Appendix e-5 Clinical description of brother of patient #2.

Brother of patient 1

The patient is the brother of patient #2. He was born as the third child to non-consanguineous German parents. Patient 1 was born as the fourth child to the family. Prenatal ultrasound revealed short extremities, eliciting suspicion for a skeletal dysplasia. He was born spontaneously after 39 weeks of gestation with a birth length of 47.0 cm (-2.1 SD), birth weight of 3,020 g (-1.1 SD), and OFC of 30.5 cm (-3.7 SD). Seizures began within the first hour of life and showed an EEG pattern that was similar to his sister's. The cranial MRI reportedly showed a thin corpus callosum. He developed progressive microcephaly and therapy resistant epilepsy. He died at the age of 10 months with multiple organ failure after contraction pneumococcus meningitis and pneumonia.

Conventional cytogenetic analysis showed a normal karyotype in the patient. He could not have been analyzed postmortem for the familial *QARS* variants, first detected in his sister.