

Notice Concerning Submissions on Natural Products

Authors are strongly advised to consult the Editorial Guidelines on “Requirements for manuscripts on the pharmacological or inflammatory properties of natural products” which was published in *Inflammopharmacology* 15 (2007) 179-180.

In particular it should be noted that:

- Stringent guidelines for papers on natural products are now being enforced to ensure papers are focused on the identification and characterisation of the pharmacological or inflammatory activities of defined natural products and not just reports on the screening or activity for biological activities.
- All work should include full and adequate data on (a) the chemical composition of the natural products or extracts whose properties are being reported, (b) identification of pharmacological or inflammatory actions of the principal constituents or components of the natural products or extracts thereof, and (c) there should be a clear rationale developed in the paper for defining the pharmacological or biological activity of the extracts and their components.

Papers not complying with these requirements will be rejected.

K. D. Rainsford
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Editorial

Requirements for manuscripts on the pharmacological or inflammatory properties of natural products

For over a decade, INFLAMMOPHARMACOLOGY has encouraged the publication of papers on the pharmacological and anti- or pro-inflammatory properties of natural products and natural product-containing preparations. This reflects the growing use and interest in these agents for treatment of a wide range of acute and chronic inflammatory diseases, including those with painful conditions, many of which are not well controlled with conventional drugs e.g. analgesics, NSAIDs, DMARDs. Moreover, as many of these conventional drugs have a wide range of adverse effects, many of which are severe and some, admittedly rarely, with fatal outcomes, the search for safer and more effective remedies from natural sources has proceeded apace especially in the past 1-2 decades. We clearly have much to learn from the applications and knowledge of the actions of an immense variety of traditional therapies from historic or classical medical treatments (e.g. Ayurvedic, Chinese, Aboriginal, Medieval European, Greco-Roman, or Arabic sources). The public in many countries worldwide have and recently found increased use of these natural product preparations for various ailments sometimes with favourable outcomes (which in a sense reflects a positive outcome aside from any perceived benefits, psychological support or placebo benefits). However, in many cases application of these products is often in ignorance of their active constituents (both beneficial and toxic), mode of action, their correct application (dose, route, duration) for particular states and especially their safety. In many countries there is increasing concern by government regulatory agencies about these issues, and many have or are developing guidelines and regulations governing nutraceuticals (or nutriceuticals), cosmeceuticals or nutritional supplements).

With this increasing interest in natural products has come a marked increase in knowledge of the molecular and cellular mechanisms of the pathogenesis of inflammatory diseases and pain as well as the development of in vitro and in vivo models for assessing or defining the mode of action of anti-inflammatory, analgesic or disease-modifying agents.

In view of these developments, there is need for more information on the chemical composition, mode of action, uses and safety issues about natural product preparations. To ensure publications of acceptable high quality and standards, having full details of the properties and actions of these prod-

ucts, it has now become necessary for this journal to give guidelines for research publications and experimental evidence required for meeting acceptable standards for publications on materials containing natural products. This reflects concerns that often there is little if any information provided in papers submitted to the Journal on (a) the origins, method of preparation, chemical composition, analytical purity, biological stability, sampling and storage of the materials or products that have been studied; (b) their known or historical use(s) along with full and comprehensive literature review of known actions and relevant toxicological information; (c) the case for their use and need for specific investigations to define their actions, uses and safety; (d) the application of state-of-art methodologies, techniques and model systems in the reported experimental studies; and (e) critical evaluation of the results and full interpretation of the results with limits defined in the potential for therapeutic applications of the agents or components for treating inflammatory conditions.

Thus, publications submitted to Inflammopharmacology should fulfil these basic requirements and, in general, have information to meet the following criteria:

- (a) Comprehensive details and a full and concise literature review of what is known about the natural products under study, including relevant references to historical uses.
- (b) A clear case with testable hypothesis or hypotheses for investigation of the pharmaceutical actions, applications or toxicological properties of the natural product. Studies reporting anti-inflammatory, analgesic and/or antipyretic effects of a crude extract prepared from a plant or other biological source without clear evidence of some specific evidence of advantages or advances in knowledge over that previously described or which are simply results of “survey” type or screening studies will not be considered for publication in Inflammopharmacology.
- (c) Comprehensive details should be provided about the source of the natural product or material(s) including location and if applicable the donor individual or organisation, taxonomic details of the biological source including references of key texts (eg for plants, Index Kewensis) and any accession or herbarium reference numbers, methods of collection and storage if from field or other sources in nature with appropriate attempts to control or

minimize the key or likely chemical components from degradation if present (e.g. glycosides, anti-oxidants or phenolic agents, unsaturated components).

- (d) If an extract, a description should be given of the quality and quantity of material, solvents, temperature and conditions of extraction, weight of extract, concentration and nature of the final extract used in any biological assay or chemical test.
- (e) Where possible as much information as possible should be provided on (i) the chemical composition and biochemical properties that has been reported previously on this and similar natural product preparations from related species, and (ii) comprehensive chemical and biochemical analyses of the material or product that has been investigated. If full chemical analysis of this product or extract is reported elsewhere the reference must be cited. Known chemicals should be identified according to an internationally recognised system such as CAS or IUPAC.
- (f) In pharmacological and toxicological investigations *in vivo* full dose-response data should be provided cover-

- ing at least 3 dose levels. For *in vitro* studies concentration-response *in vitro* data should be provided. It is important to note that it is good pharmacological practice to always present full dose-response or concentration-response data to enable evaluation of the characteristics of the agent under investigation in relation to established principles of drug-receptor theories. It is also critically important to include at least one positive (ie known reference compound) and, as appropriate, a negative control in the experiments. Where available known component(s) of the natural product-containing material should be included in the investigations, especially where it has a known property e.g. anti-oxidant activity.
- (g) Studies reported in *Inflammopharmacology* should, where possible, include investigations on the mode of action(s) of the natural product.

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