

European Chemistry Congress

June 16-18, 2016 Rome, Italy

Unnatural fluoro-oxindole alkaloids produced by *Uncaria guianensis* plantlets

Adriana A Lopes, Bruno Musquari, Suzelei de C França and Ana Maria S Pereira
Universidade de Ribeirão Preto, Brazil

Natural products and their analogues have been sources of numerous important therapeutic agents. The medicinal plant *U. guianensis* (Rubiaceae) cultured *in vitro* produce four oxindole alkaloids that displays anti-tumoral activity. Natural products can be modified by several approaches, one of which is precursor-directed biosynthesis (PDB). Thus, the aim of this work was apply precursor-directed biosynthesis approach to obtain oxindole alkaloids analogues using *in vitro* *Uncaria guianensis*. Plantlets were cultivated into culture medium supplemented with 1mM of 6-fluoro-tryptamine, the indol precursor of alkaloids biosynthesis. *U. guianensis* explants were maintained at $25\pm 2^\circ\text{C}$, 55-60% relative humidity under the same photoperiod and light intensity. After 30 days, a methanolic extract from *U. guianensis* was obtained and analysed by HPLC-DAD analytical procedure. The chromatogram showed four natural alkaloids (mitraphylline, isomitraphylline, rhynchophylline and isorhynchophylline and four additional peaks. Semi-preparative HPLC allowed isolation and purification of these four oxindole alkaloids analogues and the identity of the peaks was confirmed from high-resolution MS data (HRESIMS/MS in positive mode). All data confirmed that *Uncaria guianensis* produced fluoro-oxindole alkaloids analogues.

Biography

Adriana A Lopes is from Universidade de Ribeirão Preto, Brazil.

adrianalps@yahoo.com.br

Notes: