



## Synthesis and Evaluation of Bis-enone Derivatives against Human Spinal Cord Tumor Cell Lines

Rongrui LI<sup>1,\*,#</sup>, Chunying ZOU<sup>2,#</sup>, Yunchuan XIE<sup>1</sup>, Fengwei YU<sup>2</sup>, Xiaoxue JIANG<sup>2</sup> & Raosheng ZHAI<sup>1</sup>

<sup>1</sup> *Second Department of Orthopedic Surgery, <sup>2</sup> Fourth Department of Neurology, The First Affiliated Hospital of Jiamusi University, Jiamusi, Heilongjiang, China*

**SUMMARY.** Six novel bis-enone derivatives were prepared starting from 1,1-dimethyl-3,5-cyclohexanedione and aromatic aldehydes. The structures of the products were determined on the basis of IR, <sup>1</sup>H NMR, HRMS, and single crystal X-ray crystallography. The prepared compounds were screened for their antitumor activity against four human spinal cord tumor cell lines, namely, RPMI 8226, KMS-11, H929 and U266 and compounds 4-6 showed promising activity.

**RESUMEN.** Se prepararon seis nuevos derivados de bis-enona a partir de 1,1-dimetil-3,5-ciclohexanodiona y aldehídos aromáticos. Las estructuras de los productos se determinaron sobre la base de IR, <sup>1</sup>H RMN, HRMS y cristalografía de rayos X de cristal único. Los compuestos preparados se ensayaron para determinar su actividad antitumoral contra cuatro líneas celulares tumorales de médula espinal humanas, concretamente, RPMI 8226, KMS-11, H929 y U266, y los compuestos 4-6 mostraron actividad promisoriosa.

**KEY WORDS:** bis-enone, spinal cord tumor, X-ray.

# Authors who contributed equally to this work

\* Authors to whom correspondence should be addressed. *E-mail:* rongrui\_li666@aliyun.com