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## Novel natural compounds from endophytic fungi with anticancer activity

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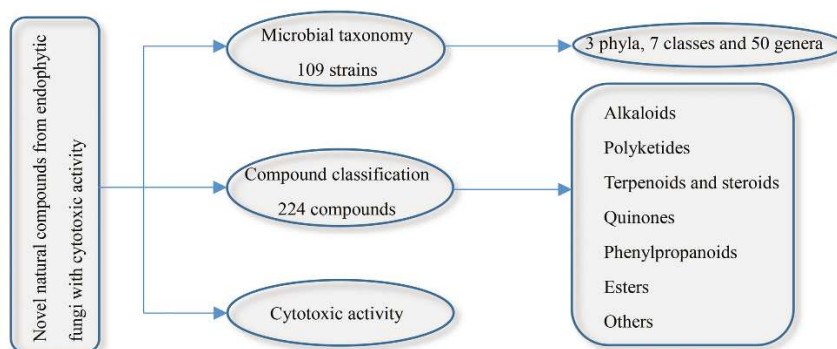
### Highlights

- Endophytes sources, taxonomy, compound classification and cytotoxicity are discussed.
- We compared the endophytic fungi genera and numbers published in different period.
- This review provides reference for the design and development of antitumor drugs.

### Abstract

Plant endophytes are microorganisms that live in healthy plant tissues in part or all of their life history without causing obvious symptoms of infection in the host plants. Endophytes, a new type of microbial resource that can produce a variety of biological constituents, have great values for research and broad prospects for development. This article reviewed the research and development progress of endophytic fungi with cytotoxic activity between 2014 and 2017, including endophytic fungi sources, microbial taxonomy, compound classification and cytotoxic activity. The results showed that the 109 strains of endophytic fungi belong to 3 phyla, 7 classes and 50 genera. The secondary metabolites mainly contained alkaloids, terpenes, steroids, polyketides, quinones, isocoumarins, esters etc. The results of this study provide references for the development of new antitumor drugs and endophytes resources.

### Graphical abstract



### Keywords

Endophytic fungi; Taxonomy; Novel compound; Cytotoxicity

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