

Capannori, 26 - 27 aprile 2008

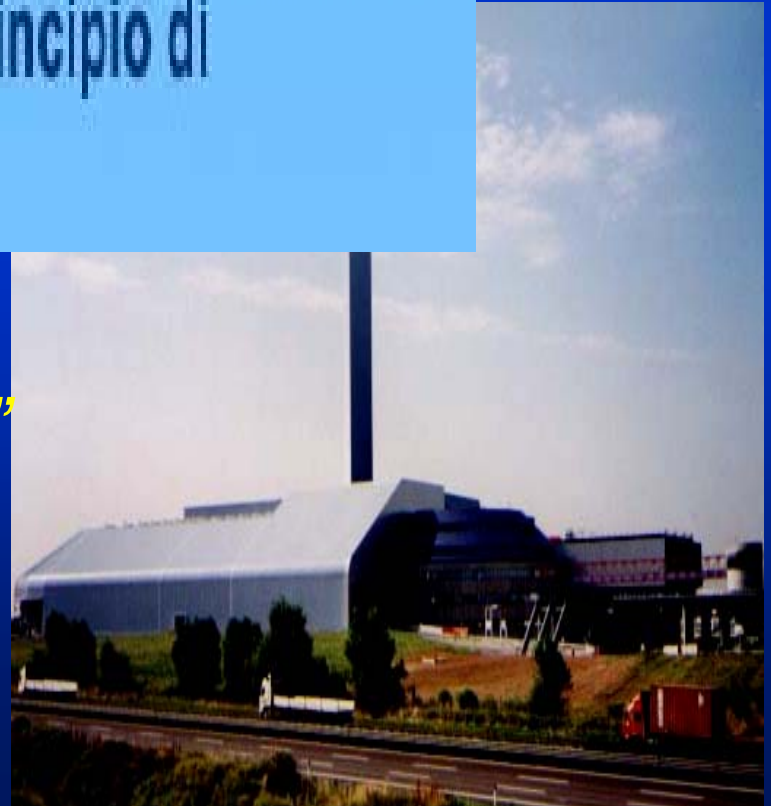
Villa Bruguier - Camigliano (LU)



“Riduzione e riciclaggio in Europa: la normativa incontra la strategia verso i rifiuti zero ed il principio di precauzione?”

“A clever man solves a problem, a wise man avoids it”

Albert Einstein



Confederation of European Waste-to-Energy Plant (2004) www.cewep.com



***"IL RICLAGGIO DI MATERIALI RACCOLTI
ALLA FONTE CON BUONA
DIFFERENZIAZIONE PROVOCA MINOR
IMPATTO AMBIENTALE RISPETTO ALLA
TERMOVALORIZZAZIONE"***

***Fonte : "Confronto dell'incenerimento dei rifiuti
come metodo di trattamento e recupero di
energia dal punto di vista ambientale"***

Evaluation

HEALTH EFFECT	LEVEL OF EVIDENCE	
	Landfills	Incinerators
All cancer	Inadequate	Limited
Stomach cancer	Inadequate	Limited
Colorectal cancer	Inadequate	Limited
Liver cancer	Inadequate	Limited
Larynx cancer	Inadequate	Inadequate
Lung cancer	Inadequate	Limited
Soft tissue sarcoma	Inadequate	Limited
Kidney cancer	Inadequate	Inadequate
Bladder cancer	Inadequate	Inadequate
Non Hodgkin's lymphoma	Inadequate	Limited
Childhood cancer	Inadequate	Inadequate
Total birth defects	Inadequate	Inadequate
Neural tube defects	Limited	Inadequate
Orofacial birth defects	Limited	Limited
Genitourinary birth defects	Inadequate	Limited
Abdominal wall defects	Limited	Inadequate
Gastrointestinal birth defects	Inadequate	Inadequate
Low birth weight	Inadequate	Inadequate
Respiratory diseases or symptoms	Inadequate	Inadequate

**Il fumo ti
uccide...**

**E quello degli
inceneritori
?**



Industrie *insalubri* di classe I

(art.216 RD 1265/34 DM 5.9 /1994)

