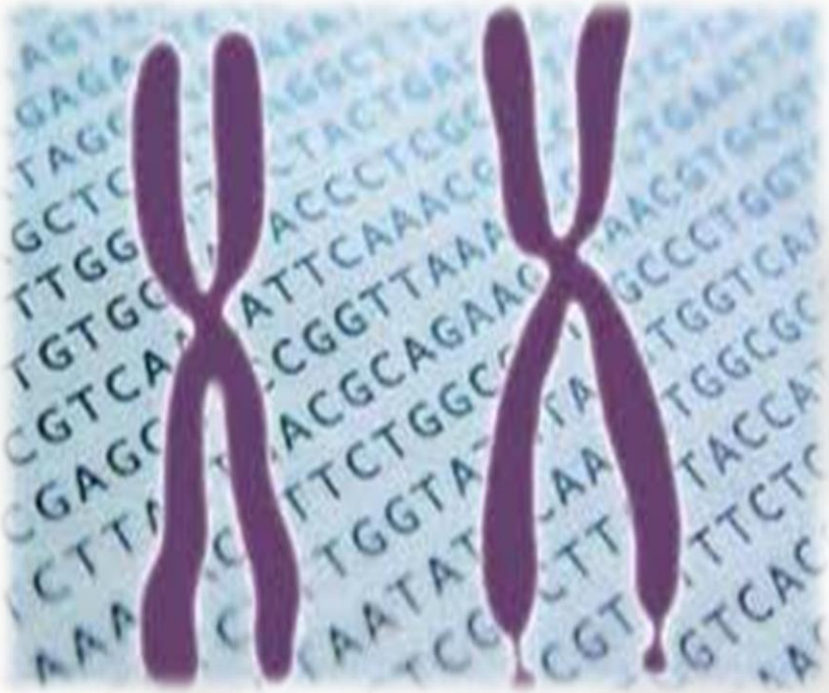
GREENARRAY

GENOMIC RESEARCH & SOLUTIONS of ADPL

# Fragile X

GREENARRAY
GENOMIC RESEARCH & SOLUTIONS of ADPL

## Fragile X Syndrome



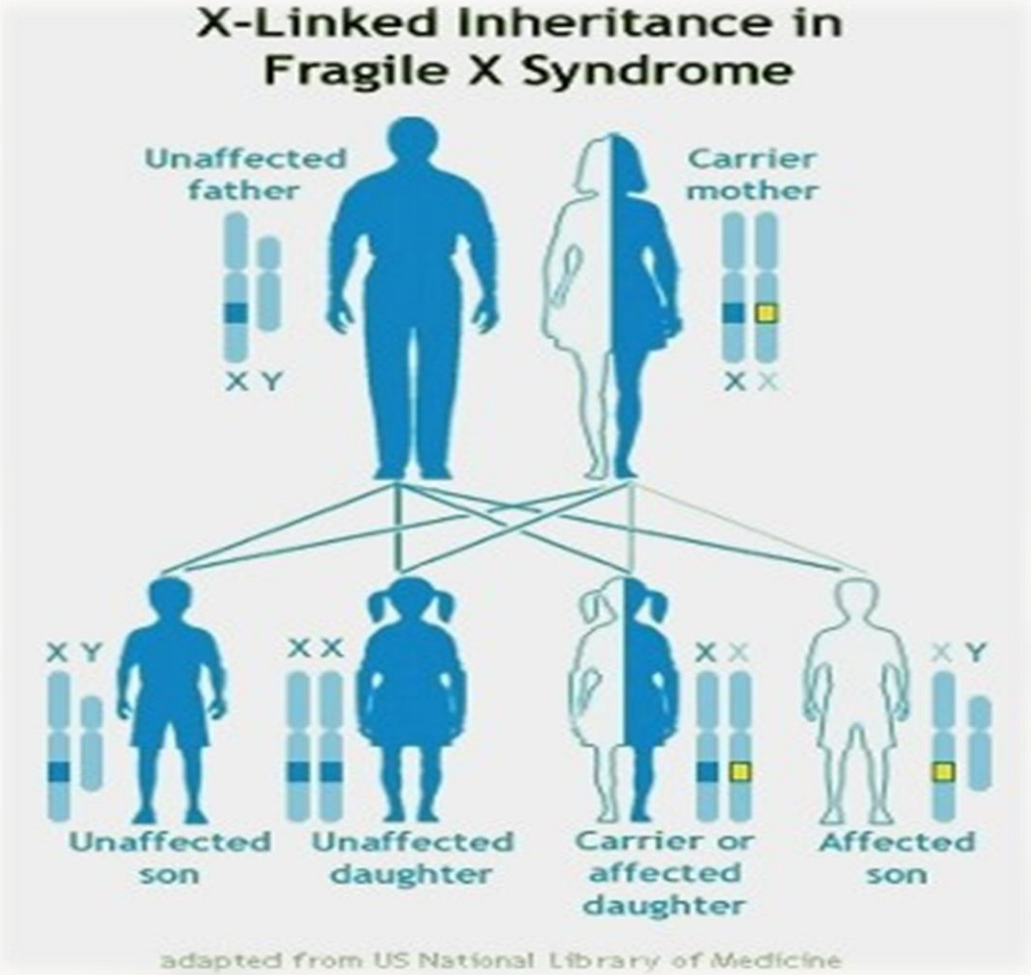
- Fragile X syndrome is a genetic condition that developmental problems including learning disabilities and cognitive impairment.
- Affected individuals usually have delayed development of speech and language by age 2. Most males with fragile X syndrome have mild to moderate intellectual disability, while about one-third of affected females are intellectually disabled.

