, pp. 1138-1149.

<sup>19</sup> Robert J. Gilliom *et al.*, *The quality of our Nation's waters. Pesticides in the Nation's streams and ground water, 1992-2001*, US Geological Survey, marzo 2006.

<sup>20</sup> Tyrone Hayes, *Pesticide mixtures, endocrine disruption and amphibian declines: are we underestimating the impact?*, "Environmental Health Perspectives", vol. 114, n. 1, aprile 2006, pp. 40-50. In questo studio, Tyrone Hayes ricorda che dal 1980 il 32 per cento delle specie di rana è scomparso e che il 43 per cento è in declino.

<sup>21</sup> Department of Health and Human Services, *Fourth National Report on Human Exposure to Environmental Chemicals*, Center for Disease Control and Prevention, Atlanta 2009.

<sup>22</sup> Citato da Nena Baker, *The Body Toxic*, cit., p. 25.

<sup>23</sup> *La chimie ronge le sang des députés européens*, "Libération", 22 aprile 2004.

<sup>24</sup> *Une cobaye verte et inquiète*, "Libération", 22 aprile 2004.

<sup>25</sup> Wwf/Greenpeace, *A present for life, hazardous chemicals in umbilical cord blood*, settembre 2005.

<sup>26</sup> Robin Whyatt, Dana Barr, *Measurement of organophosphate metabolites in post-partum meconium as a potential biomarker of prenatal exposure: a validation study*, "Environmental Health Perspectives", vol. 109, n. 4, 2001, pp. 417-420.

<sup>27</sup> Robin Whyatt *et al.*, *Contemporary-use pesticides in personal air samples during pregnancy and blood samples at delivery among urban minority mothers and newborns*, "Environmental Health Perspectives", 111, 2003, pp. 749-756. I bambini sono seguiti per tutta l'infanzia per misurare gli eventuali effetti dei pesticidi sul loro sviluppo neurocognitivo.

<sup>28</sup> Cécile Chevrier *et al.*, *Biomarqueurs urinaires d'exposition aux pesticides des femmes enceintes de la cohorte Pélagie réalisée en Bretagne, France (2002-2006)*, "Bulletin épidémiologique hebdomadaire", Hors série, 16 giugno 2009, pp. 23-28.

<sup>29</sup> John Adgate *et al.*, *Measurement of children's exposure to pesticides: analysis of urinary metabolite levels in a probability-based sample*, "Environmental Health Perspectives", 109, 2001, pp. 583-590. Risultati simili sono stati ottenuti nell'Iowa: Brian Curwin, Michael Alavanja *et al.*, *Urinary pesticide concentrations among children, mothers and fathers living in farm and non-farm households in Iowa*, "Annals of Occupational Hygiene", vol. 51, n. 1, 2007, pp. 53-65.

<sup>30</sup> Pesticide Action Network North America, *Chemical trespass: pesticides in our bodies and corporate accountability*, maggio 2004.

<sup>31</sup> *Enquête sur les substances chimiques présentes dans notre alimentation*, Générations futures e Health & Environmental Alliance, Le Réseau environnement santé e Wwf France, 2010.

<sup>32</sup> *Une Association alerte sur les substances chimiques contenues dans les repas des enfants*, LeMonde.fr, 1° dicembre 2010.

<sup>33</sup> *Des Résidus chimiques dans l'assiette des enfants*, "Le Monde", 1° dicembre 2010.

<sup>34</sup> Ulla Hass *et al.*, *Combined exposure to anti-androgens exacerbates disruption of sexual differentiation in the rat*, "Environmental Health Perspectives", 115, suppl. 1, dicembre 2007, pp. 122-128; Stine Broeng Metzdorff, Ulla Hass *et al.*, *Dysgenesis and histological changes of genitals and perturbations of gene expression in male rats after in utero exposure to antiandrogen mixtures*, "Toxicological Science", 98, n. 1, luglio 2007, pp. 87-98.

<sup>35</sup> Sofie Christiansen, Ulla Hass *et al.*, *Synergistic disruption of external male sex organ development by a mixture of four antiandrogens*, "Environmental Health Perspectives", vol. 117, n. 12, dicembre 2009, pp. 1839-1846.

<sup>36</sup> Ulrich Beck, *La società del rischio*, cit., pp. 88-89.

