### **NICOLE LE MOUAL**

Epidemiologist, respiratory and occupational diseases, PhD, HDR, Research Engineer (Ingénieur de recherche, IR1)

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### **EDUCATION AND POSITIONS**

## **Education and Training**

2013 HDR, Habilitation à Diriger des Recherches (French accreditation to supervise research) 'Epidémiologie des risques professionnels et de l'exposition domestique aux produits de nettoyage dans l'asthme', December 20, 2013, University Paris Sud

2005 PhD in Public health, Epidemiology 'Epidémiologie des risques professionnels dans les pathologies respiratoires obstructives', University Paris Sud.

2001 Master in Statistics/Epidemiology, Methodology and statistics in biomedical research, Univ. Paris Sud.

1983 Statistics and informatics, Rennes University, France

### Position and employment

2020-	Epidemiologist, Inserm UMR 1018 Centre for Epidemiology and Population Health, Villejuif, France
2015-2019	Epidemiologist, Inserm UMR 1168 Aging and chronic diseases. Epidemiological and public health approaches, Villejuif, France
2011-2012	Epidemiologist, sabbatical stay at CREAL, Barcelona, Spain
2010-2014	Epidemiologist, Research Engineer, Inserm CESP UMR 1018, Respiratory and Environmental Epidemiology, Villejuif, France
2004-2009	Epidemiologist, Engineer, Inserm U780, Respiratory and Environmental Epidemiology team, Villejuif, France
2002-2005	PhD student in the team: Respiratory and Environmental Epidemiology, Inserm U780, France
1992-2003	Epidemiologist / statistician, Assistant Engineer, Inserm U780, Respiratory and Environmental Epidemiology
1983-1992	Statistician, Assistant Engineer, Inserm U170, Epidemiological and Statistical Research on Environment and Health, Villejuif

## SCIENTIFIC COMMITTEE OR OTHER EXPERIENCES

2019	Expert, evaluation of an Inserm unit, HCERES, France
2019	Rapporteur for thesis defence, 'work-related asthma', University of Nancy, France
2019 Family Medicir	Examiner for thesis report, 'work-related asthma in health workers', University of Cape Town, School of Public Health and ne, South Africa
2018	Evaluation of a research project for a research foundation on Multiple sclerosis, ARSEP, France
2016/2018	Member of thesis comities, France
2012/2017	Evaluation of a research project for a research institute on occupational health and safety, Montréal, Canada
2017	Expert, evaluation of a research project, South Africa
2012-2016	Expert for a working package, Anses (French Agency for food, environmental and occupational health and safety), France
2012	Evaluation of two research projects for Anses, France
2011	Evaluation of a joint research project (Brazilian Swiss Joint Research Program) for Swiss Tech School Lausanne (EPFL), Swiss
2010-2016	Member of the scientific committee for an epidemiological study AGRICAN (AGRIculture & CANcer)
2009-2011	Member of the committee council of the Centre for Research in Epidemiology and Population Health
2007-2016	Expert and Member of the coordination committee for "non carcinogenic respiratory disease and work', InVS, France
2004	Teaching at the Master 'methodology and statistics in biomedical research'

### **REVIEW FOR PAPERS IN REFEREED JOURNALS**

In respiratory (American Journal of Respiratory and Critical Care Medicine, European Respiratory Journal, Thorax ...) and environmental (Occupational and Environmental Medicine, Environment International, American Journal of Industrial Medicine ...) journals

#### SUPERVISION OF PhD STUDENTS

- 2019-2022 G Sit 'Occupational exposure to irritants and respiratory health' co-supervisor: O Dumas (Inserm U1018)
- 2018-2021 P Lemire 'Household exposure to cleaning products and respiratory health' co-supervisor: V Siroux (Inserm U1209)
- 2015-2018 C Quinot 'Epidemiology of work-related asthma: assessment of occupational exposures and their association with the disease' (defended, 12 December 2018) co-supervisor: O Dumas (Inserm U1168)
- 2014-2017 S Temam 'Social and geographical determinants of asthma' (defended, 30 May 2017) co-supervisor: S. Rican (University Paris Nanterre)
- 2009-2012 O Dumas 'Work-related asthma' (defended, 4 December 2012) Supervisor: F Kauffmann Co-Supervisor: N Le Moual
- 2007-2021 Supervision of several Master students

# **GRANTS OBTAINED AS PI OR CO-PI**

2019-2022 Fondation de France - CRESPI 'Environmental exposures to cleaning products and respiratory health of infants in nurseries" (PI: N. Le Moual)

2018-2019 ARS Ile-de-France - CRESPI 'Environmental exposures to cleaning products and respiratory health of infants in nurseries" (PI: N Le Moual)

2017-2022 ANSES/ADEME - CRESPINET "Impact of environmental exposures to cleaning and disinfection products on the respiratory health of infants in nurseries" (PI: N Le Moual)

2017 PHC FASIC (French-Australia Science Innovation Collaboration Grants, Campus France, French ministry of Foreign and European Affairs and Ministry of Higher Education and Research): "Occupational exposures, asthma and allergic diseases" (PI: O Dumas, Co-PI: N Le Moual, M Abramson, G Benke)

2016-2017 ANSES/ADEME 2016: COBANET "Using Barcodes to Evaluate Occupational or Household Exposures to Cleaning and Disinfecting Products" (PI: N Le Moual)

2015-2016 PHC Van Gogh 2015 (French-Netherlands Collaboration Grant): "Improved tools for occupational exposure assessment in epidemiological studies of asthma and cancer" (PI: N Le Moual, co-PI: H Kromhout).

