

The Publication Process

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Objectives of the workshop

At the end of this workshop, you will be able to:

- Understand the process of academic publishing, and the limitations of the peer review process.
- Learning how to deal with problems in academic publishing without violating ethical principles.

Let's remember that

- **Academic Publishing is a Business**

Who Publishes Academic Journals?

- Large publishers (Elsevier, Springer, Wiley-Blackwell, etc.).
- Professional societies (American Heart Association, American Physiological Society, etc.).
- Legitimate non-profit organizations focused on publishing (PLOS, Frontiers).
- New open-access venues (legitimate and non-legitimate).

Publishing Models

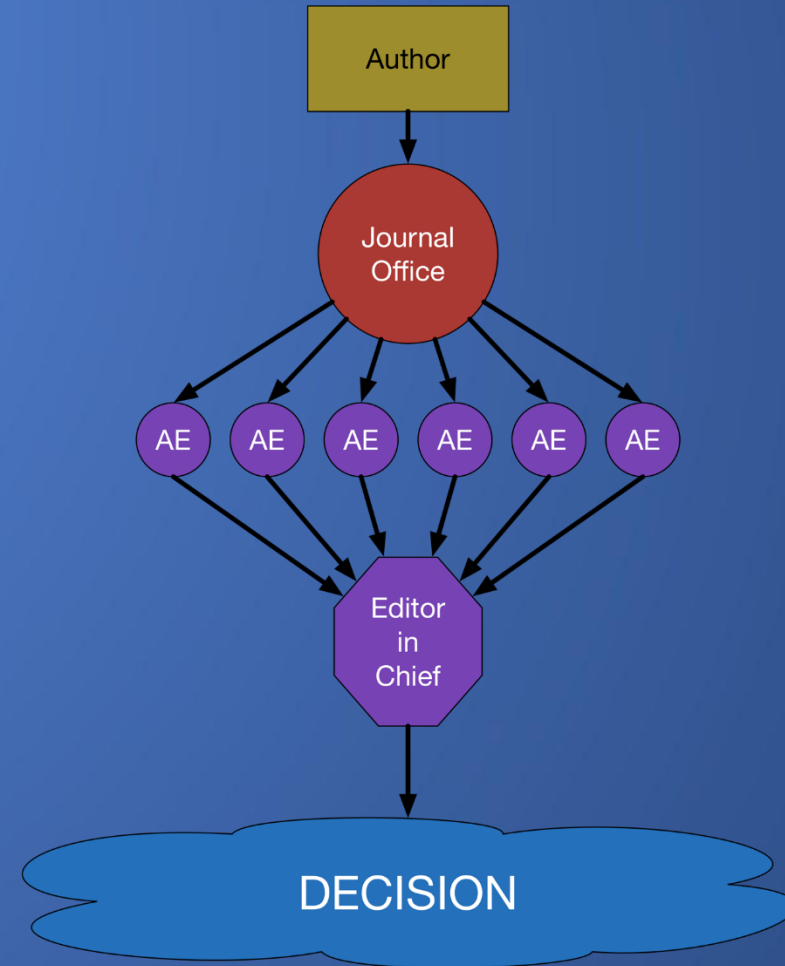
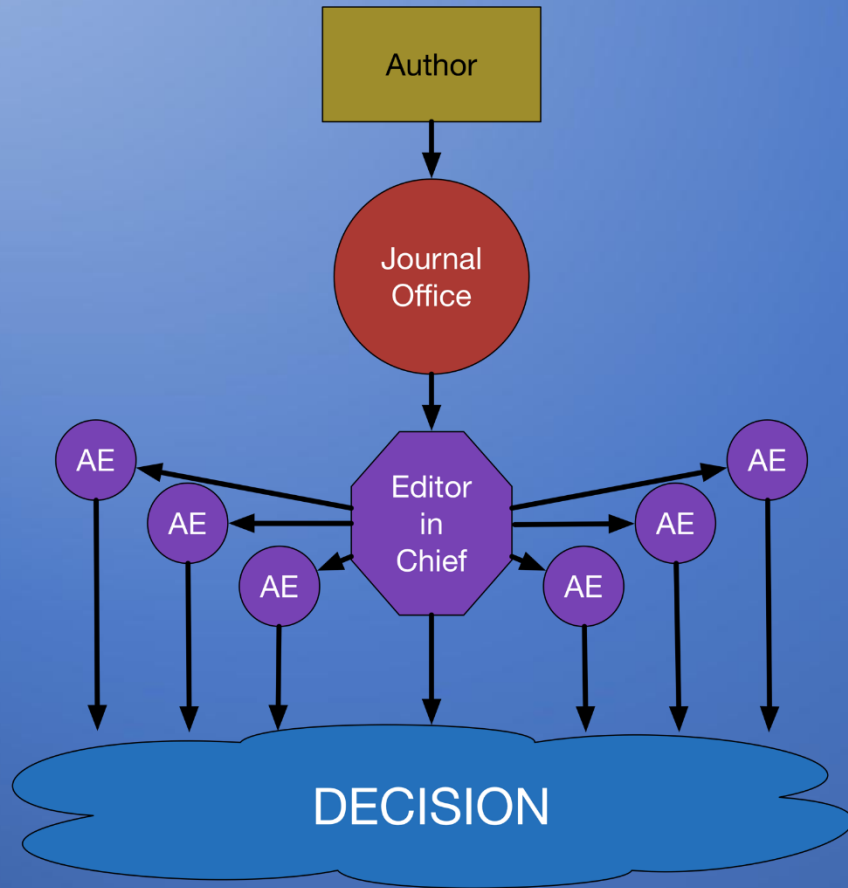
- **Subscriber fee model:** subscribers (usually libraries) pay the publication fees for the journal. Journal retains the copyright on the article. A typical model for commercial publishers.
- **Open access model:** authors pay the costs of publishing their article and retain the copyright on the article. **Warning:** legitimate open-access publishers charge \$1500-\$2000 per article.
- **Amalgam model:** authors pay page charges to partially defer costs, but the publisher retains the copyright and requires a subscription to access the journal. A typical model for academic society publishers, who often provide free journal access to their members.

