Developmental Thyroid Diseases and GABAergic Dysfunction

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Thyroid hormones (THs) regulate the gestation and lactation periods [1-30]. Also, THs can regulate the development of GABAergic system [14-16]. GABA can play important roles in the neuronal development [31]. In hypothyroid state, there was reduction in the GABAergic circuits [32], glutamate levels [33], glutamic acid decarboxylase (GAD) activities (Virgili., et al. 1991), GABA-transaminase (GABAT) and succinate semialdehyde dehydrogenase (SSDH) [34] causing a neuronal and behavioral impairments [35]. However, the GABA-transaminase (GABAT) and succinate semialdehyde dehydrogenase (SSDH) were increased in hypothyroid conditions [35]. This disturbance could be due, at least partially, to TH effects on GABA function. These alterations may retard the neurogenesis and CNS growth. Future studies should be focused on identifying the genomic actions of THs disorders, GABAergic dysfunction and neurogenesis.

Conflict of Interest
The author declares that no competing financial interests exist.

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