***Non idonee* ad ospitare inceneritori le zone agricole caratterizzate per qualità e tipicità dei prodotti**

(D. lgs 228 del 18/05/2001)



del 11 Gennaio 2008

Bresciaoggi

QUOTIDIANO: BRESCIA

estratto da pag. 11

INQUINAMENTO. Una volta eliminati dalla dieta degli animali i foraggi locali, subito i valori sono tornati nella norma

Latte al Pcb, ora è sicuro: la responsabilità è dei terreni

Associazioni degli agricoltori

Review

Origin and Health Impacts of Emissions of Toxic By-Products and Fine Particles from Combustion and Thermal Treatment of Hazardous Wastes and Materials

Stephania A. Cormier,¹ Slawo Lomnicki,² Wayne Backes,³ and Barry Dellinger²

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³Department of Pharmacology, Louisiana State University Health Sciences Center, Baton Rouge, Louisiana, USA



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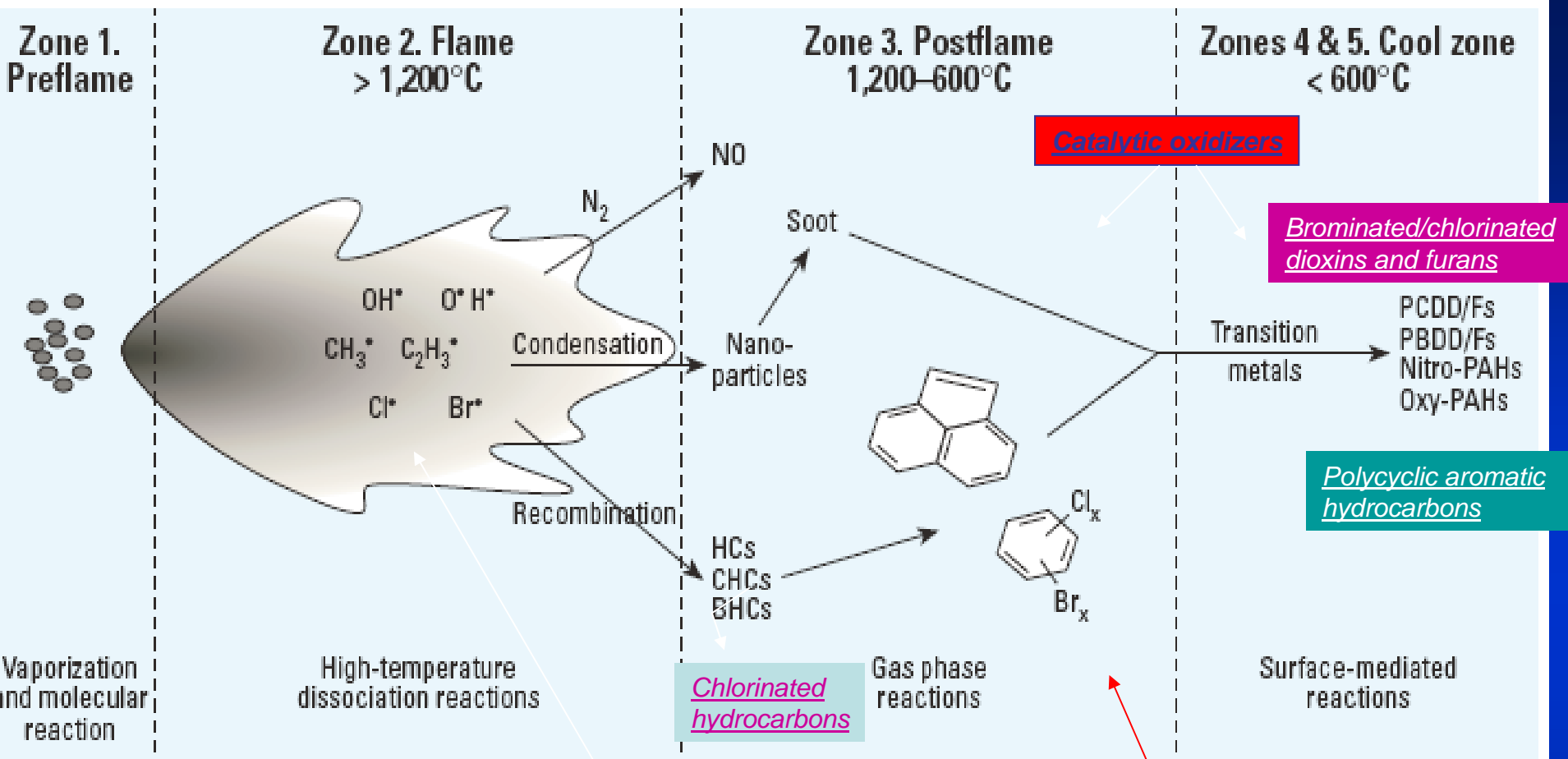