**In the Current Academic Environment,
Only Reputable Journals Can Thrive**

How is the reputation of a journal determined?

- Impact factor (*Thomson-Reuters*). 2021 IF = A/B , where
 - A = number of times that citable items published in 2019 and 2020 were cited in indexed publications in 2021.
 - B=total number of citable items published in 2019 and 2020.
- H-index (*Scopus, Google, etc.*) and other indices.
- Readership (*usually gauged by the number of downloads from the publisher's servers*)
- The reputation of a journal is largely a product of its ability to solicit and select articles that will be widely read and cited.
- Hence, the reputation of a journal rests on the quality of its editorial process.

Managing Peer Review: Two Common Models



Deciding whether to publish

- **Why publish?**
 - to add knowledge to your field
 - to advance your career
 - to see your name in print!
- **Have I got something worth publishing?**
 - Does the work add *enough* to existing knowledge?
 - Is it of interest to others in the field?

- Conference proceedings, book chapters and journals
- 26,000 journals – how to choose?
- Different strategies
 - topic and journal coverage (check website)
 - Is it peer-reviewed?
 - Most appropriate readership
 - Prestige
 - Length of time from submission to publication
 - Highest 'impact'
- Journal impact factors

What editors look for in a manuscript

- Quality
 - good science: well planned, well executed study
 - good presentation
- Significance and originality
- Consistent with scope of journal
- Demonstrated broad interest to readership
- Will it cite?
- Well written 'story'

