**Supplementary Information SI2**

**Phytochemical characterization by dereplication and biological activities of *Stenomesson miniatum* bulb extract, a medicinal plant of the Andes.**

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The results of cytotoxicity activities are shown as the means ± SEM of at least two different experiments. Significant differences among treatments were assessed by two-way analysis of variance (ANOVA), using Dunnett as post-hoc-test. GraphPad Prism 6 (Inc. La Jolla, CA, USA) was used for the statistical analysis and p < 0.05 was considered significant.



**Figure 1.** Cytotoxic effects of the alkaloids enriched extract after 24, 48 or 72 h from treatment of A431 and Jurkat cells. Statistical significance was calculated by two-way ANOVA followed by Dunnett as post-hoc test. \*\* p < 0.01; \*\*\* p < 0.001; \*\*\*\* p < 0.0001 compared to control (100% viability).

Immagine che contiene testo, strumento scrittorio, stazionario, matita

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**Figure 2.** Cytotoxic effects of the pure or semi-pure fractions of the major alkaloids of the extract tazettine (A4), albomaculine (A7), haemanthamine (A9) and crinine (A11) after 24, 48 or 72 h from treatment of A431 and Jurkat cells. Statistical significance was calculated by two-way ANOVA followed by Dunnett as post-hoc test. \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001; \*\*\*\* p < 0.0001 compared to control (100% viability).

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**Figure 3:** Cytotoxic effects of the mixed alkaloids fractions of the extract A2, A6, A8, A10, A12 and A13 after 24, 48 or 72 h from treatment of A431 and Jurkat cells. Statistical significance was calculated by two-way ANOVA followed by Dunnett as post-hoc test. \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001; \*\*\*\* p < 0.0001 compared to control (100% viability).

**Table S1:** Identified alkaloids in the fractions, mass of the fractions obtained by CPC fractionation and extractive yields.

|  |  |  |  |
| --- | --- | --- | --- |
| **FRACTION** | **Identified alkaloids** | **MASS (g) from CPC fractionation of 1 g of alkaloid extract** | **Extractive Yield [%]** |
| A1 | - | 0,004 | 0,005 |
| A2 | tazettine; trisphaeridine;  3-epimacronine;  3-methoxy-8,9-methylenedioxy-3,4-dihydrophenanthridine | 0,024 | 0,029 |
| A3 | tazettine; trisphaeridine | 0,028 | 0,034 |
| A4 | tazettine | 0,122 | 0,150 |
| A5 | tazettine; crinine acetate | 0,069 | 0,085 |
| A6 | crinine acetate; albomaculine | 0,082 | 0,101 |
| A7 | albomaculine | 0,053 | 0,065 |
| A8 | albomaculine; 6α-hydroxybuphanisine; haemanthamine | 0,089 | 0,109 |
| A9 | haemanthamine | 0,151 | 0,185 |
| A10 | haemanthamine; nerinine | 0,09 | 0,110 |
| A11 | crinine; pretazettine | 0,158 | 0,194 |
| A12 | pretazettine; 6-dehydroxy- 6-acetamido-nerinine | 0,099 | 0,122 |
| A13 | pretazettine; 6-dehydroxy- 6-acetamido-nerinine | 0,028 | 0,034 |