<sup>37</sup> Andreas Kortenkamp, *Breast cancer and exposure to hormonally active chemicals: an appraisal of the scientific evidence*, "Health & Environment Alliance", www.env-health.org, aprile 2008.

<sup>38</sup> Si veda: Warren Porter, James Jaeger, Ian Carlson, *Endocrine, immune and behavioral effects of aldicarb (carbamate), atrazine (triazine) and nitrate (fertilizer) mixtures at groundwater concentrations*, "Toxicology and Industrial Health", 15, nn. 1-2, 1999, pp. 133-150.

<sup>39</sup> Jesus Ibarluzea *et al.*, *Breast cancer risk and the combined effect of environmental oestrogens*, "Cancer Causes and Control", 15, 2004, pp. 591-600.

<sup>40</sup> Andreas Kortenkamp *et al.*, *Low-level exposure to multiple chemicals: reason for human health concerns?*, "Environmental Health Perspectives", 115, suppl. 1, dicembre 2007, pp. 106-114.

<sup>41</sup> Philippe Grandjean, Philip Landrigan, *Developmental neurotoxicity of industrial chemicals. A silent pandemic*, "The Lancet", 8 novembre 2006; Philip Landrigan, *What causes autism? Exploring the environmental contribution*, "Current Opinion in Pediatrics", vol. 22, n. 2, aprile 2010, pp. 219-225; Philippe Landrigan *et al.*, *Environmental origins of neurodegenerative disease in later life*, "Environmental Health Perspectives", vol. 113, n. 9, settembre 2005, pp. 1230-1233.

<sup>42</sup> Mark Blainey *et al.*, *The benefits of strict cut-off criteria on human health in relation to the proposal for a regulation concerning plant protection products*, Comité de l'environnement, de la santé publique et de la sécurité alimentaire du Parlement européen, ottobre 2008, IP/A/ENVI/ST/2008-18.

<sup>43</sup> Francesca Valent *et al.*, *Burden of disease attributable to selected environmental factors and injury among children and adolescents in Europe*, "The Lancet", 363, 2004, pp. 2032-2039.

<sup>44</sup> Vincent Garry, *Pesticides and children*, "Toxicology and Applied Pharmacology", 198, 2004, pp. 152-163.

<sup>45</sup> Deborah Rice, Stan Barone, *Critical periods of vulnerability for the developing nervous system: evidence from humans and animal models*, "Environmental Health Perspectives", 108, suppl. 3, 2000, pp. 511-533.

<sup>46</sup> Patricia M. Rodier, *Developing brain as a target of toxicity*, "Environmental Health Perspectives", 103, suppl. 6, settembre 1995, pp. 73-76.

<sup>47</sup> Gary Ginsberg, Dale Hattis, Babasaheb Sonawane, *Incorporating pharmacokinetic difference between children and adults in assessing children's risk to environmental toxicants*, "Toxicology and Applied Pharmacology", 198, 2004, pp. 164-183.

<sup>48</sup> Cynthia F. Bearer, *How are children different from adults?*, "Environmental Health Perspectives", 103, suppl. 6, 1995, pp. 7-12.

<sup>49</sup> M. Lackmann, K.H. Schaller, J. Angerel, *Organochlorine compounds in breastfed vs bottle-fed infants: preliminary results at six weeks of age*, "Science of the Total Environment", 329, 2004, pp. 289-293; G. Solomon, P. Weiss, *Chemical contaminants in breast milk: time trends and regional variability*, "Environmental Health Perspectives", vol. 110, n. 6, 2002, pp. 339-347.

<sup>50</sup> Intervista dell'autrice a Jacqueline Clavel, Villejuif, 6 gennaio 2010.

<sup>51</sup> Jérémie Rudant *et al.*, *Household exposure to pesticides and risk of childhood hematopoietic malignancies: the Escalé study (Sfce)*, "Environmental Health Perspectives", vol. 115, n. 12, dicembre 2007, pp. 1787-1793.

<sup>52</sup> Donald Wigle *et al.*, *A systematic review and meta-analysis of childhood leukemia and parental occupational pesticide exposure*, "Environmental Health Perspectives", vol. 117, n. 5, maggio 2009, pp. 1505-1513. Uno degli studi di riferimento è quello di Claire Infante-Rivard *et al.*, *Risk of childhood leukemia associated with exposure to pesticides and with gene polymorphisms*, "Epidemiology", 10, settembre 1999, pp. 481-487.