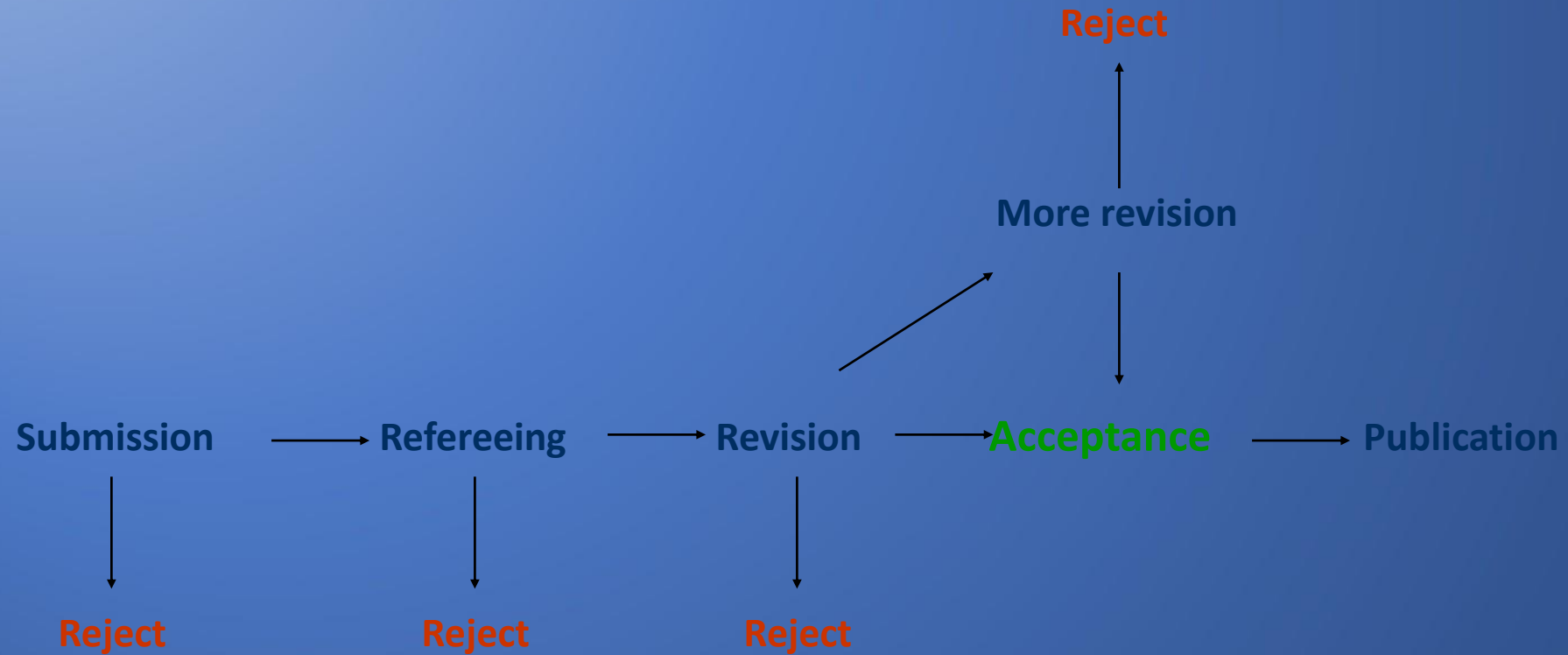
The Goals of Editors

- To assure that each manuscript receives a fair, thorough, and rapid peer review.
- To make unbiased editorial decisions on the basis of impartial peer review.
- To select the most meritorious manuscripts for publication.

