



Università  
della  
Svizzera  
italiana

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

### Modulo per la sottomissione abstract ricerca di LABORATORIO

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

EG-011 is a novel small molecule with in vitro and in vivo anti-tumor activity against lymphoma

#### **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.** Despite the improvements, still too many patients die for their lymphomas and novel compounds are needed. We present a new small molecule, EG-011 (PCT/EP2018/057678), with in vitro and in vivo anti-cancer activity in lymphoma models.

**Methods.** Lymphoma and solid tumor cell lines were exposed to a large range of concentrations of EG-011 as single agent for 72h, followed by MTT proliferation assay and IC50 calculation. Apoptosis assay was measured with annexin V by FACS. Combinations were evaluated with Chou-Talalay combination index after 72h treatments.

**Results.** EG-011 presented a median IC50 of 2.25 µM in 62 lymphoma cell lines (95% C.I. 1-5 µM). A higher activity was observed in a group of 21 cell lines that had a median IC50 of 250 nM (95% C.I. 40-600nM). A dose-dependent increase in cell death (20-55%) was observed in lymphoma cell lines (OCI-LY-19 and REC1) (500 nM and 2 µM; 72h). In vivo, EG-011 treated mantle cell lymphoma xenografts were 2.2-fold smaller than controls (P < 0.001). EG-011 was synergistic with rituximab, bendamustine, venetoclax, ibrutinib and lenalidomide in 5/5 lymphoma cell lines.

No cytotoxicity was seen in PBMCs from two healthy donors (1 and 10 µM, 24h and 48h). No significant anti-proliferative activity was observed in 25 solid tumor cell lines (IC50s > 10 µM).

**Conclusion.** The selective anti-lymphoma activity and the in vitro synergisms with FDA approved agents make EG-011 a novel intriguing new drug candidate deserving further preclinical studies.

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

Eugenio Gaudio

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

**Invio Abstract**