<sup>53</sup> Marie-Monique Robin, *Il mondo secondo Monsanto*, cit.

<sup>54</sup> Vincent Garry *et al.*, *Pesticide applicators, biocides, and birth defects in rural Minnesota*, "Environmental Health Perspectives", vol. 104, n. 4, 1996, pp. 394-399; Vincent Garry *et al.*, *Birth defects, season of conception, and sex of children born to pesticide applicators living in the Red River Valley of Minnesota, Usa*, "Environmental Health Perspectives", 110, suppl. 3, 2002, pp. 441-449; Vincent Garry *et al.*, *Male reproductive hormones and thyroid function in pesticide applicators in the Red River Valley of Minnesota*, "Journal of Toxicology and Environmental Health", 66, 2003, pp. 965-986.

<sup>55</sup> Numerosi studi dimostrano il legame tra l'esposizione materna ai pesticidi e malformazioni congenite; Ana Maria Garcia *et al.*, *Parental agricultural work and selected congenital malformations*, "American Journal of Epidemiology", 149, 1999, pp. 64-74; Petter Kristensen *et al.*, *Birth defects among offspring of Norwegian farmers 1967-1991*, "Epidemiology", vol. 8, 1997, pp. 537-554.

## Conclusioni. Cambiare paradigma

<sup>1</sup> Stéphane Foucart, *Pourquoi on vit moins vieux aux États-Unis*, "Le Monde", 27 gennaio 2011.

<sup>2</sup> Catherine Vincent, *Une personne sur dix est obèse dans le monde*, "Le Monde", 7 febbraio 2011.

<sup>3</sup> Pierre Weill, *Tous gros demain?*, Plon, Paris 2007, p. 21.

<sup>4</sup> David Servan-Schreiber, *Anticancer. Prévenir et lutter grâce à nos défenses naturelles*, Robert Laffont, Paris 2007, p. 114.

<sup>5</sup> Si veda Richard Béliveau, Denis Gingras, *Les Aliments contre le cancer*, Solar, Paris 2005.

<sup>6</sup> Jed Fahey, *Broccoli sprouts: an exceptionally rich source of inducers of enzymes that protect against chemical carcinogens*, "Proceedings of the National Academy of Sciences USA", vol. 94, n. 19, settembre 1997, pp. 10367-10372.

<sup>7</sup> Denis Gingras, Richard Béliveau, *Induction of medulloblastoma cell apoptosis by sulforaphane, a dietary anticarcinogen from Brassica vegetables*, "Cancer Letters", 203, 1° gennaio 2004, pp. 35-43.

<sup>8</sup> Michel Demeule, Richard Béliveau, *Diallyl disulfide, a chemopreventive agent in garlic, induces multidrug resistance-associated protein 2 expression*, "Biochemical and Biophysical Research Communications", vol. 324, n. 2, novembre 2004, pp. 937-945.

<sup>9</sup> Lyne Labrecque, Richard Béliveau, *Combined inhibition of PDGF and VEGF receptors by ellagic acid, a dietary-derived phenolic compound*, "Carcinogenesis", vol. 26, n. 4, aprile 2004.

<sup>10</sup> Borhane Annabi, Richard Béliveau, *Radiation induced-tubulogenesis in endothelial cells is antagonized by the antiangiogenic properties of green tea polyphenol (-) epigallo-catechin-3-gallate*, "Cancer Biology & Therapy", 6, novembre-dicembre 2003, pp. 642-649; Anthony Pilorget, Richard Béliveau, *Medulloblastoma cell invasion is inhibited by green tea epigallocatechin-3-gallate*, "Journal of Cellular Biochemistry", vol. 90, n. 4, novembre 2003, pp. 745-755.

<sup>11</sup> John Weisburger, *Chemopreventive effects of cocoa polyphenols on chronic diseases*, "Experimental Biology and Medicine", vol. 226, n. 10, novembre 2001, pp. 891-897.

<sup>12</sup> Meishiang Jang *et al.*, *Cancer chemopreventive activity of resveratrol, a natural product derived from grapes*, "Nature", vol. 25, n. 2, 1999, pp. 65-77.