Figure 1. Combustor reaction zones. Zone 1, preflame, fuel zone; zone 2, high-temperature, flame zone; zone 3, postflame, thermal zone; zone 4, gas-quench, cool zone; zone 5, surface-catalysis, cool zone. PCDD/Fs, polychlorinated dibenzo-p-dioxins and dibenzofurans. Reaction products from upstream zones pass through downstream zones and undergo chemical modifications, resulting in formation of new pollutants. Zone 2 controls formation of many “traditional” pollutants (e.g., carbon monoxide, sulfur oxides, and nitrogen oxides). Zones 3 and 4 control formation of gas-phase organic pollutants. Zone 5 is a major source of PCDD/Fs and is increasingly recognized as a source of other pollutants previously thought to originate in zones 1–4.



**FORLI' 24 NOVEMBRE 2005 : AUDIZIONE SUGLI INCENERITORI
LORENZO TOMATIS ESORDI'..."**

***LE GENERAZIONE A VENIRE NON CI PERDONERANNO I
DANNI CHE NOI STIAMO LORO FACENDO"***

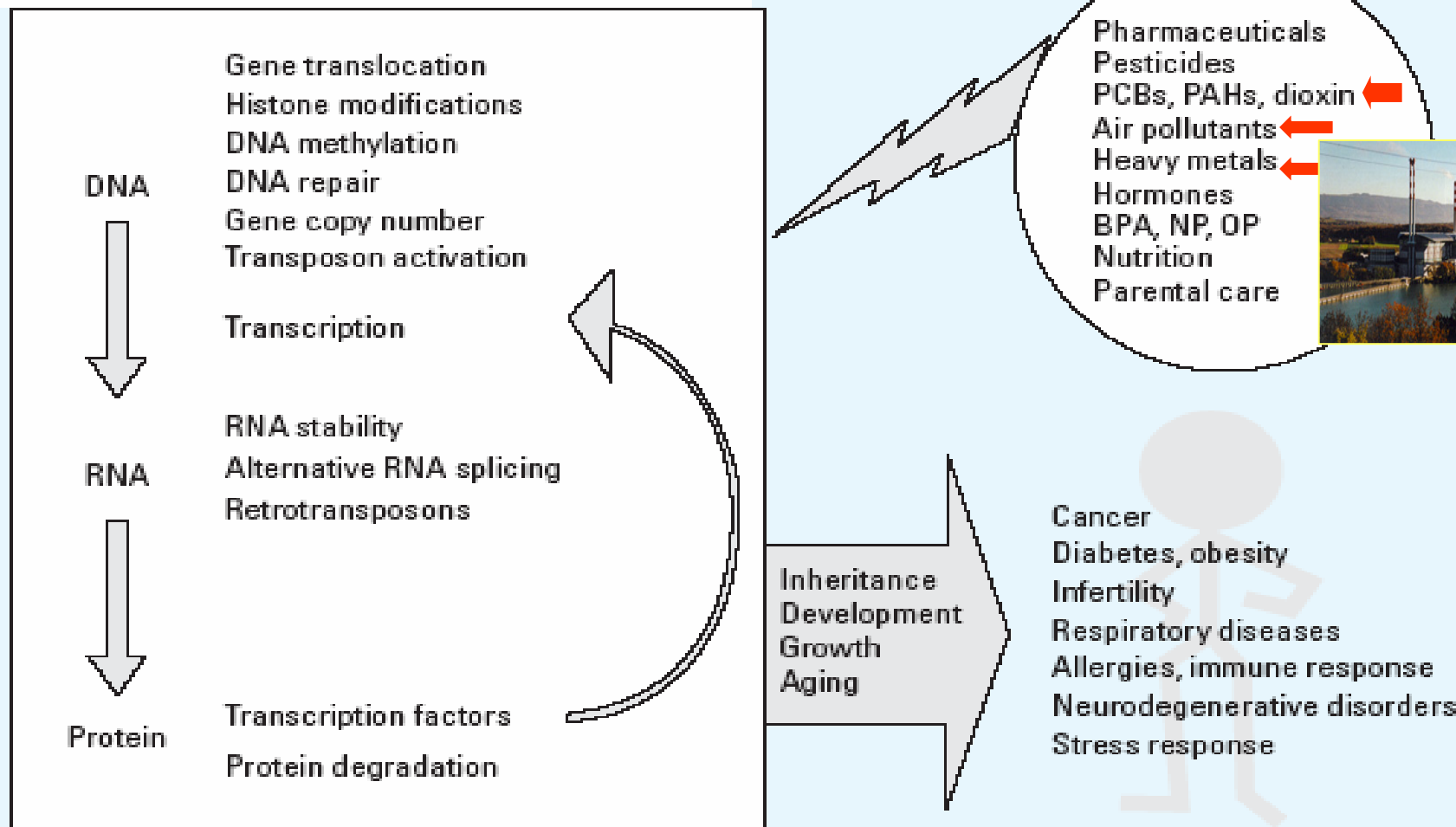
Environmental Exposures and Gene Regulation in Disease Etiology
Thea M. Edwards^{1,2} and John Peterson Myers²
¹Department of Zoology, University of Florida, Gainesville, Florida, USA; ²Environmental Health Sciences, Charlottesville, Virginia, USA