Writing the paper: key points

- Strong Introduction
 - Engage the reader
 - Set the scene, explain why the work is important, and state the aim of the study
- Clear, logically organized, complete Methods
 - Provide enough information to allow assessment of results (could someone else repeat the study?)
- Results
 - Be clear and concise; avoid repetition between text, tables and figures
- Relevant Discussion
 - Start strongly – were aims achieved?
 - Discuss the significance and implications of the results

Journal publishing process



Attracting the editor/reader

- There are lots of opportunities for rejection!
- Remember: your paper is competing with many others for the attention of editors and readers
- Title
 - Brief, interesting and accurate
- Abstract
 - Attract readers to your paper
 - Aim for 4 sections: why, how, what and implications
 - Include important keywords for searching
 - Make it clear and easy to read

Before you submit

- Internal review
 - Ask your peers to read it to get an alternative perspective
 - Ask someone outside your field to read it
- Read the Instruction to Authors
 - Follow format and submission instructions
- Write a covering letter to the editor
 - Should clearly explain (but not overstate) the scientific advance
- Submit with the consent of all authors and to only one journal

After you submit: the refereeing process

- Referees are crucial to quality control – they play a vital role in the scientific process
- Selection criteria
 - Knowledge of the field, expertise, reputation
 - Specific recommendations
 - Editor's experience of referee's style
 - Reliability
- Referee selection: two or three referees
 - Referees hand-picked for each paper
 - Use cited references, keyword searches, related papers
 - ISI Web of Science, web (Google Scholar), journal/publisher databases
 - Editorial Board member recommendations

Understanding reviews: what makes a good review

- Good reviews provide the editor with the information on which a decision can be based
- The best are *insightful*, *articulate* and *constructive*
- They tell the editor:
 - What is interesting about the paper
 - How the results are significant
 - What contribution the paper makes to the field
 - What can be done to improve the paper
 - If the paper is not publishable and why

Detailed comments in the review

- A good review answers the following questions and provides suggestions for improvement:
 - Does the introduction explain why the work was done and the hypothesis being tested?
 - Is the experimental/study design appropriate?
 - Are the methods clearly described to enable full assessment of the results?
 - Is the analysis appropriate?
 - Are the results presented effectively?
 - Is the work discussed in the context of all relevant literature?
 - Does the discussion make clear the significance and wider implications of the work?
 - Are the conclusions supported by the data presented?

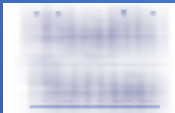
Peer review problems

Finding appropriate referees for manuscripts is very difficult.

This severely compromises the peer review process.

[illegible]

- As a consequence, the opinions of peer reviewers are often discrepant.
- Over 50% of manuscripts receive divergent reviews.
- This complicates the ability to make a fair editorial decision, particularly if an Editor is not an expert regarding the subject matter.

	Accepted	9th Dec 14	9th Dec 14	Reject
	Accepted	8th Dec 14	8th Dec 14	Acceptable as is or with minor changes

Responding to referees' reports

- Read the editor's letter first for instruction
- Take a deep breath: proceed to the reports
- Put them aside for a day, or two, a week...
- Re-read reports and discuss with coauthors ...
- Revise paper and prepare response document
- Remember –
 - Even comments that seem aggressive or ignorant can be helpful
 - Always view this as a chance to improve the paper

Good response to referees' reports are

- Well organized
 - Address common themes at start
 - Use a 'quote and response' OR numbering system of points raised by each referee
- Informative
- Provide full explanations
- Do not overlook or ignore any points
- Assertive (and polite)

A good example

Referee:

“Abstract – too long and too little about rationale; some repetition and some jargon presented without explanation (e.g. SL and age-0)”

Author:

“The rationale behind the study has been established at the beginning of the abstract (L29-32). The abstract has been shortened to 200 words and all jargon except age-0 has been removed (we don’t agree that this term will confuse readers as it is commonly used). However, we have defined age-0 in the Introduction (L62 revised MS)”

Not so good ...

Referee:

“The presentation is not particularly clear, nor concise. I feel the paper would benefit from being shortened, with more emphasis on the new conclusions and differences from previous works.”

Author:

“As it is clearly apparent that you have not properly read or understood the paper, comments on clarity are irrelevant. The paper has been shortened.”

Referees:

Two three-page reports with many fixable, but major, criticisms.

Author:

“I have changed the MS in line with the referees’ comments.”