2013-2017 NIOSH (National Institute for Occupational Safety and Health)/CDD 'Occupational exposures to cleaning product and asthma in the Nurses' Health Study 2" (co-PI: N Le Moual, PI: C Camargo, Boston)

2009-2013 ANSES PNR-EST 2009: NETA "Role of occupational or domestic exposures to cleaning products in asthma" (PI: N. Le Moual).

## MAJOR PUBLICATIONS, all publications available at: https://publons.com/researcher/2180531/nicole-lemoual/; H-index=28

- 1. Lemire P et al. Domestic exposure to irritant cleaning agents and asthma in women. Environment International. 2020; 144:106017
- 2. Dumas O, et al. Association of Occupational Exposure to Disinfectants With Incidence of Chronic Obstructive Pulmonary Disease Among US Female Nurses. JAMA Netw Open 2019; 2(10):e1913563
- 3. Dumas O, et al. Influence of Childhood Asthma and Allergies on Occupational Exposure in Early Adulthood: A Prospective Cohort Study. Int J Environ Res Public Health. 2019 Jun 19;16(12)
- 4. Temam S, et al. Low socioeconomic position and neighborhood deprivation are associated with uncontrolled asthma in elderly. Respir Med. 2019;158:70-77
- 5. Quinot C, et al. Development of a barcode-based exposure assessment method to evaluate occupational exposure to disinfectants and cleaning products a pilot study. Occup Environ Med 2018; 75:668-74
- 6. Le Moual N, et al. Update of an Occupational Asthma-specific Job-Exposure Matrix to assess exposure to 30 specific agents. Occup Environ Med 2018;75:507-14 available from <a href="http://oasjem.vjf.inserm.fr/">http://oasjem.vjf.inserm.fr/</a>
- 7. Dumas O, et al. Association of hand and arm disinfection with asthma control in US nurses. Occup Environ Med 2018; 75:378-81
- 8. Temam S, et al. Ability of ecological deprivation indices to measure social inequalities in a French cohort. MC Public Health. 2017; 17:956
- 9. Dumas O, et al. Occupational exposure to disinfectants and asthma control in US nurses. Eur Respir J. 2017;50(4)
- 10. Quinot C, et al. Development of a job-task-exposure matrix to assess occupational exposure to disinfectants among US nurses. Occup Environ Med 2017;74:130-7 available from <a href="http://nursesjem.vjf.inserm.fr/">http://nursesjem.vjf.inserm.fr/</a>
- 11. Matulonga B, et al. Women using bleach for home cleaning are at increased risk of non-allergic asthma. Respir Med 2016;117:264-71
- 12. Dumas Ö, et al. Asthma history, job type and job changes among US nurses. Occup Environ Med. 2015;72(7):482-8
- 13. Dumas O, et al. Occupational irritants and asthma: an Estonian cross-sectional study of 34,000 adults. Eur Respir J. 2014 ;44:647-56
- 14. Le Moual N, et al. Occupational exposures and uncontrolled adult-onset asthma in the ECRHS II. Eur Respir J 2014; 43:374-86
- 15. Bédard A, et al. Cleaning sprays, household help and asthma among elderly women. Respir Med 2014 108:171-80
- 16. Le Moual N, et al. Use of household cleaning products, exhaled nitric oxide and lung function in females. Eur Respir J. 2014 44:816-8
- 17. Dumas O, et al. Occupational irritants and asthma: an Estonian cross-sectional study of 34 000 adults Eur Respir J 2014 44:647-56
- 18. Dumas O, et al. Occupational exposure to cleaning products and asthma in hospital workers. Occup Environ Med. 2012 69:883-9.
- 19. Donnay C, et al. Under-estimation of self-reported occupational exposure by questionnaire in hospital workers Occup Environ Med 2011;68:611-7
- 20. Dumas O, et al. Do young adults with childhood asthma avoid occupational exposures at first hire? Eur Respir J 2011 37:1043-9
- 21. Le Moual N, et al. The healthy worker effect in asthma: work may cause asthma, but asthma may also influence work. Am J Respir Crit Care 2008 177:4-10
- 22. Le Moual N, et al. Asthma severity and exposure to occupational asthmagens. Am J Respir Crit Care Med 2005 172:440-5
- 23. Le Moual N, et al. Occupational exposures and asthma in 14,000 adults from the general population. Am J Epidemiol 2004 160:1108-16
- 24. Le Moual N et al. Performance of population–specific Job Exposure–Matrices (JEM). European Collaborative. Analyses on Occupational risk factors for COPD using Job Exposure Matrices (ECOJEM). Occup Environ Med 2000 57:126-32
- 25. Kennedy SM, et al. Development of an asthma specific job exposure matrix and its application in the epidemiological study of genetics and environment in asthma (EGEA) Occup Environ Med 2000;57: 635-641, available from: http://cesp.vif.inserm.fr/asthmajem