Figure 1. Summary of gene regulatory mechanisms affected by environmental exposures, with disease implications. Abbreviations: BPA, bisphenol A; NP, 4-nonylphenol; PAHs, polycyclic aromatic hydrocarbons; PCBs, polychlorinated biphenyls; OP, 4-*tert*-octylphenol.

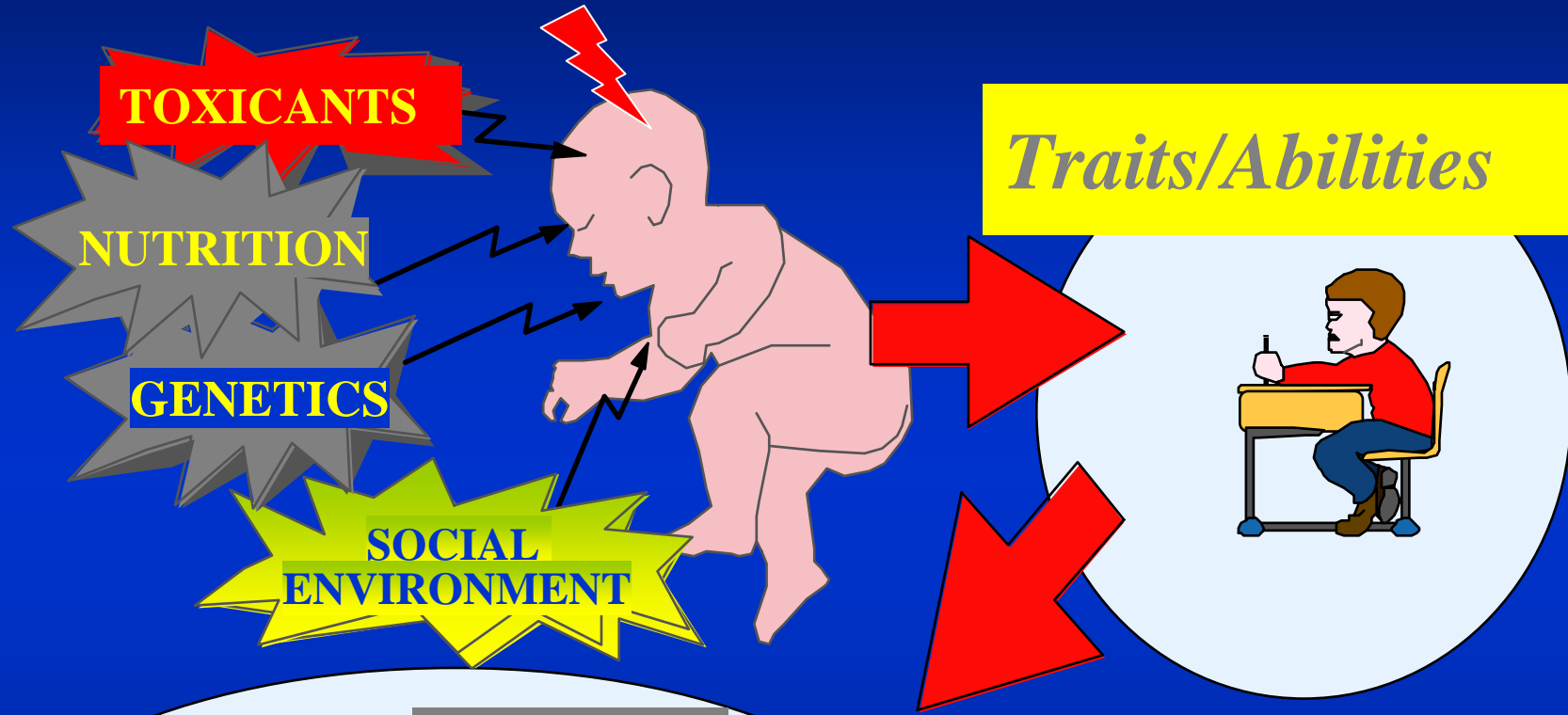
Environmental Factors, DNA Methylation, and Fetal Origins of Adult Disease