**Can we reject an editorial decision
that we think is unfair?**

Is this effective?

Rebuttals of Bad Reviews Can Be Effective if the Author:

- Thoroughly but professionally points out the errors in reviewer comments.
- Indicates which comments can be addressed, and which can't.
- Reiterates the importance of the manuscript, with appropriate evidence.

In Response to an Appeal, an Editor Will:

- Evaluate the author's comments to determine if they are legitimate.
- Likely consult with the original reviewers to determine if they are convinced by the appeal.
- Reassess the potential for the manuscript to be read and cited extensively.

Things to Consider:

- While one appeal may be successful, frequent appeals likely won't be. If you frequently submit to a journal, don't appeal capriciously!
- An Editor's job is to protect the interests of the journal, and not to appease authors.
- The scientific community is small, so it is essential to be respectful.
- Take a step back and consider whether the reviewers may be right, such that new experiments are in order.

It is Fine to Exclude Negative Reviewers, but Be Judicious

- Editors understand that investigators can develop “scientific enemies” over time, and respect requests to exclude such individuals as reviewers.
- However, a long list of excluded reviewers can be taken negatively, as an indicator that the author is trying to “game the system.”
- It is particularly important to exclude potentially hostile members of the Editorial Board.

Things You Can Do to Maximize Success

Suggest Knowledgeable but Impartial Reviewers

- Since finding reviewers is so difficult, Editors appreciate author suggestions of reviewers.
- Most journals permit, or even require, that authors suggest reviewers.
- A common strategy is for an Editor to send the manuscript to a reviewer suggested by an author, as well as their own pick.

**A Postdoc is Preparing their First Independent Manuscript.
Is it Appropriate to Suggest their Graduate School Advisor as
a Reviewer?**

1. Yes
2. No

Standard COI Restrictions for Reviewers:

- You should recuse yourself if you have an association with any of the authors that constitutes a conflict of interest or could give an appearance of a conflict of interest, including:
 - An ongoing, working collaboration
 - A co-authored publication in the past three years
 - A trainee-mentor relationship in the past five years

It is critical that none of the suggested reviewers have a real or apparent conflict with any of the authors, such as an ongoing, working collaboration, a co-authored publication in the last three years, or a trainee-mentor relationship in the past five years.

Suggested Reviewers



Optional

	First Name *	Last Name *	E-mail *	Institution *
#1	Sydney	Schwartz	Sydney.Schwartz@university.edu	State State University
#2	John	Smith	john.smith@university.edu	University of State
#3	Nancy	Thompson	nancy.thompson@university.edu	State University

Common Ethical Problems Faced By Editors

- Complaints about authorship (*order of authors, excluded authors*).
- Concerns about data integrity or misrepresentation of data.
- Concerns about the ethical treatment of animal or human subjects.
- Plagiarism of other manuscripts, including the author's own studies.

How Are Ethical Problems Reported to Editors?

- Reviewers are the most common source of ethical concerns during the peer review process. These concerns may not be legitimate (*i.e., are due to a misinterpretation of the paper, or arise from an innocent omission of information*).
- Co-authors can also raise ethical concerns (*e.g., authorship issues*)
- Journal staff members can also detect ethical problems such as figure manipulation (*e.g., changing the contrast of a particular lane of a gel to “enhance” the findings*).

How Do Editors Respond to Ethical Concerns?

- Typically, peer review is suspended until the concern is resolved.
- Authors are asked to address the concern, and in most cases, the concern is found to be benign and the manuscript is returned to peer review.
- If serious ethical misconduct is suspected (plagiarism, falsification of data), the Editor contacts the authorities of the authors' institution and requests an investigation.
- In rare cases, serious ethical misconduct are uncovered, leading to a rejection of the paper (and likely sanctions by the institution and funding agency).

