Rewinding cell development: Sisters' cells reveal rare gene mutation

As siblings, Hayley and Bari Mogul share biological characteristics.

Unfortunately one that they share is a rare metabolic disorder that causes dangerously low blood sugar whenever they get ill or stressed out.

But, as also happens, the siblings have differences.

So along with a shared metabolic disorder, Hayley, 15, has a mutation of the RAI1 gene resulting in the Smith-Magenis syndrome with its characteristic effects — obesity, a sleep disorder and behavioral problems. Bari, 9, has a mutation in her GRIN2B gene, causing neurological and development problems in the autism spectrum.

The Moguls have donated their daughters' cells to science so researchers can rewind cellular development to the embryo stage to see what caused the gene mutations and at what point in cell development. The ultimate goal is treatment and prevention.

Read the full, original story: Sisters' cells may unlock genetic mystery