Lipids is a journal of the American Oil Chemists’ Society that publishes high-quality peer-reviewed papers, in the general area of lipid research: including chemistry, biochemistry, clinical nutrition, and metabolism. Lipids also publish papers establishing novel methods addressing research questions in the field of lipid research.

**Types of Papers**

The following manuscript types are accepted for submission:

1). **Rapid Communications** are concise and complete accounts of significant findings of a more limited scope, but have a rapid review schedule and a target of 30 days from submission to acceptance for publication. These submissions must have a combined Results and Discussion sections. The total length of a Rapid Communication cannot exceed 1,500 words and the Abstract cannot exceed 150 words. Rapid Communications are considered using the same review standards as those for Articles, however review is expedited and decisions are either Accept, Minor Revision, or Reject. Preliminary data are not acceptable and fragmentation of related results into several reports is not acceptable. After receiving the first decision letter on disposition of the manuscript, authors have 2 weeks to revise and resubmit the revised manuscript.

2). **Communications** are concise and complete accounts of significant findings of a more limited scope and often have combined Results and Discussion sections. The total length of a Communication cannot exceed 1,500 words and the Abstract cannot exceed 150 words. Communications are considered using the same review standards as those for Articles; preliminary data are not acceptable and fragmentation of related results into several reports is strongly discouraged. After receiving the first decision letter on disposition of the manuscript, authors have 3 months to revise and submit the revised manuscript, but additional time is considered on a case-by-case basis upon request.

3). **Articles** are full-length manuscripts that are in-depth accounts of comprehensive studies and contain the major parts of a paper described in detail below, e.g. Abstract, Introduction, Materials and Methods, Results, and Discussion. After receiving the first decision letter on disposition of the manuscript, authors have 3 months to revise and submit the revised manuscript, but additional time is considered on a case-by-case basis upon request.

4). **Methods** manuscripts are focused on the development of new methodology in the area of lipid biochemistry and lipid chemistry that are intended for publication in the *Methods* section and should be identified as such. These manuscripts are permitted to have a combined Results and Discussion section. After receiving the first decision letter on disposition of the manuscript, authors have 3 months to revise and submit the revised manuscript, but additional time is considered on a case-by-case basis upon request.

5). **Reviews** are generally invited on timely topics and authors who desire to submit an uninvited review article must first consult with the Editor-in-Chief before submitting a Review. After receiving the first decision letter on disposition of the manuscript, authors have 3 months to revise and submit the revised manuscript, but additional time is considered on a case-by-case basis upon request.

6). **Letters to the Editor** are intended for discussion or reinterpretation of published data as well as for presentation of novel hypotheses. After receiving the first decision letter on disposition of the manuscript, authors have 3 months to revise and submit the revised manuscript, but additional time is considered on a case-by-case basis upon request.
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**Parts of Manuscripts**

**Title:** The title should be a declaration of the major finding and should avoid the use of “effect of” in the title. In this situation, the authors should ask themselves what is the major effect of A on B? Convey this major finding in the title to engender a greater response by your colleagues to the findings presented herein. The title is limited to 150 characters including spaces.

**Abstract:** This section contains a synopsis of the work presented in the manuscript and gives the rationale for undertaking the study, the methods used, the major results, and a concluding sentence putting the results into perspective with regards to the field. For Articles, the length of the Abstract is up to 250 words, whereas the length for Rapid Communications, Communications, and Methods is up to 150 words.

**Introduction:** This section should state the purpose of the investigation and give a short review of the pertinent literature. The major emphasis of this section is to identify the gap in knowledge that the current submission fills and highlights the novelty of the work. The last paragraph of the Introduction should contain information with regards to why the work was done, how it was done, the general outcomes of the work, and lastly the major impact of this work in the field. Although this last section of the Introduction is similar to the abstract, it provides the reader a bridge between the review of the literature and the major thrust of the work contained herein.

**Materials and Methods:** This section follows the Introduction and should provide enough information to ensure the reproducibility of the experimental work. Published methods should be referred to by literature citation of the original procedure and of pertinent published modifications to any method, but sufficient detail given to permit readers to understand how the work was done. Use of chemical formulas for simple agents is encouraged. Repetitive descriptions of similar procedures should be avoided. The identity and purity of new compounds must be adequately documented. Spectral data and other physical characteristics of new compounds should be listed concisely. Ratios of components, such as mixtures of solvents, should be given by placing slashes between the component names and colons between the numerals, e.g., chloroform/methanol/water (65:25:4, by vol). This section should end with a section devoted to the statistical methods used to evaluate the data contained herein.