If Severe Ethical Concerns Are Identified After Publication, the Paper is Retracted

Anabolic Steroids Induce Region- and Subunit-Specific Rapid Modulation of GABA_A Receptor-Mediated Currents in the Rat Forebrain

JUAN CARLOS JORGE-RIVERA,¹ KERRY L. MCINTYRE,² AND LESLIE P. HENDERSON^{1,2}
Departments of ¹Physiology and ²Biochemistry, Dartmouth Medical School, Hanover, New Hampshire 03755

Jorge-Rivera, Juan Carlos, Kerry L. McIntyre, and Leslie P. Henderson. Anabolic steroids induce region- and subunit-specific rapid modulation of GABA_A receptor-mediated currents in the rat forebrain. *J Neurophysiol* 83: 3299–3309, 2000. Anabolic-androgenic steroids (AAS) have become significant drugs of abuse in recent years with the highest increase reported in adolescent girls. In spite of the increased use of AAS, the CNS effects of these steroids are poorly understood. We report that in prepubertal female rats, three commonly abused AAS, 17 α -methyltestosterone, stanozolol, and nandrolone, induced rapid and reversible modulation of GABAergic currents in neurons of two brain regions known to be critical for the expression of reproductive behaviors: the ventromedial nucleus of the hypothalamus (VMN) and the medial preoptic area (mPOA). All three AAS significantly enhanced peak synaptic current amplitudes and prolonged synaptic current decays in neurons of the VMN. Conversely all three AAS significantly diminished peak current amplitudes of synaptic currents from neurons of the mPOA. The endogenous neuroactive steroids, 3 α -hydroxy-5 α -pregnan-20-one and 5 α -androstane-3 α ,17 β -diol, potentiated currents in the VMN as did the AAS. In contrast to the negative modulation induced by AAS in the mPOA, the endogenous steroids potentiated responses in this region. To determine the concentration response relationships, modulation by the AAS, 17 α -methyltestosterone (17 α -meT), was assessed for currents evoked by ultrafast perfusion of brief pulses of GABA to acutely isolated neurons. Half-maximal effects on currents elicited by 1 mM GABA were elicited by submicromolar concentrations of AAS for neurons from both brain regions. In addition, the efficacy of 10⁻⁵ to 10⁻² M GABA was significantly increased by 1 μ M 17 α -meT. Previous studies have demonstrated a striking dichotomy in receptor composition between the VMN and the mPOA with regard to γ subunit expression. To determine if the preferential expression of γ_2 subunit-containing receptors in the VMN and of γ_1 subunit-containing receptors in the mPOA could account for the region-specific effects of AAS in the two regions, responses elicited by ultrafast perfusion of GABA to human embryonic kidney 293 cells transfected with α_2 , β_3 , and γ_2 or α_2 , β_3 , and γ_1 subunit cDNAs were analyzed. As with native VMN neurons, positive modulation of GABA responses was elicited for $\alpha_2\beta_3\gamma_2$ recombinant receptors, while negative modulation was induced at $\alpha_2\beta_3\gamma_1$ receptors as in the mPOA. Our data demonstrate that AAS in doses believed to occur in steroid abusers can induce significant modulation of GABAergic transmission in brain regions essential for neuroendocrine function. In addition, the effects of these steroids can vary significantly between brain regions in a manner that appears to depend on the subunit composition of GABA_A receptors expressed.

INTRODUCTION

Anabolic-androgenic steroids (AAS), synthetic derivatives of testosterone originally designed to provide enhanced ana-

The costs of publication of this article were defrayed in part by the payment of page charges. The article must therefore be hereby marked "advertisement" in accordance with 18 U.S.C. Section 1734 solely to indicate this fact.