A growing number of animal studies show that parental diet and other exposures can influence fetal DNA methylation patterns and permanently affect health outcomes in later life (Dolinoy et al. 2006; Wu G et al. 2004; Yu et al. 1999). Moreover, there is evidence that environmentally induced changes in DNA methylation patterns are heritable across generations (Anway et al. 2005; Newbold et al. 1998, 2000; Ruden et al. 2005; Turusov et al. 1992; Walker and Haven 1997). To understand how and when environmental factors might change DNA methylation, why these changes are potentially heritable, and how they can contribute to the fetal origins of adult disease, it is helpful to consider examples in the context of ontogeny.

Ontogeny of DNA methylation and environmental influence. DNA methylation occurs in two modes: dynamic methylation and theoretically permanent methylation, such as X chromosome inactivation and genomic

**PARACELSO : LA DOSE FA' IL VELENO.....
MA NON SEMPRE!
MOLTO SPESSO IL MOMENTO IN CUI ESSO AGISCE E' CRUCIALE!**



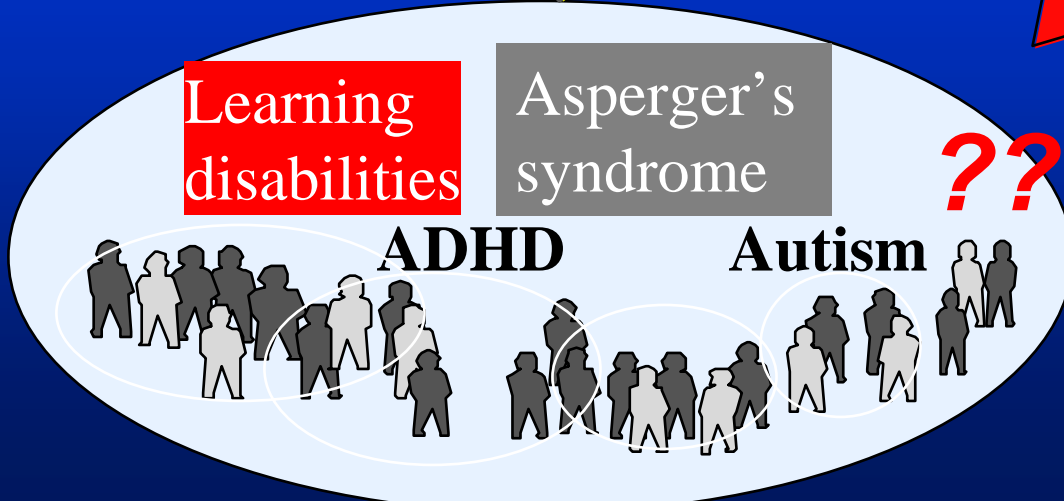


Learning disabilities

Asperger's syndrome

??

