

COGNITION RESCUE IN ANIMAL MODELS AND IN PATIENTS WITH DOWN SYNDROME

Although many drugs have shown promise in mice, none have worked in human trials. The low-level expression of gonadotropin-releasing hormone (GnRH) causes infertility and reduces sense of smell in patients with Down syndrome and in the trisomy-21 mouse model. Recently, GnRH has been shown to influence brain development.

Prevot's group reported in a [Science paper](#)¹, that restoring GnRH production in cells using microRNA reverses odor and memory deficits in rodents. These results prompted them to start a trial on seven patients, aged between 20 and 50 years. After 6 months, they showed a 10% to 30% improvement, as measured by the Montreal Cognitive Assessment.

Families with a child with Down syndrome have experienced several trial treatment failures. Their reactions and comments are well summarized in the [accompanying paper](#)².

1- <https://www.science.org/doi/10.1126/science.abq4515>

2- <https://www.science.org/content/article/restoring-key-hormone-could-help-people-down-syndrome>