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## 9° Giornata della Ricerca della Svizzera Italiana Venerdì 15 marzo 2019

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### Modulo per la sottomissione abstract ricerca di LABORATORIO

**Titolo** (massimo **15 parole**)

The transcription factor FLI1 sustains relevant biologic pathways in diffuse large B cell lymphoma (DLBCL).

**Autori** (cognome e iniziali, es: Grassi L.)

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**Affiliazioni** (ospedale o istituto, servizio o reparto, indirizzo, es: Ospedale Regionale di Lugano, Servizio di angiologia, Lugano)

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**Testo** (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, **Metodi, Risultati, Conclusioni e Finanziamento**)

Introduction:

DLBCL is the most frequent B-cell lymphoma, comprising 30-40% of all new cases each year. Standard treatment regimen (R-CHOP) leads to complete clinical remission in most patients but 30-40% of patients still succumb of the disease, indicating the need of better understanding the disorder for further therapeutic improvements. Our group has identified an 11q24.3 gain that occurs in 20-25% of DLBCL cases and is associated with the overexpression of the transcription factors FLI1 and ETS1 (Blood 2013). Here, we studied the FLI1-regulated network of genes.

Methods:

To understand the genes directly regulated by FLI1 in DLBCL we have performed ChIP-Seq paired with transcriptome analysis (RNASeq) after gene silencing to identify specific primary FLI1-binding sites in four DLBCL cell lines, two derived from activated B cell-like subtype and two from germinal center B-cell like subtype.

Results:

The vast majority of binding sites was observed in promoter regions of annotated genes (37% of the peaks). Integrating the promoter regions ChIP-Seq data and RNA-Seq from genetically silenced FLI1 in DLBCL cell lines we identified, as FLI1 negatively regulated direct targets, tumor suppressors genes implicated in p53 pathway and in negative regulation of mitotic cell cycle. Among the FLI1 positively regulated direct targets we found genes involved in immune response, in B cell receptor signaling, in TNFA and IL2 signaling.

Conclusions:

FLI1 acts as an oncogene in DLBCL, directly regulating important biologic pathways in the lymphoma cells.

Grant:

Oncosuisse

**Visto superiore\*** (prego indicare **Nome e Cognome** del superiore) **\*campo obbligatorio**

Francesco Bertoni

**Criteria per sottomissione Abstract:**  
NO Case report  
NO Abstract senza nessun risultato  
VISTO da un superiore



**Invio Abstract**