Developmental Syndromes
(In Harm's Way, GBPSR, 2000)



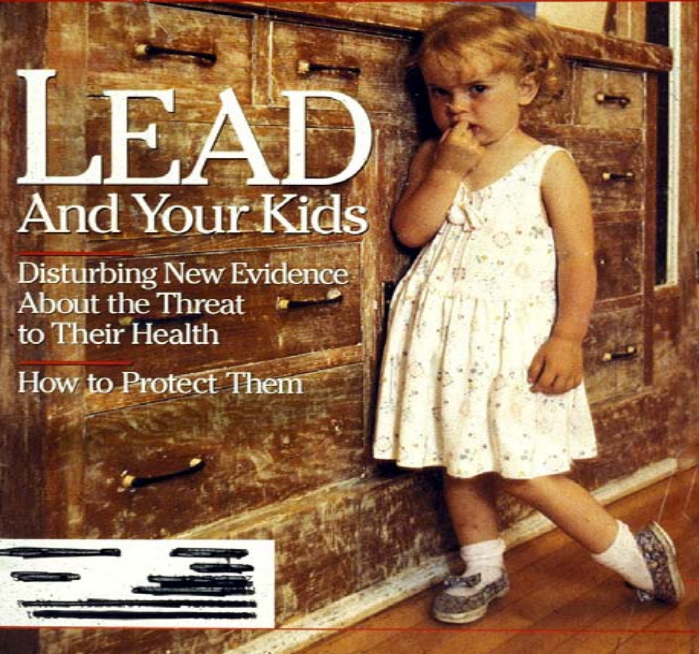
WHAT BLACK CONSERVATIVES WANT
Clarence Thomas and the Court

