TECHNOLOGY ID#BM-013

UNIVERSIDAD DE CHILE

Predictive test for patients' response to glucocorticoid treatment

University of Chile has generated an *ex vivo* predictive method for early stage determination of autoimmune disease patients' response to treatment with glucocorticoid

THE CHALLENGE

The standard treatment for most autoimmune diseases is the use of glucocorticoids (GC), requiring a high dosage of those compounds and administration for a long period of time. Although most patients respond clinically to therapies with GC, still 35% of patients are resistant to this kind of treatment. Failure to detect the ability of a patient to respond to GC treatment can result in permanent damage to patients' health, especially when an effective treatment at an early stage of disease is crucial for patient recovery and for avoiding irreparable damages.

THE TECHNOLOGY

New *ex vivo* method for predicting response to treatment with GC by patients suffering autoimmune inflammatory diseases. This test allows **early identification of GC-resistant patients**, providing relevant information for the physicians to make the best choice of treatment for each patient. The test is based on qPCR quantification of **the expression levels of isoform α of the GC receptor (GRα) in blood, tissue or cell samples for the patients** and the determination of the fold change ratio that indicates whether a patient is GC-sensitive (fold change ratio between 1.00 to 17.8) or –resistant (fold change ratio <1.00).

STAGE OF DEVELOPMENT

- **Validated with 108 uveitis patients VKH** receiving prednisone treatment

COMPETITIVE ADVANTAGES

- Allows prediction **from day 1 after initiation of treatment with GC**
- Complementary exam for patients suffering from autoimmune diseases

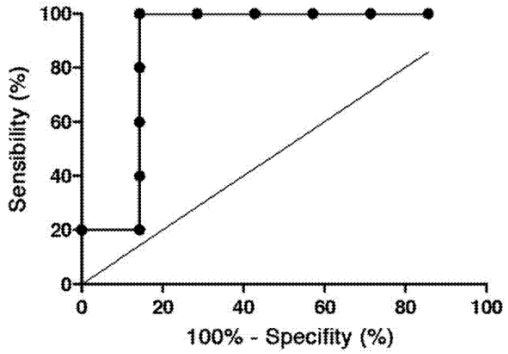

Figure 1. ROC curve of the* ex vivo *prediction method. *AUC values between 1.00 and 5.36 allows determining patient's response to GC treatment.*

APPLICATIONS

- Applicable for patients suffering: uveitis, scleritis, inflammatory bowel disease, arthritis, multiple sclerosis, systemic erythematous lupus, psoriasis, scleroderma and thyroid autoimmune diseases

OPPORTUNITY

University of Chile is searching for industry partners for **out-licensing** this technology.

INTELLECTUAL PROPERTY/REFERENCES

- Chilean patent application 201501420; US20190062834; MX2017014639

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