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**Discussion:** This section should be an interpretation of the results and a comparison of these results to what is reported in the literature. Authors are encouraged to discuss the significance of their work relative to other studies found in the literature as well as highlight potential mechanisms accounting for their observations. Similar to the Introduction, a more in-depth discussion regarding the novelty of the work should be presented. Authors should not merely recapitulate the results in the Discussion section.

**Acknowledgements:** This section acknowledges the contributions to the study by individuals who are not authors of the work. These individuals, while contributing to the work,
did not make an intellectual contribution. In addition, listing of relevant funding agencies should be made in this section, citing the grant number if possible and the names of funding organizations written in full.

**Conflict of Interest:** In this section, the authors note any conflicts of interest by the authors. If no conflict exists, than a statement to noting no conflicts of interest should be made in this section.

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The three major forms of scientific misconduct, plagiarism, falsification, and fabrication, are not tolerated at Lipids and can result in rejection of the submitted manuscript without prejudice. Note that all manuscripts are checked for plagiarism using the iThenticate software package. Hence, plagiarism is detected and not tolerated. Some degree of self-plagiarism is acceptable in the Methods at the discretion of the Editor-in-Chief. In addition, other unacceptable practices include, but are not limited to, guest authorship, unwarranted authorship, co-first authors, co-corresponding authors, improper use of statistics, lack of properly citing the original literature, lack of citing relevant literature, even literature with an opposing view, and manipulation of data and other data presented, e.g. Western blots.

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Justification for adding authors during the revision phase or for removing authors during revision must be included. Requests to add or delete authors at revision stage and may be considered only after receipt of written approval from all authors and detailed explanation about the role/deletion of the new/deleted author. The decision on accepting the change rests with the Editor-in-Chief of *Lipids*.

Changes of authorship or in the order of authors are not accepted after acceptance of a manuscript.

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Submissions must present scientific results that are novel, that are unpublished, and are not intended for publication elsewhere. They must be written in American English using American spelling throughout. Authors who have difficulty with American English should obtain the assistance of colleagues more proficient in the language, in writing their manuscripts or consider the use of an editorial service to help in the preparation of their manuscripts. The Springer Author Academy provides online tools and courses and recommends Edanz ([www.Edanzediting.com](http://www.Edanzediting.com)) for help with manuscript preparation.

In addition, lipid compositional data must be presented as mole% rather than weight %. Mass of lipids should be reported in moles with the exception being work in which a lipid is included in the diet. In this case, mg of material included in the diet is acceptable, e.g. DHA (500 mg/day). Further, for work demonstrating production of a product for consumption, mg of lipid per unit of material, e.g mg/egg or mg/100 g of meat, is acceptable.

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The author is responsible for the accuracy of the references.

Authors must submit their manuscripts online. Please follow the hyperlink “Submit online” on the right and upload all of your manuscript files following the instructions given on the screen.

**Formatting of the Title Page:**
The title page should include in the following order:

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A concise and informative title

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Use tab stops or other commands for indents, not the space bar.

Use the table function, not spreadsheets, to make tables.

Use the equation editor or MathType for equations.

Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).

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Please use no more than two levels of displayed headings. For example, use the section heading, e.g. Methods and then a subsection heading, e.g. Tissue Lipid Extraction.

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Abbreviations and acronyms should be defined at first mention and used consistently thereafter. Avoid the overuse of abbreviations and acronyms in lieu of spelling out the word. Acronyms should not be pluralized, e.g. PUFAs should be PUFA.

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and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.

Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data).

Footnotes to the title or the authors of the article are not given reference symbols.

Always use footnotes instead of endnotes.

**Terminology**

**Nomenclature:**

Authors are required to follow agreed upon recommendations of nomenclature and to strive for uniformity. Excessive use of acronyms and abbreviations is discouraged. Trivial names often are shorter and more commonly understood, but they may be used only after being introduced together with the systematic names. Valuable guidance in the selection of accepted nomenclature is provided in the Recommendations of the IUPAC-IUB Commission on Biochemical Nomenclature (CBN) and of the IUB Commission of Editors of Biochemical Journals (CEBJ). Specific recommendations on lipid nomenclature were published by CBN in *Lipids* 12, 455–468 (1977).

Recommendations on the nomenclature of steroids can be found in *Biochemistry* 8, 2227–2242 (1969) and 10, 4994–4995 (1971). A compendium of relevant CBN and CEBJ documents [see also *J. Biol. Chem.* 261, 11 (1986)] was published in 1978 as *Biochemical Nomenclature and Related Documents* by CEBJ. Reprints of individual documents and advice on nomenclature use may be obtained gratis from the Director, Office of Biochemical.

