

CURRICULUM VITAE
MEMBER OF THE SCIENTIFIC COMMITTEE REACH

1. General Information

Name (FAMILY NAME, First Name)	Van Larebeke Nicolas
Nationality	Belgian

2. Education

Medical doctor; PhD in Histological Sciences

3. Relevant employment

Present employment	Scientific collaborator, Department of analytical and environmental chemistry
Previous relevant employment	Professor of Experimental Cancerology Ghent University Head of the Laboratory for Detection of Carcinogens, Pasteur Institute, Brussels.

4. Relevant fields of in-depth expertise

Area of expertise	Description
Mutagenesis; Carcinogenesis; Low dose effects ; human biomonitoring	I have worked on the genetic basis of the crown gall tumor of plants induced by <i>Agrobacterium tumefaciens</i>, on environmental mutagenesis, on the phenotypic properties of cancer cells, especially on the motility and invasive characteristics. Also on hormonal and other biological and health effects of pollutants as measured in the urine and blood of subjects from the general Flemish population.

5. Membership of relevant professional bodies

6. Other relevant information

Prof. Dr. Nik van Larebeke.

Born 21/08/1947. Graduated as medical doctor at Ghent University in 1972. Worked with Marc Van Montagu and Jef Schell on the induction of tumours in plants. PhD (1977): "Identification and study of an extrachromosomal genetic element responsible for the tumour-inducing capacity of *Agrobacterium tumefaciens*. A contribution to the study of the tumoural transformation of the cell." Founded in december 1978 the "Laboratory for Detection of Mutagens and Carcinogens" of the Pasteur Institute in Brussels. Worked from 1984 to 1994 in the Laboratory for Experimental Cancerology of Ghent University on the role of cell movements in the malignant behaviour of cancer cells. At present Director of the Study Centre "Carcinogenesis and Primary Prevention of Cancer" of the Medical Faculty of Ghent University. Co-promotor of the Flemish pilot biomonitoring campaign in 1999. Co-promotor and Spokesperson of the Flemish Centre for Environment and Health. Chairman of the Commission for Health and Environment of the Flemish Health Council. Member of the Board of the Flemish Institute for Technology Assessment.

a. Main publications (all of them in international peer reviewed journals)

van Larebeke N., Engler G., Holsters M., Van Den Elsacker S., Zaenen I., Schilperoort R. and Schell J. (1974). Large plasmid in *Agrobacterium tumefaciens* essential for crown-gall inducing ability. *Nature*, 252, 169.

van Larebeke N., Genetello C., Schell J., Schilperoort R., Hermans A., Hernalsteens J. and Van Montagu M. (1975). Acquisition of tumor-inducing ability by non-oncogenic *Agrobacteria* as a result of plasmid transfer. *Nature* 255, 742.

Paul J.C. Schepens¹, Adrian Covaci¹, Philippe G. Jorens¹, Luc Hens², Simon Scharpe^{1*}, Nik van Larebeke³: "Surprising findings following a Belgian food contamination with polychlorobiphenyls and dioxins". *Environ Health Perspect.* 2001 Feb;109(2):101-3.

J Deman & N. van Larebeke: Carcinogenesis: "Mutations and mutagens." *Tumour Biol.* 2001 Mar;22(3):191-202. (The journal of the International Society for Oncodevelopmental Biology and medicine).

¹NIK VAN LAREBEKE, ²LUC HENS, ³PAUL SCHEPENS, ³ADRIAN COVACI, ⁴JAN BAEYENS, ⁴KIM EVERAERT, ²JAN L. BERNHEIM, ⁵ROBERT VLIETINCK, ⁶GEERT DE POORTER: "THE BELGIAN PCB AND DIOXIN INCIDENT OF JANUARY-JUNE 1999: EXPOSURE DATA AND POTENTIAL IMPACT ON HEALTH". *ENVIRONMENTAL HEALTH PERSPECTIVES.* 109, 265-274.

G. Koppen¹, A. Covaci^{2*}, R. Van Cleuvenbergen¹, P. Schepens², G. Winneke³, V. Nelen⁴, N. van Larebeke⁵, R. Vlietinck⁶, G. Schoeters¹: "Persistent organochlorine pollutants in human serum of 50-65 years old women in the Flanders Environmental

and Health Study (FLEHS).

Part 1: Concentrations and regional differences". Chemosphere, 48, 811-825.

