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ORIGINAL PAPERS

Meta-Analysis on some Plant Extracts Benefits on Neuropsychiatric Disorders Models Studied in Zebrafish

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Abstract. Background. Nowadays' society becomes increasingly interested in plant-based alternatives in order to treat various diseases. Humans worldwide are diagnosed with neuropsychiatric disorders like epilepsy, autism, Alzheimer's disease, Parkinson's disease, or ADHD (attention deficit hyperactivity disorder) and, consequently, research has been done in order to analyse different plant extracts' effects in their treatment, considering the various side effects conventional drugs could have. Judging by the neuroanatomical similarities to the human body and due to the advantages it has as experimental purpose animal, zebrafish (*Danio rerio*) has been preferred throughout the past years in the detriment of mammalian animal models. **Objectives.** This study aims to analyse the specialized literature regarding the benefits of phytotherapy in neuropsychiatric disorders treatment, using the zebrafish as animal model. **Methods.** This systematic analysis involved search engines like PubMed, Zfin, Semantic Scholar, Microsoft Academic, Scite and BASE (Bielefeld Academic Search Engine). Publications from 1960-2021 were used only, and reviews, conference articles or video/audio information were not selected in order to avoid redundancy, while journal articles were preferred. Different key words combinations were used to collect the articles related to the subject of interest. **Results.** Analysing the collected data, it can be concluded that zebrafish is increasingly used in behavioural, toxicological, or genetical research as descriptive or experimental model. Also, there is an expanding interest in using this species to investigate phytotherapy's benefits in neuropsychiatric disorders treatment.

Keywords: *phytotherapy, neuropsychiatry, zebrafish, plant extracts*

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