

UNaProd 1.0: Universal Natural Product Resource

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Abstract: Many natural products have pharmacological or biological activities that can be beneficial in treating diseases and are also an important source of inspiration for development and discovery of novel drugs¹. UNaProd 1.0 has provided a systematic collection of information concerning natural drugs used in Iranian traditional medicine (ITM). For generating this database, one of the most authentic resources in this medicine, *Makhzan-AL-Advieh*², has been used. This book has been authored by *Aghili Alavi Khorasani (Shirazi)* in 1769 A.D. in the Persian language. *Makhzan-AL-Advieh* can be regarded as a semi-structural resource containing attributes such as Essence, *Mizaj*, Functions, Substitutes, Side Effects, Refinements, Usage, etc. for each introduced natural products. The method used for extracting information for each drug attribute is text mining by which 1744 drugs, 1525 entries for Essence, 1405 for *Mizaj*, 420 for Substitutes, 163 for Side Effects, 21 for Refinements and 606 for Usage have been extracted so far. UNaProd can contribute to clustering drugs based on their attributes, generating the special ontology of ITM and ultimately support modern drug discovery³. This is merely the gateway for our future investigations. More authentic resources in the complementary and alternative medicine such as Chinese or Indian traditional medicine⁴ have to be added and integrated into UNaProd, and also with the help of text mining algorithms, more drug attributes could be completed systematically⁵. Moreover, we aim to provide a platform to extend the existing database and completing drug attributes as a crowdsourcing project. The UNaProd is freely available at <http://jafarilab.com/uniproduct>.

Keywords: Iranian Traditional Medicine; *Makhzan-AL-Advieh*; Natural Product; Database

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