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MD, University of Antwerp, 2008
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Keywords
Parkinson's disease – Lewy body disorders – movement disorders - genetics – genotype-phenotype correlation studies - non-motor symptoms

Science
Parkinson's disease (PD) is the second most common neurodegenerative brain disorder. Several causal genes (*SNCA*, *LRRK2*, *VPS35*, *PARK2*, *PINK1, DJ1* and *ATP13A2*) leading to familial PD have already been identified. Variations in these genes have also been shown to increase susceptibility for sporadic PD. In this project, I am prospectively recruiting a population of familial and sporadic PD patients. Detailed phenotypic characterization of the patients is performed with standardized clinical scales at different time intervals. Genetic variations (simple and complex mutations) in the known causal genes will be identified and genotype-phenotype correlations will be established. Since disease progression is an important part of the phenotypic variability of PD, these correlations will focus on clinical features associated with disease progression, non-motor symptoms and motor complications. Genetic association studies will be conducted to identify new genetic risk factors for PD. In informative families new causal PD genes will be identified using a positional cloning strategy and next-generation sequencing. The combination of objective and longitudinal clinical data in a genetically well-characterized population of PD patients, is a major asset of the project.

Recent fellowships
Research Foundation Flanders (FWO) – PhD fellowship
Period: 01.10.2009 – 30.09.2013
Title: 'Clinical and genetic epidemiology of Parkinson's disease: focus on disease progression and non-motor symptoms'
Role: fellow

All fellowships

Selected publications

Theuns,J., **Crosiers,D.**, Debaene,L., Nuytemans,K., Meeus,B., Sleegers,K., Goossens,D., Corsmit,E., Elinck,E., Peeters,K., Mattheijssens,M., Pickut,B., Del-Favero,J., Engelborghs,S., De Deyn,P., Cras,P., Van Broeckhoven,C.: Guanosine Triphosphate Cyclohydrolase 1 promoter deletion causes dopa-responsive

dystonia. Movement Disorders 27(11): 1451-1456 (2012) (PMID: 22976901) (I.F.: 4.505)

Meeus,B., Verstraeten,A., **Crosiers,D.**, Engelborghs,S., Van den Broeck,M., Mattheijssens,M., Peeters,K., Corsmit,E., Elinck,E., Pickut,B., Vandenberghe,R., Cras,P., De Deyn,P., Van Broeckhoven,C., Theuns,J.: DLB and PDD: a role for mutations in dementia and Parkinson disease genes? Neurobiology of Aging 33(3): 629.e5-629.e18 (2012) (PMID: 22118943) (I.F.: 6.189)

Crosiers,D., Ceulemans,B., Meeus,B., Nuytemans,K., Pals,P., Van Broeckhoven,C., Cras,P., Theuns,J.: Juvenile Dystonia-Parkinsonism and dementia caused by a novel ATP13A2 frameshift mutation. Parkinsonism & Related Disorders 17(2): 135-138 (2011) (PMID: 21094623) (I.F.: 3.795)

Crosiers,D., Theuns,J., Cras,P., Van Broeckhoven,C.: Parkinson disease: insights in clinical, genetic and pathological features of monogenic disease subtypes. Journal of Chemical Neuroanatomy 42: 131-141 (2011) (PMID: 21810464) (I.F.: 2.435)

Nuytemans,K., Meeus,B., **Crosiers,D.**, Brouwers,N., Goossens,D., Engelborghs,S., Pals,P., Pickut,B., Van den Broeck,M., Corsmit,E., Cras,P., De Deyn,PP., Del-Favero,J., Van Broeckhoven,C., Theuns,J.: Relative contribution of simple mutations vs. copy number variations in five Parkinson disease genes in the Belgian population. Human Mutation 30(7): 1054-1061 (2009) (PMID: 19405094) (I.F.: 6.887)

All publications