Nomenclature, Biology Division, Oak Ridge National Laboratory, P.O. Box Y, Oak Ridge, TN 37831, USA, phone +1-615-574-0808. General guidance on nomenclature also can be found in *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers*, 6th ed., 1994, published by the Council of Biology Editors, Inc., Bethesda, MD 20814, USA.

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Following the Abstract page, provide a list of relevant abbreviations and acronyms used in your manuscript on a separate page. This list should be in alphabetical order and should follow the list of acceptable abbreviations and acronyms found below.

The following is a list of acceptable abbreviations for many major lipids commonly referred to in *Lipids*. Although standard number-based nomenclature for fatty acids is preferable, the use of three-letter nomenclature is also acceptable. For phospholipids, the Lipid MAPS abbreviations are not acceptable, e.g. PE, PI etc.. For fatty acids, do not use a capital C prior to the number nomenclature denoting the fatty acid, e.g. 16:0 not C16:0.

- **Fatty acids (FA)**
  - PAM palmitic acid (16:0)
  - STA stearic acid (18:0)
  - OLA oleic acid (18:1n-9)
  - LNA linoleic acid (18:2n-6)
  - ALA alpha-linolenic acid (18:3n-3)
  - SDA stearidonic acid (18:4n-3)
  - DGLA dihomo-gamma-linolenic acid (20:3n-6)
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARA</td>
<td>arachidonic acid (20:4n-6)</td>
</tr>
<tr>
<td>EPA</td>
<td>eicosapentaenoic acid (20:5n-3)</td>
</tr>
<tr>
<td>DPA-3</td>
<td>docosapentaenoic acid (22:5n-3)</td>
</tr>
<tr>
<td>DPA-6</td>
<td>docosapentaenoic acid (22:5n-6)</td>
</tr>
<tr>
<td>DHA</td>
<td>docosahexaenoic acid (22:6n-3)</td>
</tr>
<tr>
<td>PUFA</td>
<td>polyunsaturated fatty acid(s)</td>
</tr>
<tr>
<td>MUFA</td>
<td>monounsaturated fatty acid(s)</td>
</tr>
<tr>
<td>SFA</td>
<td>saturated fatty acid(s)</td>
</tr>
</tbody>
</table>

### Phospholipids (PL)
- **CerPCho**: sphingomyelin
- **PtdIns**: phosphatidylinositol
- **PtdIns-4-P**: phosphatidylinositol 4-phosphate
- **PtdIns-4,5-P$_2$**: phosphatidylinositol 4,5-bisphosphate
- **PtdSer**: phosphatidylserine
- **PtdOH**: phosphatidic acid
- **PtdGro**: phosphatidylglycerol
- **Ptd$_2$Gro**: cardiolipin
- **ChoGpl**: choline glycerophospholipids (contains all 3 subclasses)
- **EtnGpl**: ethanolamine glycerophospholipids (contains all 3 subclasses)
- **PtdCho**: 1,2-diacyl-sn-glycero-3-phosphocholine or phosphatidylcholine
- **PakCho**: 1-O-alkyl-2-acyl-sn-glycero-3-phosphocholine
- **PlsCho**: 1-O-alkenyl-2-acyl-sn-glycero-3-phosphocholine or choline plasmalogen
- **PtdEtn**: 1,2-diacyl-sn-glycero-3-phosphoethanolamine or phosphatidylethanolamine
- **PakEtn**: 1-O-alkyl-2-acyl-sn-glycero-3-phosphoethanolamine
- **PlsEtn**: 1-O-alkenyl-2-acyl-sn-glycero-3-phosphoethanolamine or ethanolamine plasmalogen

### Sphingolipids
- **Cer**: ceramide
- **CerPCho**: sphingomyelin
- **Cer-Gal**: galactocerebroside
- **CerGlu**: glucocerebroside
- **CerLac**: lactosylcerebroside

### Sterols
- **C**: cholesterol
- **CE**: cholesteryl esters

### Neutral Lipids (NL)
- **TAG**: triacylglycerol(s)
- **DAG**: diacylglycerol(s)
- **MAG**: monoacylglycerol(s)
- **FFA**: unesterified fatty acids

Enzymes should be identified by the name and EC number recommended by the Enzyme Commission. EC numbers should be given on first mention in the abstract and in the text. Enzyme Nomenclature, Recommendations (1992) of the IUPAC-IUB, is available from Academic Press, New York and London.

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This result was later contradicted by Becker and Seligman [5].

This effect has been widely studied [1-3, 7].

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