bolic potency with negligible androgenic effects (for review, Kochakian 1993), have become significant drugs of abuse not only among elite athletes, but among a growing number of adolescents (Johnson 1990; Yesalis et al. 1997) especially young girls (Bahkre et al. 1998). It has been noted that long term risks from AAS abuse are greater in women than in men (Franke and Berendonk 1997; Hickson and Kuowski 1986; Honor 1997; Strauss and Yesalis 1993) and that AAS use in both women and female rodents is associated with irregular cyclicity (Blasberg et al. 1997; Bronson 1996; Bronson et al. 1996; Clark et al. 1998a; Franke and Berendonk 1997), accelerated reproductive senescence (Bronson 1996), and changes in both aggressive and sexual behaviors (Bronson 1996; Bronson et al. 1996). While adverse effects of long-term AAS treatment on estrous cyclicity can be attributed to signaling through androgen receptors (Blasberg et al. 1998), recent studies demonstrating that AAS alter Cl⁻ flux in synaptosomes, as well as binding of t-butylbicyclophosphorothionate (TBPS) and benzodiazepines to the γ -aminobutyric acid type A (GABA_A) receptor (Masonis and McCarthy 1995; 1996), suggest that these compounds may have acute effects in the CNS that are mediated by nongenomic actions at the GABA_A receptor.

Here we show for the first time that three commonly abused AAS, 17 α -methyltestosterone (17 α -meT), stanozolol, and nandrolone, induced rapid modulation of GABA_A receptor-mediated synaptic currents in the ventromedial nucleus of the hypothalamus (VMN) and the medial preoptic area (mPOA), two forebrain regions known to play critical, but contrasting, roles in regulating female reproductive behaviors (for review, McCarthy 1995). AAS elicited opposing effects in these two regions, enhancing currents in neurons from the VMN while diminishing them in neurons from the mPOA. Ultrafast application of GABA plus AAS to acutely isolated neurons demonstrated that AAS altered GABA efficacy in a dose-dependent fashion. Moreover, assessment of currents elicited from recombinant receptors in heterologous cells suggested that the opposing pattern of AAS modulation in the two brain regions may arise, at least in part, from the preferential expression of γ_2 subunit-containing receptors in the VMN and γ_1 subunit-containing receptors in the mPOA. Finally, we show that the endogenous neuroactive steroids, 3 α -hydroxy-5 α -pregnan-20-one (allopregnanolone; 3 α ,5 α -THP) and 5 α -androstane-3 α ,17 β -diol (3 α -DIOL) also modulated synaptic currents in both regions; however, AAS and the endogenous neuroactive steroids had opposite effects in the mPOA, suggesting different mechanisms of actions for these two classes of steroids at the GABA_A receptor.

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J Neurophysiol. 2000 Jun;83(6):3299-309.

Anabolic steroids induce region- and subunit-specific rapid modulation of GABA(A) receptor-mediated currents in the rat forebrain.

Jorge-Rivera JC¹, McIntyre KL, Henderson LP.

⊕ Author information

Retraction in

J Neurophysiol. 2007 Sep;98(3):1841.

Abstract

Anabolic-androgenic steroids (AAS) have become significant drugs of abuse in recent years with the highest increase reported in adolescent girls. In spite of the increased use of AAS, the CNS effects of these steroids are poorly understood. We report that in prepubertal female rats, three commonly

It is Always Better for an Author to Retract a Flawed Study Than to Leave it in the Literature

J Neurophysiol 112: 2667, 2014.
doi:10.1152/jn.z9k-2710-retr.2014.

Retraction

Crosse MJ, Lalor EC. The cortical representation of the speech envelope is earlier for audiovisual speech than audio speech. *J Neurophysiol* 111: 1400–1408, 2014; doi:10.1152/jn.00690.2013 (<http://jn.physiology.org/content/111/7/1400>).

We are retracting this article for the following reason: Following the publication of our manuscript, we aimed to replicate and extend our previous findings on audiovisual speech. Thus, we implemented a larger follow-up study with several different experimental conditions. In order to guarantee accurate synchronization of our audio and visual stimuli, we incorporated some additional electronic circuitry in our experimental setup. The result we reported in our original article did not replicate. This forced us to re-investigate the accuracy of the audiovisual synchronization used in our first study. On doing so, we detected a subtle yet consistent misalignment in the timing of our audiovisual stimuli. Thus, the latency shift we reported for audiovisual speech in the article cannot be trusted to be accurate. Latency shifts have previously been reported for discrete audiovisual speech in humans and for discrete non-human primate vocalizations. Whether similar latency shifts also occur in the context of continuous audiovisual human speech requires further investigation.