Newsweek

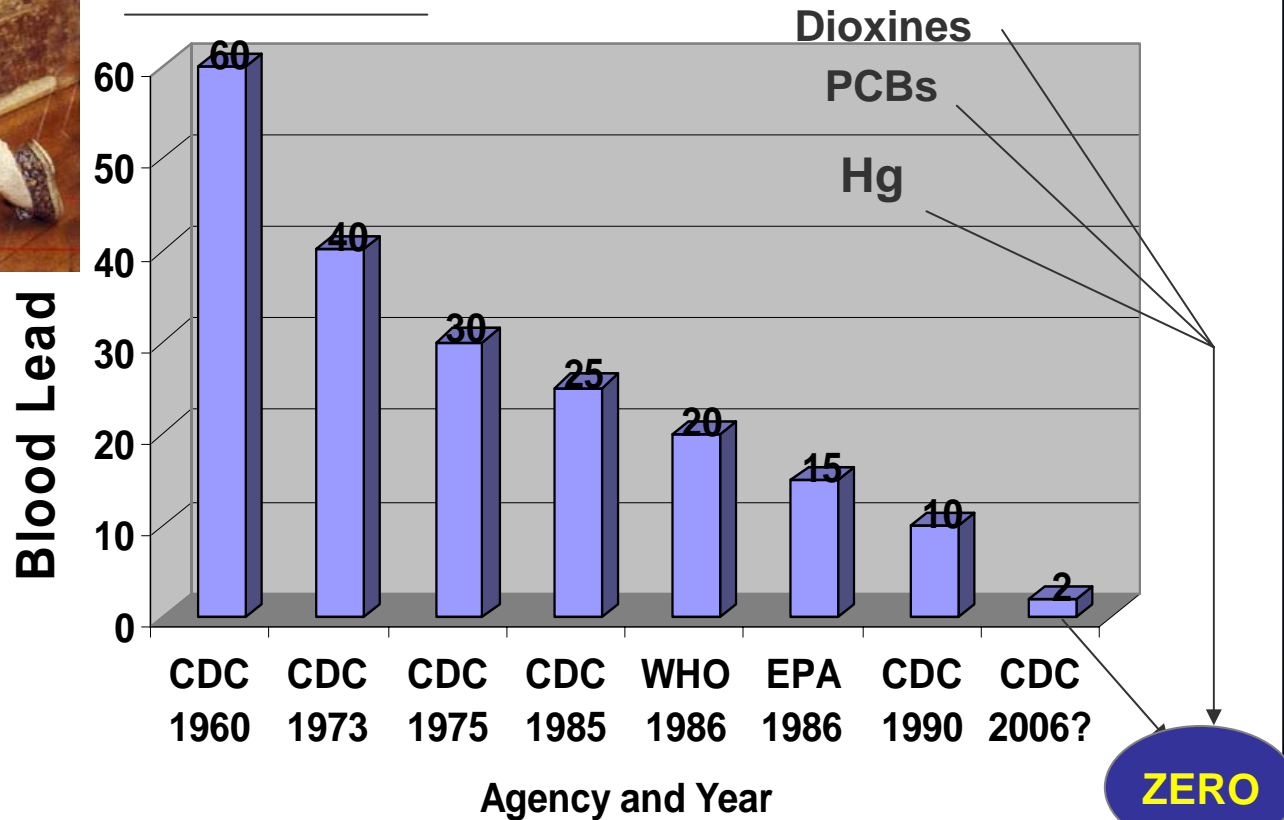
July 16, 1991 \$2.50

LEAD And Your Kids

Disturbing New Evidence
About the Threat
to Their Health
How to Protect Them



Acceptable Childhood Blood Lead Levels



SALUTE PUBBLICA E COSTI DELL'INQUINAMENTO DA METIL-MERCURIO IN U.S.A.

- Quantità di MERCURIO associato a diminuzione del QUOZIENTE INTELLETTIVO (Q.I.)= 5.8 mcg/l nel cordone ombelicale
- Si calcola che da 316.000 a 637.000 bambini/anno/U.S.A. siano presenti livelli sup. a 5.8 mcg/l
- Perdita di produttività per il ridotto Q.I. pari a 8.7 miliardi di \$/anno
- 6.062 ton/anno MERCURIO rilasciate in atmosfera (70% da attività industriali)

Envir. Health Persp. Num 51 May 2005

A Silent Pandemic

Industrial Chemicals Are Impairing
The Brain Development of Children Worldwide

For immediate release: Tuesday, November 7, 2006

Fetal and early childhood exposures to industrial chemicals in the environment can damage the developing brain and can lead to neurodevelopmental disorders (NDDs) — autism, attention deficit disorder (ADHD), and mental retardation.

DISTURBI NEUROLOGICI E COMPORTAMENTALI NEI BAMBINI IN U.S.A.

