WEB TABLE I TRANSCRIPTION FACTORS GENES INVOLVED IN DEVELOPMENT OF PITUITARY

Gene	*Function of the gene*	*Clinical features in mutations*
HESX1 (3p21.2)	Development of optic nerve and anterior pituitary	Depending on the mutations, the children may have septo optic dysplasia, and variable deficiency of GH and other pituitary hormones.
PROP1 (5q35.3)	This gene represses *HESX1* expression. It is involved in early development of multiple pituitary cell lineages	Autosomal recessive mutations are associated with deficiency of GH, Prolactin, TSH, LH, FSH. Patients either do not enter puberty or it is arrested early. Pitutary gland may be enlarged.
POU1F1 (PIT1)(3p11.2)	Important for pituitary development and hormone expression	Associated with GH and Prolactin deficiency and variable hypothyroidism.
LHX3 (9q34.3)	Establishment and maintenance of different cell types	Associated with MPHD, hearing loss and limited neck rotation.
LHX4 (1q25.2)	Maintenance function for anterior pituitary cells	Associated with MPHD, abnormalities of sella turcica, central skull base and hind brain
SOX3 (Xq27.1)	Regulates brain development and cell differentiation	X linked mental retardation and isolated GHD. MPHD may also be seen.