

Archives of Pharmacology

Edited for the Deutsche Gesellschaft für experimentelle und klinische Pharmakologie und Toxikologie

Instructions for authors

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1. Naunyn-Schmiedeberg's Archives of Pharmacology will consider manuscripts in all fields of pharmacology for publication as full papers or Short communications. The publication must make a significant contribution to pharmacological knowledge. The proceedings of meetings of the Deutsche Gesellschaft für experimentelle und klinische Pharmakologie und Toxikologie are published separately as supplements.

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Reports of animal experiments must state that the "Principles of laboratory animal care" (NIH publication No. 85-23, revised 1985) and, where applicable, specific national laws (e.g., the current version of the German Law on the Protection of Animals) were followed.

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6. Manuscripts must be written in English. Editorial assistance with the language is available, but only if the meaning is clear throughout.

7. Manuscript structure

The **title page** should comprise:

- The names of the authors.
- The title of the paper.
- The names of the authors together with their respective affiliations. Addresses should be complete and may be given in the local language. An envelope symbol should be used to indicate to which author correspondence should be sent.
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8. Abstract and Key words:

- The manuscript must be preceded by an abstract of up to three non-numbered paragraphs, which concisely presents the purpose of the study, the general methods used, the results and the conclusions. If a reference cannot be avoided, it must be given in full (see 14 below) but without the title of the paper.
- Below the abstract up to eight key words are to be given for subject indexing.

9. Introduction. Detailed historical introductions are to be avoided. The subject matter should be defined briefly and the aim of the study stated clearly.

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12. Discussion. The authors should interpret their results against the background of existing

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Examples:

Meyer W, Nose M, Schmitz W, Scholz H (1984) Adenosine and adenosine analogs inhibit phosphodiesterase activity in the heart. *Naunyn-Schmiedeberg's Arch Pharmacol* 328: 207–209
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If available the **Digital Object Identifier (DOI)** of the cited literature should be added at the end of the reference in question.

Example:

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References should be listed at the end of the paper in alphabetical order under the first author's name. If there are papers by several authors with the same first author, the order should be (1) papers with one coauthor (list alphabetically by coauthor, and then chronologically); (2) papers with more than one coauthor (list chronologically and *not* alphabetically according to the second author's name, as only the first author and "et al.", followed by the year of publication, appears in the text). If there is more than one work by the same author or team of authors in the same year, a, b, c, etc. is added to the year both in the text and in the list of references.

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14. Illustrations and Tables. All figures (photographs, graphs or diagrams) and tables should be cited in the text, and each numbered consecutively throughout. Figure parts should be identified by lower-case roman letters. **Half-tone illustrations** (black and white and color). For **colour illustrations** the authors will be expected to make a contribution of € 485 (\$ 534) per article. Magnification should be indicated by *scale bars*. Details that might identify patients should be omitted unless absolutely necessary for scientific

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5. Use the table functions of your word processing program, not spreadsheets, to make tables.
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Save your file in two formats:

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18. Nomenclature. The International Nonproprietary Names of drugs must be used. A proprietary equivalent may be indicated once, in round brackets. If a drug has no International Nonproprietary Name, its chemical name or a suitable abbreviation should be used. Drugs referred to by code numbers must be identified chemically at first mention.

In the case of stereoisomers, authors must state unambiguously whether the racemate or an enantiomer was used. The prefixes (+)-, (–) and (±)- should be used to indicate optical rotation. Small capital D and L refer to absolute configuration.

For the adrenoceptors: the names noradrenaline and adrenaline should be used for their endogenous agonists.

19. Receptor nomenclature. The recommendations of the “IUPHAR Committee on Receptor Nomenclature and Drug Classification” (as published in *Pharmacol Rev*) must be followed. The suffix “ergic” should be used only for nerve fibres (or the transmission process) and not, for example, receptors; hence, “cholinoceptor” and not “cholinergic receptor”.

20. Abbreviations. The International System of Units (SI units) is recommended. The following abbreviations should be used for units of physico-chemical quantities:

Space, time and related quantities:

metre (length)	m
hertz (frequency)	Hz
hour (time)	h
litre (volume)	l
minute (time)	min
second (time)	s

Mechanical and related quantities:

dalton (molecular mass)	Da
gram (mass)	g
mole (amount of substance)	mol
moles per litre (concentration; the abbreviation chosen has to be used consistently)	M or mol/l
newton (force) (g force is allowed)	N
pascal (pressure) (mmHg is allowed)	Pa

Thermodynamic and related quantities:

degree celsius (Celsius temperature)	°C
kelvin (thermodynamic temperature)	K
joule (work)	J
watt (power)	W

Electricity, radioactivity:

ampere (current)	A
becquerel or curie (radioactivity)	Bq or Ci
coulomb (electric charge)	C
farad (capacitance)	F
ohm (electric resistance)	Ω
siemens (electric conductance)	S
volt (electric potential difference)	V

Multiples of units are constructed with prefixes abbreviated: T (tera; 10¹²), G (giga; 10⁹), M (mega; 10⁶), k (kilo; 10³), d (deci; 10⁻¹), c (centi; 10⁻²), m (milli; 10⁻³), μ (micro; 10⁻⁶), n (nano; 10⁻⁹), p (pico; 10⁻¹²), f (femto; 10⁻¹⁵) and a (atto; 10⁻¹⁸).

