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Corrigendum

Corrigendum to "Characterization of potent anticholinesterase plant oil based microemulsion" [Int. J. Pharm. 401 (2010) 32–40]

Wantida Chaiyana[a], Kiattisak Saeio[a], Wim E. Hennink[b], Siriporn Okonogi[a,*]

[a] Department of Pharmaceutical Science, Faculty of Pharmacy, Chiang Mai University, Chiang Mai 50200, Thailand
[b] Department of Pharmaceutics, Utrecht Institute for Pharmaceutical Sciences (UIPS), Utrecht University, P.O. Box 80082, 3508 TB Utrecht, The Netherlands

We regret that a number of references cited in Introduction and the grants mentioned in Acknowledgements of the above article were not correct. The corrected paragraphs in question are reproduced below.

1. Introduction

Alzheimer's disease (AD), a neurodegenerative disorder, affects an estimated number of more than 18 million elderly people worldwide. This disease is associated with intellectual misfunction and subsequent decline in cognitive, behavioral and motor functions (Farfara et al., 2008; Perry et al., 1978). Increased levels of acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) have been found in postmortem brain samples of AD patients which has lead to the hypothesis that the cognitive decline in AD patients is related to progressive cholinergic degeneration (Snyder et al., 2001). Therefore, promising approaches for treating AD are to enhance acetylcholine concentrations in the brain using cholinesterase inhibitors (Scarpini et al., 2003; Greig et al., 2004; Ingkaninan et al., 2006). During the past decade, synthetic inhibitors of AChE and BChE have been clinically evaluated (Mercier et al., 2007; Lefevre et al., 2008). Nevertheless, none of them can cease the disease. Consequently, there is still a great demand for new drug candidates for AD treatment. Particularly, natural sources might be used to isolate such compounds. Many essential oils from medicinal plants show a great variety of biological activities such as antioxidant, antimicrobial, anti-inflammatory and anticancer (Chatterjee et al., 2004; Rauber et al., 2005). Transdermal delivery has shown to give a sustained drug concentration in the circulation with lower fluctuations as compared to conventional oral drug delivery. Therefore, transdermal delivery is an attractive option for administration of AD drugs (Amzal and Appel-Dingemanse, 2007; Mercier et al., 2007). Terpenoid compounds derived from various essential oils were reported to have low skin irritancy and low systemic toxicity as well as good penetration enhancing activity for both hydrophilic and lipophilic drugs (Pudil et al., 1998). Therefore, essential oils from edible plants are attractive sources for active agents to treat AD patients via the transdermal route. Microemulsions are isotropic colloidal systems that are formed spontaneously from appropriate combinations of oil, water and surfactant/co-surfactant mixtures (Baker et al., 1984; Boonme et al., 2006; Kreilgaard, 2002). They are optically transparent since their internal phase droplet size ranges from 5 to 100 nm (Pedro et al., 2009; Sinico et al., 2005), which is below the wavelength of visible light. They have become of interest for pharmaceutical applications as carrier systems in transdermal drug delivery (Leimann et al., 2009; Holmberg et al., 1998; Moulik and Paul, 1998; Garcìa et al., 2001) as they provide several advantages over conventional topical formulations such as creams, ointments and gels (Lawrence and Rees, 2000; Paolino et al., 2002). The manufacturing of microemulsions is easy and the products are thermodynamically stable and therefore have a good pharmaceutical shelf-life. Their flexibility in composition enables microemulsions to solubilize both hydrophobic and hydrophilic compounds, depending on the type of microemulsion used. Moreover, the skin permeation rate of active compounds from microemulsions can be well controlled by the type and ratio of the components (Blanco et al., 2009).

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* Corresponding author. Tel.: +66 53 944 311; fax: +66 53 222 741.
E-mail addresses: w.e.hennink@uu.nl (W.E. Hennink), sirioko@chiangmai.ac.th (S. Okonogi).

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