

**Project:** "Optimization of treatment in X-linked hypophosphatemia. Effects on growth, epiphyseal cartilage and bone in the mouse Hyp."

**Principal investigator:** Dr. Fernando Santos Rodríguez

**Institution:** Pediatric Nephrology - Pediatrics - Hospital Universitario Central de Asturias

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**General objective of the project:** Bring new knowledge to the mechanism of hypogrowth and bone involvement in hypophosphatemic rickets linked to X (XLH) and find out what are the best therapeutic strategies to counteract these manifestations of the disease.

**Specific objectives of the project:** i) Know the effects of blocking FGF23 associated or not with GH on the longitudinal growth rate and find out how these treatments influence the cellular processes caused by the enlargement of the chondrocytes of the growth cartilage; ii) Establish the effects of previous treatments on bone structure and quality.

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**Project explanation:** This is a study aimed at knowing why XLH affects growth and what would be the best treatments to improve growth in this disease. The project proposes to address this issue, of high clinical interest for patients, using an animal model of XLH, the Hyp mouse, since it requires microscopic examination and bone and cartilage growth imaging techniques, which is not feasible in humans. It implies the continuity of a consolidated research line of the group that has resulted in articles in high impact journals and wide international dissemination. It requires for its realization a high time of dedication to it, the acquisition of Hyp mice and laboratory expenses.

**Funding is required for the hiring of research personnel capable of carrying out the study.**

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