➤ Deficit di attenzione/iperattività:
+250% dal 1990 al 1998



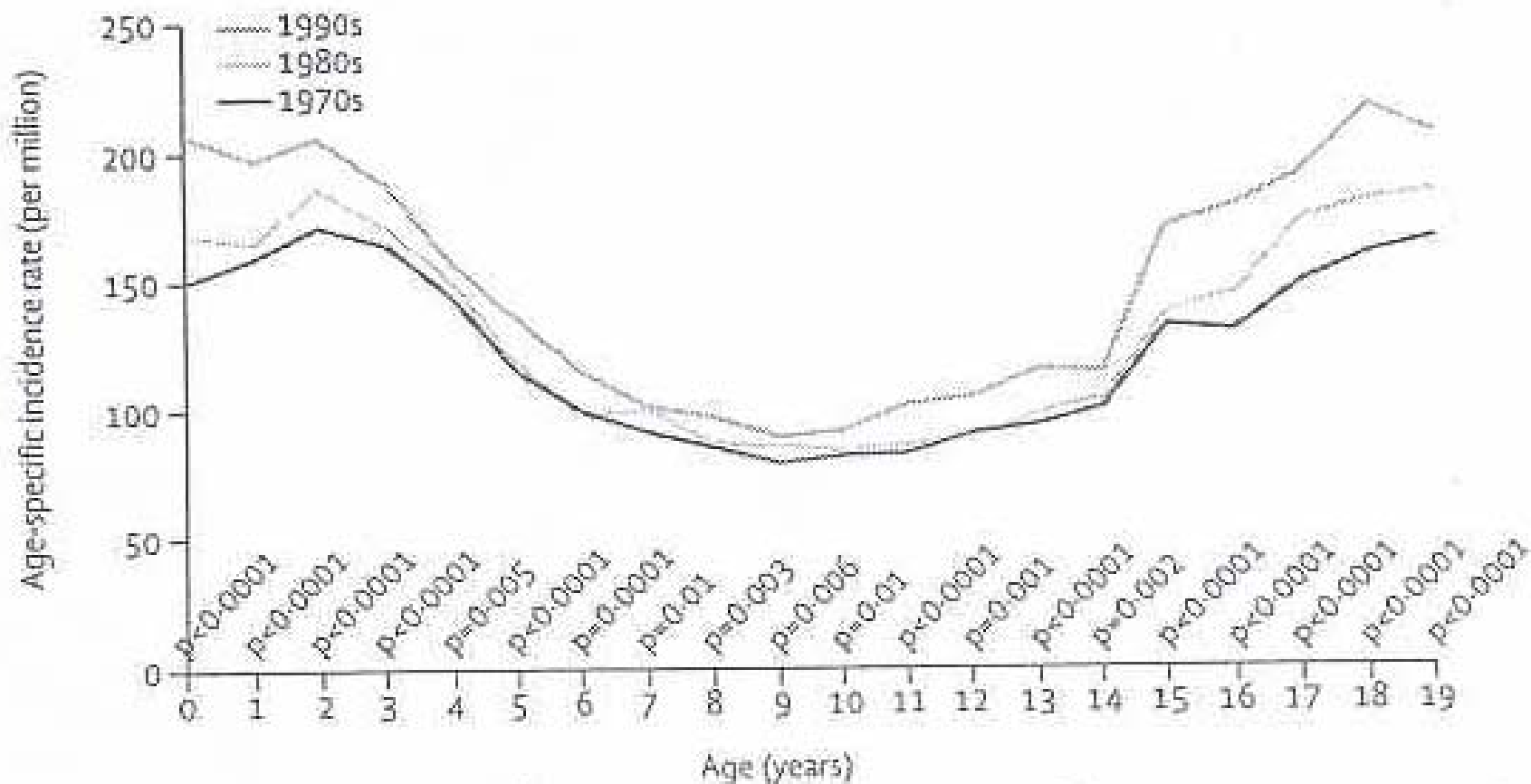
➤ Bambini inseriti in scuole speciali:
+ 190% dal 1977 al 1994



➤ Autismo:
1980: 4 - 5 casi/anno su 10.000
1990: **30 - 60** casi/anno su 10.000



INCIDENZA DI NEOPLASIE NELL'INFANZIA E NELL'ADOLESCENZA IN EUROPA (anni 1970-1999)



(Lancet, Dic. 2004)

Economic Costs of Pediatric Environmental Diseases

Estimated Costs of Pediatric Disease of Environmental Origin,
United States, 1997 (billions)

	Best Estimate	Low Estimate	High Estimate
Lead Poisoning	\$43.4	\$43.4	\$43.4
Asthma	\$2.0	\$0.7	\$2.3
Cancer	\$0.3	\$0.2	\$0.7
Neurobehavioral Disorders	\$9.2	\$4.6	\$18.4
TOTAL	\$54.9	\$48.8	\$64.8

(From "*Environmental Pollutants and Disease in American Children*," Landrigan, Schechter, et.al., 2002)

A Present for Life

hazardous chemicals in umbilical cord blood



PRINCIPALI EMISSIONI DA INCENERITORI



- **Ossidi di Azoto**
- **Metalli Pesanti (Cadmi, Piombo, Nichel...)**
- **Inquinanti Organici : IPA, PCB, furani, ftalati, chetoni, alcheni, diossine**
- **Particolato**