ADRIAN COVACI^{1*}, GUDRUN KOPPEN², RUDY VAN CLEUVENBERGEN², PAUL SCHEPENS¹, GERHARD WINNEKE³, NICOLAS VAN LAREBEKE⁴, VERA NELEN⁵, ROBERT VLIETINCK⁶ AND GREET SCHOETERS²: "PERSISTENT ORGANOCHLORINE POLLUTANTS IN HUMAN SERUM OF 50-65 YEARS OLD WOMEN IN THE FLANDERS ENVIRONMENTAL AND HEALTH STUDY (FLEHS). PART 2: CORRELATIONS AMONG PCBs, PCDD/PCDFs AND THE USE OF PREDICTIVE MARKERS." CHEMOSPHERE 48, 827-832.

Nik van Larebeke, Bernard Husson, Wim De Coen, Eric Pluygers (2003): "Immunologic and other biological parameters in function of smoking status and of residence in areas differing in terms of air pollution. International Journal of Environmental Health Research 13, 57-71.

Dufour, Vincent, van Larebeke, Nik. and Janssen, Colin: 'Genotoxic and mutagenic activity of environmental air samples in Flanders, Belgium' Mutation Research, Genetic Toxicology and Environmental Mutagenesis, 558:155-167 (2004)

NICOLAS VAN LAREBEKE¹, GUDRUN KOPPEN, VERA NELEN, GREET SCHOETERS, HERMAN VAN LOON, HARMA ALBERING, LOUK RIGA, ROBERT VLIETINCK AND JOS KLEINJANS, FOR THE FLEMISH ENVIRONMENT AND HEALTH STUDY GROUP². DIFFERENCES IN HPRT MUTANT FREQUENCY AMONG MIDDLE-AGED FLEMISH WOMEN IN ASSOCIATION WITH AREA OF RESIDENCE AND BLOOD LEAD LEVELS. BIOMARKERS, 9 (1), 71-84.

Rinne De Bont and Nik van Larebeke: " Endogenous DNA damage in humans : a review of quantitative data." Mutagenesis vol. 19 no. 3 pp. 169-185, May 2004.

Du Four V, van Larebeke N. and Janssen C. (2004). Genotoxic and mutagenic potency of environmental air samples in Flanders, Belgium. Mutation Research 558, 155-167.

DEBORAH AXELROD, MD, KATHY BURNS, PHD, DEVRA DAVIS, PHD, MPH,

NICOLAS VON LAREBEKE, MD, MPH: "Hormesis"—An Inappropriate Extrapolation from the Specific to the Universal INT J OCCUP ENVIRON HEALTH 2004;10:335–339

NICOLAS A. VAN LAREBEKE, MD, PHD, LINDA S. BIRNBAUM, PHD, MARC A. BOOGAERTS, MD, PHD, MARC BRACKE, MD, PHD, DEVRA LEE DAVIS, PHD, DAVID M. DEMARINI, PHD, KIM HOOPER, PHD, JAMES HUFF, PHD, JOS C. KLEINJANS, PHD, MARVIN S. LEGATOR, PHD, GREET SCHOETERS, PHD, KIRSI VÄHÄKANGAS, MD, PHD: Unrecognized or Potential Risk Factors for Childhood Cancer. INT J OCCUP ENVIRON HEALTH 2005;11:199–201

V.A. Du Four [a,*](#), C.R. Janssen [a](#), E. Brits [b](#), N. Van Larebeke [c](#): Genotoxic and

mutagenic activity of environmental air samples from different rural, urban and industrial sites in Flanders, Belgium. *Mutation Research*, 588,106-117.

Nicolas van Larebeke¹, Mark Bracke, Vera Nelen, Gudrun Koppen, Greet Schoeters, Herman Van Loon, and Robert Vlietinck: Differences in tumor-associated protein levels among middle-aged Flemish women in association with area of residence and exposure to pollutants. *Environmental Health Perspectives*. Accepted for publication. *Environ Health Perspect*: doi:10.1289/ehp.8811. [Online 9 February 2006]

Willem Dhooge, Nicolas van Larebeke, Gudrun Koppen, Vera Nelen, Greet Schoeters, Robert Vlietinck, Jean-Marc Kaufman, Frank Comhaire, for the Flemish Environment and Health Study group*: Regional differences in reproductive parameters in men in Flanders are associated with the consumption of self-grown vegetables, but not with urinary cadmium levels. Accepted for publication in *Journal of Andrology*.

