

5<sup>th</sup> World Congress on **Parkinsons & Huntington Disease**  
&  
5<sup>th</sup> International Conference on **Epilepsy & Treatment**

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**Metabolic dysfunction underlying response of ketogenic diet in children with refractory epilepsy and potential diagnostic and treatment approaches**

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**R**efractory epilepsy or drug-resistant epilepsy is defined as a failure of adequate trials of 2 tolerated and appropriately chosen and used AED schedules. “Neuroscience Center, King Fahad Medical City 2011”. The most effective line of treatment for refractory epilepsy is the ketogenic diet, however, about 20 to 30 % of the patient doesn't respond to KD and continue to have seizures, despite adherent to ketosis. The aim of this study to define serum biomarkers that determined the efficacy of the ketogenic diet and to determine other metabolic cause contributing to epilepsy & should be managed first before KD implantation.

**Research Hypothesis:** Many metabolic dysfunctions can contribute to seizure activity and had an impact on KD response, homeostasis, stress, defect in neuronal homeostasis, hyper ammonia, oxidative stress, cellular hypoxia, homocysteinemia and epigenetics, and DNA methylation defect all are contributing to epilepsy and must be excluded and managed before implantation of KD.