Excessive use of abbreviations is strongly discouraged. Abbreviations should be defined when first mentioned. The title, abstract and key words should be free of abbreviations. If abbreviations are absolutely necessary in the abstract they must be defined in the abstract and again in the body of the manuscript.

The following abbreviations may be used without definition:

ADP, CDP, GDP, IDP, UDP, XDP

5′-diphosphates of adenosine, cytidine, guanosine, inosine, uridine, xanthosine

AMP etc.

adenosine 5′-monophosphate etc.

ATP etc.

adenosine 5′-triphosphate etc.

ATPase, GTPase

adenosine (guanosine) triphosphatase

CNS

central nervous system

CoA, acetyl-CoA

coenzyme A and its acetyl derivative

cyclic AMP, cyclic GMP or cAMP, cGMP

adenosine (guanosine) 3′:5′-cyclic monophosphate

d.c.

direct current

d.f.

degree of freedom

DEAE-cellulose

diethylaminoethylcellulose

DNA, cDNA, mtDNA, nDNA

desoxyribonucleic acid (complementary, mitochondrial, nuclear)

dpm

disintegrations per minute

EDTA

ethylenediaminetetracetic acid

EDRF

endothelium-derived relaxing factor

ECG

electrocardiogram

EEG

electroencephalogram

EGTA

ethyleneglycol-bis-(β-aminoethylether)-N,N,N′,N′-tetracetic acid

ELISA

enzyme-linked immunoabsorbent assay

EMG electromyogram	MS mass spectrometry	TLC thin layer chromatography
FAD flavin-adenine dinucleotide	n number of observations	Tris 2-amino-2-hydroxymethylpropane-1,3-diol
FMN flavin mononucleotide	NAD, NADP nicotinamide-adenine dinucleotide and its phosphate	V_{\max} maximum velocity
g gravity	P probability level	v/v volume by volume
GABA γ -aminobutyric acid	pA_2 negative logarithm of antagonist dissociation constant obtained by Schild plot or an analogous procedure	wt weight
GC gas chromatography	PAGE polyacrylamide gel electrophoresis	w/v weight by volume
GSH, GSSH glutathione, reduced and oxidized	P_i, PP_i inorganic phosphate, pyrophosphate	21. Short communications. Manuscripts submitted as Short communications should be <i>brief and contain complete</i> series of experiments with results of <i>unusual interest</i> . A Short communication should normally not exceed 2–3 printed pages, including not more than two displayed items (figures, tables). The review process is -accelerated. Only minor revision is normally allowed. Papers appear in the next available issue after acceptance. Authors are asked to explain in the letter that accompanies the manuscript why the data merit publication in this form. The editors reserve the right to decide whether a manuscript is suitable to be published as a Short communication.
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HEPES 4-(2-hydroxyethyl)-1-piperazine-ethane-sulphonic acid	r correlation coefficient	23. Offprints. Twenty-five offprints of each contribution are supplied free of charge. If you wish to order additional offprints you must return the order form with the corrected proofs. You are then entitled to receive a pdf file of your article for your own personal use.
HPLC high pressure liquid chromatography	R_f relative speed to front of chromatogram	
5-HT 5-hydroxytryptamine	RIA radioimmunoassay	
i.a., i.c.v., i.m., i.p., i.v., s.c. intra-arterial, intracerebroventricular, intramuscular, intraperitoneal, intravenous, subcutaneous	RNA, hnRNA, mRNA, mtRNA, nRNA, rRNA, tRNA ribonucleic acid (heterogeneous nuclear, messenger, mitochondrial, nuclear, ribosomal, transfer)	
IgA, IgD, IgE, IgG, IgM immunoglobulins	rpm revolutions per minute	
kb 10^3 bases	SD, SE, SEM standard deviation, standard error of sampling, standard error of mean value estimate	
K_d, pK_d dissociation constant and its negative logarithm	SDS sodium dodecyl sulphate	
K_i, pK_i inhibition constant and its negative logarithm	t time	
K_m Michaelis constant	$t_{1/2}$ half-life	
M_r relative molecular mass	τ time constant	
MAP mean arterial pressure		

