

# The brain speaks : functional and structural neural correlates of language production impairments in classic galactosemia

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### **The Brain Speaks: Functional and structural neural correlates of language production impairments in classic galactosemia**

1. Cognitive neuroscience provides a valuable perspective to understand classic galactosemia.
2. Syntactic planning in sentence production is reflected in multiple P300 time windows, each time-locked to the relevant visual event.
3. In addition to potential impairments in motor speech planning, classic galactosemia can also affect the more cognitive planning stages of language production, such as lexical and syntactic planning.
4. The observed language production impairments in this disease warrant more extensive studies which thoroughly review the current therapeutic approaches.
5. Animated scenes can well be used as experimental stimuli to study language production and potential impairments to create a relatively natural setting.
6. NODDI analysis allows more direct and specific estimations of white matter microstructure properties, and is a promising and feasible technique for clinical studies.
7. Clinical researchers should not fear but embrace methodological advances, like fundamental scientists should not fear but incorporate the uncontrollability and unpredictability that come with clinical samples.
8. Multidisciplinary research, reference networks and patient organizations are the key to successful improvement of patient care in rare diseases by sharing knowledge and expertise, and bridging gaps.
9. If you're not making errors, you're not breaking new ground. (*Greg Thompson on language learning*)
10. Melk is goed voor elk, melk is goed voor elk, maar niet voor Jan, omdat voor hem alleen sojamelk kan. (*Dutch rhyme - adapted; "Milk is good for all, milk is good for all, but not for John, because for him only soy milk is allowed"*)

**Inge Timmers**

**Maastricht, 25<sup>th</sup> April 2014**