



Aggression in Children:
unraveling gene-environment
interplay to inform Treatment
and Intervention strategies



Abstract

Aggression inflicts a huge personal, psychological and financial burden on affected individuals, their relatives, and society at large. Despite large scientific, preventive, and treatment investments, no decrease in aggressive behavior is seen.

This calls for a shift to new approaches. By capitalising on comprehensive longitudinal cohorts, recent advances in genetic, biological, epidemiological, and clinical fields, and combining such interdisciplinary expertise the ACTION consortium will dissect the etiology and pathogenesis of aggression.

Based on new insights, ACTION will inform the development of novel diagnostic tools and causative targets and guide the development of treatment and prevention strategies.

ACTION is built on interrelated work packages with a focus on a) clinical epidemiology and current classification and treatment problems; b) genetic epidemiology, including Genome Wide Association studies and epigenetics; c) gene-environment correlation and interaction; d) biomarkers and metabolomics.

ACTION will deliver an overarching framework that combines a thorough understanding of pathways leading to aggression with a map of current gaps, best practices on clinical, ethical, legal, and social issues. Based on this framework, ACTION will develop novel biomarkers suitable for large-scale applications in children and combine biomarker data with new insights into the effects of gender, age, and comorbidity.

ACTION will provide guidance in optimising current intervention programs and deliver new biological targets to pave the way for novel therapeutic interventions.

ACTION will provide a decision tree to guide personalised intervention programmes and will have direct and sustained impact on reducing paediatric aggression. Its overarching aim is to reduce aggression by developing approaches that take individual differences in genetic and environmental susceptibility into account, thereby leading to better understanding of personalised intervention programs.

Topic(s): HEALTH.2013.2.2.1-3 - Paediatric conduct disorders characterised by aggressive traits and/or social impairment: from preclinical research to treatment

Call for proposal: FP7-HEALTH-2013-INNOVATION-1

Funding scheme: CP-FP - Small or medium-scale focused research project

Start date of the Project: 1st June 2014. Duration: 60 months

Coordinator: VU University Amsterdam, Department of Biological Psychology



Funded by the European Commission

Seventh Framework Programme