

Pituitary Gland Disorders

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DESCRIPTION

We investigate pituitary diseases & their impact, i.e., acromegaly, Cushing's sd. (coordinators of the European registry ERCUSYN), hypopituitarism among others. We are currently carrying out the project "Epidemiology in Catalonia" & investigating residual myopathy and its impact on psychological aspects and health-related quality of life (with specific questionnaires developed by us and used worldwide) after treating these diseases, pathophysiology of oxytocin deficiency and precision medicine in acromegaly, thanks to a recently funded project by the IMPACT strategy in a multicentric study.

MAIN LINES OF RESEARCH

- ERCUSYN: European Registry of Cushing's Syndrome. Maintenance and operation of the database contains more than 2500 patients and is the largest one so far worldwide on these patients. Leaders SM Webb & A Santos.
- Study of the physiological and pathological secretion of oxytocin in humans besides pregnancy and lactation. Identification and clinical relevance of an oxytocin deficient state in patients with hypothalamic and pituitary diseases, who are presumably at highest risk for an oxytocin deficiency. Leader A Aulinas.
- Effects of Mindfulness therapy in patients with acromegaly and Cushing's syndrome. Leader A Santos.
- Spanish Molecular Registry on Pituitary Adenomas (REMAH study). Leaders J Gil and SM Webb.
- ACROFAST and ACROMICS: Personalized Medicine in acromegaly, to identify markers with a



5.1.5 Translational Medicine Area

- therapeutic value. Leaders J Gil, A Aulinas and SM Webb.
- Epidemiology of hypothalamic-pituitary diseases in Catalonia. Leaders A Aulinas and SM Webb.
- Study of bone microarchitecture and resistance and factors that determine them in Cushing's syndrome or acromegaly in remission. Model for investigating the body's bone-fat interaction. Leader SM Webb.
- Role of myosteatosis in the development and persistence of residual muscle weakness in treated acromegaly and Cushing syndrome. Study of the involved mechanisms. Leader SM Webb.
- Pathophysiology of sleep disorders in patients with hypothalamic and pituitary damage, using a multidisciplinary approach. Leader A Aulinas.

SCIENTIFIC CHALLENGES

- Evaluate long-term persistent morbidity and mortality in patients who have had Cushing's syndrome or acromegaly, bone quality, psychological outcomes, muscular dysfunction, and quality of life.
- Analyze and update the European database of patients with Cushing syndrome (ERCUSYN), which in 2023 included over 2400 patients, with partners from 61 centers in 27 countries.
- Identification of a provocative test to unmask an oxytocin deficient state in patients with hypothalamic and pituitary diseases using a randomized, crossover, placebo-controlled design.
- Increase our understanding of oxytocin physiology and pathophysiology in healthy humans and clinical conditions (patients with hypothalamic and pituitary diseases, obesity, and eating disorders).
- Conduct in vitro molecular analysis of operated pituitary adenomas within the REMAH (Molecular Registry of Pituitary Adenomas) study, sponsored by the Spanish Endocrinology and Nutrition Society (SEEN), to investigate personalized markers of therapeutic response (mainly in acromegaly, corticotroph adenomas, and non-functioning pituitary adenomas).
- Analyze clinical and molecular aspects of pituitary adenomas diagnosed at a young age, in collaboration with Hospital Universitario Cruces.

- Perform the first epidemiological study in Catalonia on hypothalamic-pituitary diseases and compare it with the PADRIS database of CatSalut.
- Personalized Medicine (IMPACT strategy) through next-generation precision medicine in the diagnosis and treatment of Acromegaly.

ACTIVE GRANTS

- Aulinas Maso, Anna. Convocatoria Beca Junior Fundacion SEEN Proyecto de investigación 2021. PCN00018. Sociedad Española de Endocrinología y nutrición (SEEN). Duration: 2021-2023. 15.000,00 €.
- Aulinas Maso, Anna. Identificación y relevancia clínica de un estado deficiente de oxitocina: estudio piloto fisiopatológico aleatorizado, cruzado y controlado con placebo. PI20/01165. Instituto de Salud Carlos III (ISCIII). Duration: 2021-2023. 210.540,00 €.
- Aulinas Maso, Anna. Epidemiología de las enfermedades de la hipófisis en Cataluña y análisis de la asistencia prestada a los pacientes. IIBSP-EHH-2021-41. Duration: 2021-2023.

SCIENTIFIC PRODUCTION

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5.1.5 Translational Medicine Area

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