We offer our formal apologies for this error and for any inconvenience associated with the publication of the article. The paper is therefore being retracted by the American Physiological Society at our request.

Michael J. Crosse and Edmund C. Lalor.

A Corrigendum Should Be Issued If Minor Problems Are Detected After the Publication

Corrigendum

J Neurophysiol 112: 3252, 2014.
doi:10.1152/jn.z9k-2675-corr.2014.

Volume 104, December 2010

Lewis LB, Saenz M, Fine I. Mechanisms of cross-modal plasticity in early-blind subjects. *J Neurophysiol* 104: 2995–3008, 2010. First published July 28, 2010; doi:10.1152/jn.00983.2009; <http://jn.physiology.org/content/104/6/2995.full>.

There was a mistake in the denominator in *Eq. 4*. The correct equation follows:

$$r_{x'y'} = \frac{r_{xy}}{\sqrt{(r_{xx}r_{yy})}} \quad (4)$$

The decision: accept, re-review, reject

- Questions going through the editor's mind:
 - How good is the science in this paper?
 - Is an important issue/area of study being addressed?
 - Is the experimental design appropriate and adequate?
 - Are the analyses appropriate and competently done?
 - Has the study been put in context?
 - Does the paper contribute significantly to the literature?
 - Does the paper tell an interesting story?
 - *Will it be read and cited?*

The decision

- Remember –
- The editor will make a final decision based on how well the referees' reports have been dealt with, so ...
- Revise with care
- Respond fully to each of the referees' comments
- Present cogent and complete arguments if you have not followed a referee's recommendation
- **Make the editor's job as easy as possible!**

Your Paper Was Rejected. What Should You Do?

- If the reviewer's comments were accurate, you should modify your manuscript accordingly before resubmission to a different journal. If critical flaws were identified, do the experiments again!
- Scientific communities are small, and it is possible the same reviewers will be asked to consider the paper when submitted to a new journal. The outcome will be the same if you don't address the prior concerns.
- It is always better to get the science right than to have a flawed publication in the literature.

Most Important Take Home Points:

- Science is critically dependent on fair and impartial peer review:
 - Be a good citizen and peer review articles and grants when requested.
 - Abide by COI requirements when accepting assignments.
 - Do not accept an assignment if you think you can't be fair and impartial.
 - Complete the peer review of a manuscript in accordance with the agreed-upon deadline.

Summary

- Writing for successful publication means
 - having a well designed, original study to write about
 - selecting an appropriate outlet/journal
 - knowing what you want to write
 - writing clearly
 - making the story interesting
 - highlighting the significance of the results
 - responding carefully and positively to referees' reports

Ten rules for getting published

1. Read many papers, and learn from both the good and the bad ones.
2. The more objective you can be about your work, the better the work will ultimately become.
3. Good editors and reviewers will be objective about your work.
4. If you do not write well in the English language, take lessons early; it will be invaluable later.
5. Learn to live with rejection.

Ten rules for getting published

6. Understand what makes good science and what makes good science writing: be objective about them.
7. Start writing the paper the day you have the idea of what questions to pursue
8. Become a reviewer early in your career.
9. Decide early on where to try to publish your paper.
10. Quality (not quantity) is everything.

Questions??

A scenic landscape photograph showing a dense forest of trees with vibrant autumn foliage in shades of orange, red, and yellow. The trees are reflected in a calm body of water in the foreground. The text "THANK YOU FOR YOUR ATTENTION" is overlaid in white, bold, sans-serif capital letters across the lower portion of the image.

THANK YOU FOR YOUR ATTENTION