**METABOLIC CHARACTERIZATION OF NEURODEVELOPMENTAL DISORDERS WITH NEUROTRANSMISSION AFFECTATIONS.**

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**RATIONALE**

We have analyzed the CSF metabolic signature of X patients of X diseases compared to controls, to identify differences related to X specific pathways.

We describe alterations in such pathways analogous through the studied diseases. The research on common metabolic alterations can unveil new therapeutic approaches transversal to neurodevelopmental diseases.

**RESULTS**

1. “Study design”, what you have compared and why (controls in supplementary).

Explain the gross differences between groups, not focusing in the metabolites differences but in the behavior or pattern. <hierarchical clustering and PCAs>

* There are differences comparing ct vs patients, but apparently not within patients
* These differences are subtle (they are not metabolic diseases but neurodevelopmental diseases with a metabolic component) and transversal.

1. Results in control vs hypo vs hypo/hyper.

* Multivariant and univeriant
* Final list of metabolites.

1. Results regarding tryptophan metabolism. Potential unbalance in the pathway.

* Pathway summary
* Graphs of metabolites
* Branches proportions
* \*Other amino acids (leucine? Phe? Tyr?) + SLC

1. Results regarding energetic metabolism and related

**DISCUSSION**

Your work has great value as it evaluates metabolism from a cross-sectional perspective to neurodevelopmental diseases

You describe alterations regarding tryptophan metabolism which can be further studied for therapeutic purposes.

You describe SLC alterations which are the first new of such kind.

Metabolism can be a common feature in neurodevelopmental diseases worth studying.