



National Research Council of Italy

INSTITUTE FOR BIOMEDICAL RESEARCH AND INNOVATION

CHILD ABUSE AND MALTREATMENT CLINICAL, GENETIC AND EPIGENETIC CORRELATES

MATERIALS AND METHODS

Study of genetic and epigenetic variations of *FKBP5* and *MAOA* genes and gene candidates involved in the neuropsychopathologies developed after exposure of abuse and maltreatment in childhood.

Analysis of DNA and RNA from whole saliva of minor and adult victims of Child Abuse and Maltreatment (CAM) with and without Post Traumatic Stress Disorder (PTSD) (with age and sex-matched controls), **grouping in 5 classes:**



- 1) Minors with PTSD correlated with CAM;
- 2) Minors exposed to CAM without PTSD;
- 3) Minors with PTSD caused by other traumatic causes;
- 4) Adults exposed to CAM who developed PTSD and those did not;
- 5) Abusers with or without a previous history of CAM.

EPIGENETIC OF CHILD ABUSE – BIOLOGICAL CORRELATES

A REMOVABLE SIGNATURE OF DNA

Signs and marks of child abuse remain on DNA of minor leaving a «genetic signature», a «molecular mark», a «sticky note», which modifies the gene expression of the child (phenotype), sometimes with the same influence of an inherited mutation. **THE SIGNATURE OF VIOLENCE IS ON DNA**



Child Abuse and Epigenetic Mechanisms of Disease Risk



- EPIGENETIC CHANGES ARE REVERSIBLE -

The project is aimed at identify and study the epigenetic changes correlated with the child maltreatment and represents a scientific challenge for: the diagnosis, prevention, prediction and therapy of the neuropsychopathologies associated with Child Maltreatment and Abuse.

la Repubblica LA STAMPA CORRIERE DELLA SERA Le Scienze

Lo studio del Cnr sul Dna per prevenire la violenza sui minori

Così nasce la violenza sui minori

Per prevenire la violenza sui minori si studierà il DNA

Al via un progetto del CNR che punta ad analizzare le evidenze di tipo genetico ed epigenetico nei minori che hanno sviluppato neuropsicopatologie gravi in seguito ad abusi e maltrattamenti subiti.

THE OPEN NEUROLOGY JOURNAL 2016;1:12-13

Child Abuse Syndrome (CAS): a newly recognized distinct entity

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 Orthopaedic Department, University of Catania
 Neuropsychiatry Department, ASP3 Catania
 Postal Police Service, Eastern Sicily
 Parliamentary Commission for Childhood and Adolescence, Senate of the Republic

