**Drug Screening & Development**

# Use of BCL7A as molecular target for DLBCL drug screening & development

A research team from the Andalusian Health System has demonstrated that BCL7A plays a tumor suppressor role in Diffuse large B cell lymphoma (DLBCL) which reveals new prognostic and therapeutic opportunities for the treatment of DLBCL patients.

Oficina de TRANSFERENCIA DE TECNOLOGÍA
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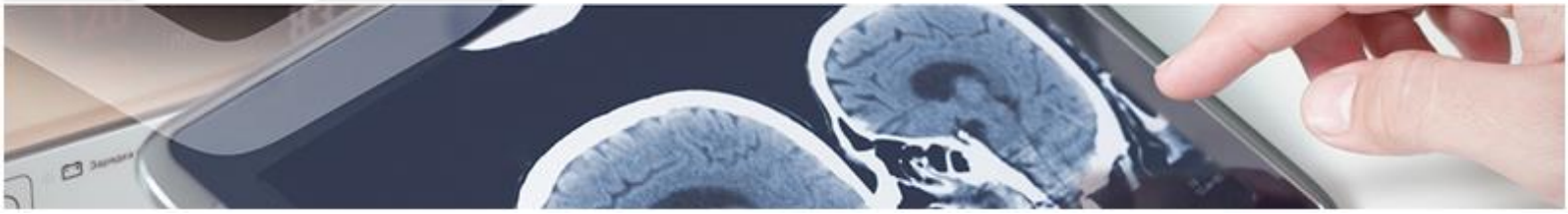

## Description

Diffuse large B cell lymphoma (DLBCL) is the most common hematologic malignancy, with an annual incidence of over 100.000 cases worldwide. DLBCL is an heterogeneous neoplasia that represents the most common type of B-cell Non-Hodgkin Lymphoma (B-NHL). Usually DLBCL arises de novo from normal B cells, but it can also represent a malignant transformation from other less aggressive B-NHL, as follicular lymphoma (FL) or chronic lymphocytic leukemia (CLL). Although more than half of these patients may achieve long-term remission, DLBCL remains a challenging clinical problem with about one-third patients not being cured by standard immunochemotherapy regimens. Current limitations for effective treatment are related in part to the striking heterogeneity at the genetic and clinical levels.
There are two major distinct molecular subtypes of DLBCL, germinal center B-cell (GCB) and activated B-cell (ABC), characterised by different gene expression profiles, representing 50 and 30% of total DLBCL respectively.

A Spanish research team has demonstrated that BCL7A is among the most frequently mutated genes in DLBCL-GCB.
They show that BCL7A restoration induces transcriptomic changes in genes involved in B cell activation. In addition, they have demonstrated that SWI/SNF complex subunits harbor accumulate mutations in more than half of patients with germinal center B-cell (GCB)-DLBCL subtype patients. Overall, their work demonstrates highlights the tumor suppressor function role of BCL7A in DLBCL, and highlights suggests that the SWI/SNF complex plays has a relevant role in DLBCL pathogenesis.
The team proposes the analysis of BCL7A in the diagnosis, prognosis, prevention, improvement, relief or treatment of diffuse large B-cell lymphoma (DLBCL).

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## Advantages

-*In vitro and in vivo* evidences: restoration of BCL7 develop a tumor suppressor-like phenotype. These mutations abrogate the ability of BCL7A of binding to SWI/SNF complex to develop their function.
- New tool for the development of new class of epigenetic cancer drug that targets histone marks with greater precision than previous generations.

## Intellectual Property

The technology is protected by worldwide patent application.

## Aims

The research group is looking for a partner for the co-development of the technology/ patent licensing

## Classification

Area: Therapy
Technology: Drug screening.
Pathology: Oncology. Diffuse large B cell lymphoma (DLBCL)

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FIBAO
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