<sup>13</sup> Bharat Aggarwal *et al.*, *Anticancer potential of curcumin: preclinical and clinical studies*, "Anticancer Research", 23, 2003, pp. 363-98; Bharat Aggarwal, *Prostate cancer and curcumin add spice to your life*, "Cancer Biology & Therapy", vol. 7, n. 9, settembre 2008, pp. 1436-1440; Sita Aggarwal, Bharat Aggarwal *et al.*, *Curcumin (diferuloylmethane) downregulates expression of cell proliferation and anti-apoptotic and metastatic gene products through suppression of IkappaBalpha kinase and Akt activation*, "Molecular Pharmacology", 69, 2006, pp. 195-206; Ajaikumar Kunnumakkara, Preetha Anand, Bharat Aggarwal, *Curcumin inhibits proliferation, invasion, angiogenesis and metastasis of different cancers through interaction with multiple cell signaling proteins*, "Cancer Letters", vol. 269, n. 2, ottobre 2008, pp. 199-225.

<sup>14</sup> Intervista dell'autrice ad Arvind Chaturvedi, Bhubaneswar, 21 dicembre 2009.

<sup>15</sup> Cynthia Curl *et al.*, *Organophosphorus pesticide exposure of urban and suburban preschool children with organic and conventional diets*, "Environmental Health Perspectives", 111, 2003, pp. 377-382.

<sup>16</sup> Chensheng Lu *et al.*, *Organic diets significantly lower children's dietary exposure to organophosphorus pesticides*, "Environmental Health Perspectives", vol. 114, n. 2, 2006, pp. 260-263.

<sup>17</sup> Chensheng Lu *et al.*, *Dietary intake and its contribution to longitudinal organophosphorus pesticide exposure in urban/suburban children*, "Environmental Health Perspectives", vol. 116, n. 4, aprile 2008, pp. 537-542.

<sup>18</sup> David Egilman, Susanna Rankin Bohme, *Over a barrel: corporate corruption of science and its effects on workers and the environment*, "The International Journal of Occupational and Environmental Health", 11, 2005, pp. 331-337.

<sup>19</sup> Citato da André Cicoella, *Le Défi des épidémies modernes*, cit., p. 5.

<sup>20</sup> Ivi, p. 17.

<sup>21</sup> Ivi, p. 29.

<sup>22</sup> Tom Muir, Mike Zegarac, *Societal costs of exposure to toxic substances: economic and health costs of four case studies that are candidates for environmental causation*, "Environmental Health Perspectives", vol. 109, n. 6, dicembre 2001, pp. 885-903.

<sup>23</sup> Mark Blainey, Catherine Ganzleben, Gretta Goldenman, Iona Pratt, *The benefits of strict cut-off criteria on human health in relation to the proposal for a regulation concerning plant protection products*, 2008, IP/A/ENVI/ST/2008-18.

<sup>24</sup> David Pimentel *et al.*, *Environmental and economic costs of pesticide use*, "Bioscience", vol. 42, n. 10, 1992, pp. 750-760.

<sup>25</sup> Jacques Ferlay *et al.*, *Estimates of the cancer incidence and mortality in Europe in 2006*, "Annals of Oncology", vol. 18, n. 3, 2007, pp. 581-592.

<sup>26</sup> Commissione europea, Commission Staff Working Paper, 2003.

<sup>27</sup> Michael Ganz, *The lifetime distribution of the incremental societal costs of autism*, "Archives of Pediatrics and Adolescent Medicine", vol. 161, n. 4, aprile 2007, pp. 343-349 ; Krister Järbrink, *The economic consequences of autistic spectrum disorder among children in a Swedish municipality*, "Autism", vol. 11, n. 5, settembre 2007, pp. 453-463.

<sup>28</sup> Commissione europea, DG XXIV (consumi, sanità), dicembre 1998.

<sup>29</sup> Michel Callon, Pierre Lascoumes, Yannick Barthes, *Agir dans un monde incertain. Essai sur la démocratie technique*, Seuil, Paris 2001.

<sup>30</sup> Ivi, p. 270.

<sup>31</sup> Ivi, p. 289.

<sup>32</sup> Le seguenti citazioni sono tratte da Michel Callon, "La science confinée", in Michel Callon, Pierre Lascoumes, Yannick Barthes, *Agir dans un monde incertain. Essai sur la démocratie technique*, cit.

<sup>33</sup> Michel Gérin et al., *Environnement et santé publique*, cit., p. 79.

<sup>34</sup> Jacqueline Verrett, Jean Carper, *Eating may be hazardous to your health*, cit.