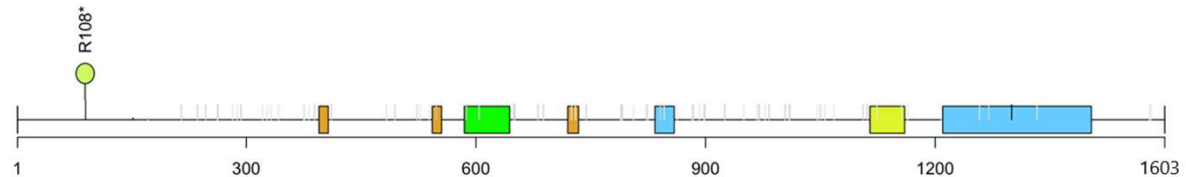


Story sharing for a few  
mild XGS individuals

- Vast majority of XGS individuals bear mutations leading to AHDC1 truncation
- Most XGS individuals are severely affected with core XGS clinical features
- Few individuals were classified as 'mildly affected' with the ultimate prospect of independent living

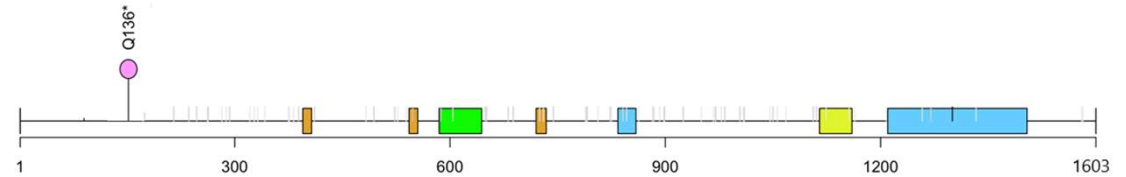
# Individual 1:



Presentation data from  
clinician:

- 17 year-old male
- Born to the mom with an uncomplicated pregnancy
- Variants:
  - AHDC1: c.322C>T, p.R108\* (Paternal)
  - KDM6A: c.1223 A>T, p.E408V (Maternal, UVS)
- Generally non-dysmorphic
- Early developmental milestones not delayed. Stutter, no speech therapy required.
- Individualized education plan for math, English and French due to short-term memory loss
- Seizures with onset at age 2.  
Medication: lacosamide and clobazam
- Abnormal EEG and MRI
- Maternal great-grandmother, maternal grandmother and 4 siblings with seizures.
- Father has no seizure, but was reported focus and memory issues as “very similar “ to individual 1
- Father finished high school on time. Undiagnosed learning disability?

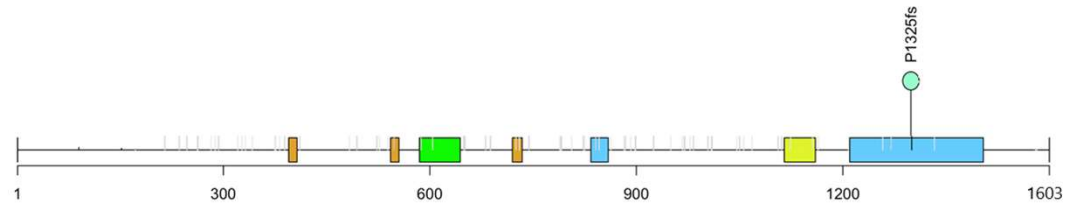
## Individual 2:



Presentation data from clinician and

- mother:
  - 41 year-old female
  - Variants: AHDC1: c.406 C>T, p.Q136\* (de novo). Diagnosed at age 34.
  - Showed dysmorphic traits (widely spaced eyes)
  - Recurrent middle ear infections, leading to conductive hearing loss
  - Gross motor issues were present to some degree through childhood. Mild difficulties with gross motor coordination.
  - Signs of speech/language delay were present in childhood. Not diagnosed with a learning disability.
  - Completed high school education.
  - Completed 3 years of study in College of Art. Near sufficient credits for Bachelor degree.
  - Has a talent for painting, drawing, and graphic arts.
  - Reading comprehension is impaired, while reading decoding skills are within normal range.
  - Lives independently in an apartment close to mom. Checked frequently by mom and attendants.

# Individual 3 and 4:



Presentation data from medical notes and mother's interview:

- 18 year-old females; identical twins
- Delivered following an uncomplicated spontaneous twin pregnancy
- Diagnosed at age 15. Variants: AHDC1: c.3974delC, p.P1325Hfs\*18
- Family history: ASD, ADHD, learning problem, cancer, stroke, autoimmune disorder, and heart problems

## Individual 3

- Low muscle tone in childhood
- Chronic diarrhea and gastrointestinal (GI) symptoms from 3 years old
- Seizure-like activity till age 10. EEGs and MRIs normal
- Diagnosed with ASD
- No concerns regarding sleep and appetite
- Vision: eye coordination difficulties, glasses/contacts
- Cognitive and adaptive skills mild to moderately impaired
- Relative strength: rote learning; verbal ability > nonverbal skills
- Very social with many friends
- Private school Individualized Education Program (IEP)
- A number of extracurricular activities: therapeutic horseback riding, weight training, and regular summer camps
- Challenging tasks (Girls on the Run, fitness goals)

## Individual 4

- Frequent ear infection in childhood
- Vision: strabismus, glasses/contacts
- NO history of seizures or epilepsy
- Low muscle tone in childhood
- Tight tendons and ligaments with pool flexibility
- Inconsistent Neurological-psych diagnosis for ASD
- Gets along best with adults
- Private school Individualized Education Program (IEP)
- A number of extracurricular activities: ballet, swimming, running, therapeutic horseback riding
- Loves reading and certain reality TV shows
- Higher functioning than individual 3. Very independent in academic setting
- Typically spends 1 to 2 hours working on homework on a typical school night

# Most Recent Updates from Mom

## Individual 3

- Very outgoing and physically active
- Involved in more after-school sports
- Was transitioned to high school certificate
- pursue the culinary arts and can take some vocational classes at the community college
- No GI issues
- Need PT due to scoliosis

## Individual 4

- Higher functional
- Involved in more after-school theater
- Will graduate with a high school diploma 2026
- Will take a course in local community college in senior year
- Interested in pursuing the culinary arts and pursuing the college degree
- Continued GI issues but test results indicating that her GI tract is functioning within the normal range



*“I truly believe that you can retrain the brain and develop new neuro-connections thru exercise. I do not believe the Xia Gibbs population is any different, of course the intensity is relative.”*

- Mom of Individual 3 and 4