H. B. Ketelslegers, R. W. Godschalk, R. W. Gottschalk, A. M. Knaapen, G. Koppen, G. Schoeters, W. F. Baeyens, V. Nelen, J. P. Geraedts, J. H. van Delft, J. C. Kleinjans, and N. A. van Larebeke. Prevalence of at-risk genotypes for genotoxic effects decreases with age in a randomly selected population in Flanders: a cross sectional study. *Environ. Health* 10:85, 2011.

De Coster S., D. M. van Leeuwen, D. G. Jennen, G. Koppen, Hond E. Den, V. Nelen, G. Schoeters, W. Baeyens, J. H. van Delft, J. C. Kleinjans, and Larebeke N. Van. Gender-specific transcriptomic response to environmental exposure in Flemish adults. *Environ. Mol. Mutagen.* 54 (7):574-588, 2013.

N. van Larebeke, I. Sioen, E. D. Hond, V. Nelen, Mieroop E. Van de, T. Nawrot, L. Bruckers, G. Schoeters, and W. Baeyens. Internal exposure to organochlorine pollutants and cadmium and self-reported health status: a prospective study. *Int. J. Hyg. Environ. Health* 218 (2):232-245, 2015.

b. Projects

- Flemish Pilot Biomonitoring Project 1999-2000, two years, Flemish Community
- Charting of genotoxic and mutagenic activity in air and water in Flanders, 4 years, Flemish Community
- Several projects for MIRA (Flemish Environment and Nature report), 3 years, Flemish Environmental Protection Agency
- Promotor and Spokesman for the Flemish Environment and Health Centre, organizing the Flemish biomonitoring Campaign, 2001-2006, Flemish Community
- Principal Promotor of the projects "Identification of indicators for the impact of Endocrine disrupting substances" (2004-2005'), and "Evaluation of the air quality in Flanders through effect measurements on environmental air (2004-2005) sponsored by AMINAL (Flemish Administration).
- Copromotor of the project "Indicators for the health impact of Polycyclic Aromatic Hydrocarbons (2004-2006,) sponsored by AMINAL (Flemish Administration).
- Co-promotor of a project on the evaluation of environmental norms for the Flemish Government (1 year, 2005) and participant in a Belgian Federal project on indicators concerning the state of the environment (2005-2006).

-Advisor to the Flemish Environmental Protection Agency (since 1994) and to Biffa Waste Services inc.concerning health effects in relation to a landfill (since 2002).

c. International Contacts

I have many contacts throughout the world in relation to environment and health. I have participated in a workshop in the International Agency for Research on Cancer as a representative of the European Commission. Belgian representative in the "Technical Working Group on Environment and Health, Subgroup Childhood Cancer", in the contextx of the "European Environment and Health Strategy". Together with Prof. Kirsi Vähäkangas and a series of European Colleagues I tried to set up a European project called "PAHnet - Molecular epidemiology of polycyclic aromatic hydrocarbons"

I worked as scientific adviser to WWF with regard to their biomonitoring campaign on European Politicians. I was a member of the "Scientific Comitee" van de NATO Advanced Research Workshop "Endocrine Disrupters and Carcinogenic Risk Assessment", Bialystok, Polen. I was designated as an advisor to the Center for Environmental Oncology University of Pittsburgh Cancer Institute.

My contacts include Prof. Dr Mantovani (), Prof. Dr. Jos Kleijnans (Maastricht University), Prof Dr Kirsi Vähäkangas (Universities of Kuopio and Oulu, Finland), Prof. Dr. Vivian Howard (University of Liverpool and of Dublin) Prof. Dr. James Huff (National Institutes of Environmental Heaklth Sciences, USA), Dr. Kim Hooper (Californian Environ,mental Protection Agency), Dr. De Marini (U.S. Environmental Protection Agency), Dr. Devra Davis (Pittsburgh University) and Dr. Linda Birnbaum (US EPA).

d. Scientific Services rendered to Society.

I was the first Medical Doctor in Belgium stressing the importance of somatic mutations and occupational and environmental mutagens as causes of cancer. I have been active since 1978 to increase awareness of consumers, workers and citizens in general, amongst others as advisor to three big organizations in Belgium: the Consumer organization "Test Aankoop", the Socialist Labor Union and the Socialist Party. In the period 1978-1983 I published seven papers in a Belgian Medical Journal on a series of concepts important to Cancer Prevention. Since the mid 90's I work to introduce the concept of chemical-physical hygiene as a necessary condition for an effective prevention of cancer.