- Children with fragile X syndrome may also have anxiety and hyperactive behavior such as fidgeting or impulsive actions. They may have attention deficit disorder (ADD), which includes an impaired ability to maintain attention and difficulty focusing on specific tasks.

- They suffer with features of autism spectrum disorder that affect communication and social interaction. Seizures occur in about 15 percent of males and about 5 percent of females with fragile X syndrome.

- Most males and about half of females with fragile X syndrome have characteristic physical features that become more apparent with age. These features include a long and narrow face, large ears, a prominent jaw and forehead, unusually flexible fingers, flat feet, and in males, enlarged testicles (macroorchidism) after puberty.

## What Causes It?




- The FMR1 gene, which is on the X chromosome, makes a protein called FMR that helps nerve cells communicate to one another. A child needs this protein for their brain to develop normally. Children with fragile X make too little or none of it.
- A mother with the FMR1 gene change has a 50% chance of passing it to any of their children. A father can only pass it to their daughters.

- Boys are more likely to have fragile X than girls, and they have more severe symptoms. This is because girls have two copies of the X chromosome. Even if one X chromosome has the gene change, the other copy can be fine. Boys have one X and one Y chromosome. If the X chromosome has the gene change, they will have symptoms of fragile X syndrome.
- Some people inherit the fragile X gene without having symptoms. They are called carriers. Carriers can pass the gene change to their children.

GREENARRAY
GENOMIC RESEARCH & SOLUTIONS of ADPL

## Diagnosis

FXS can be diagnosed by testing a person's DNA from a blood test. A doctor or genetic counselor can prescribe the test. Testing also can be done to find changes in the FMR1& FMR2 gene that can lead to fragile X-associated disorders.

## Usefulness of the test

A diagnosis of FXS can be helpful to the family because it can provide a reason for a child's intellectual disabilities and behavior problems. This allows the family and other caregivers to learn more about the disorder and manage care so that the child can reach his or her full potential.

## About Green Array

Green Array is a molecular diagnostic company. We offers diagnosis of infectious diseases, genetic testing and healthcare information to improve health and wellness. Our goal is to provide high quality affordable and accessible services.

GREENARRAY
GENOMIC RESEARCH & SOLUTIONS of ADPL

# Why green array?

Simple
Just some blood required

Experts for genetic counseling

Accurate Genome sequencing by advanced methods

Safe and reliable

Reliable
Processed by experts, confirmed by physicians