

# The Rule of 17: New Ground Rules for Plant Science and Bio-medical Manuscripts

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## ABSTRACT

In science publishing, whether plant science or bio-medical science in general, submission of a manuscript to a journal constitutes the final and one of the most important phases of an entire research project. Care with scientific writing, language and style all increase the chances of publication in a target journal, even one of repute. Naturally, in all cases, the style of a journal is followed, but there are some uncovered and unabridged errors that many scientific editors encounter during the review process which are almost never corrected by the authors, or are passed over or ignored by the editorial board. In this short paper we wish to highlight the most important of these errors to provide a new set of simple but useful guidelines that would allow scientists, particularly from developing countries and from countries whose first language is not English, particularly in Asia, to sharpen their presentation skills, thus improving, even if slightly, the chances of acceptance. These issues are almost never covered by journals or their publishers, and are never clearly indicated in the Instructions for Authors. This new “Rule of 17” could serve as a solid complement to any journal’s current Instructions for Authors.

**Keywords:** formatting, English grammar, syntax, punctuation

## INTRODUCTION

Science publishing, more than publishing of non-fiction titles, involves an incredibly complex network of factors that would lead to its successful publication. In most cases where we are dealing with a respectable journal of international repute that undergoes stringent peer review, other than the scientific content and clarity of language of the manuscript, factors such as style, organization, structure and overall presentation quality are also important factors which would not likely influence the outcome of a peer review, but which would certainly tone the mood or feeling of a peer reviewer or editor during the initial phases of manuscript processing. What many scientists fail to understand is a basic human psyche, i.e. that every editor and peer reviewer that handles our manuscripts is also human, too, subject to the same day-to-day stresses, irritants and distractions. And since an irritated peer reviewer is more likely to reject a manuscript which is carelessly submitted – independent of its scientific worth – the objective of this paper is to provide some novel hints as how to reduce that irritation and perhaps maximize the likelihood of acceptance by allowing the editor or reviewer to focus exclusively on the scientific writing. From my personal experience (JTdS), that > 50% of the manuscripts I have ever peer reviewed or edited have serious submission flaws related to non-scientific issues, while > 80% have mild to moderate flaws. Although a subjective assessment, the urgency in addressing these minor but important points, is increasing rapidly as the world of science publishing is a rapidly evolving mosaic of factors that will determine the success of publication. Observing the problem from a editor’s or peer’s perspective, incorrect style and poor language of scientific writing might influence the review process only as an “irritant” or a “disturbance”, and may cause a loss of time during editing or reading (for the editor, reviewer or publisher), loss in publication costs (for the publisher). They

may even influence the sense of “the message” and therefore could lead to a misunderstanding of the scientific message.

The 17 “new” rules proposed in this study serve the purpose of maximizing the submission process by minimizing collateral risk associated with style and other issues often considered to be unimportant or fairly redundant. However, taken together, they collectively represent the difference between a submission and a careful submission. All 17 rules are strictly implemented by Global Science Books (GSB; [www.globalsciencebooks.info](http://www.globalsciencebooks.info)) journals.

## New Rule 1: Co-authorship and the function of the corresponding author

In general it is understood that the corresponding author (CA) is the person with whom members of the scientific community correspond after a manuscript is published within a journal. This is usually decided by the authors and not by the publisher or journal. However, in many cases, the CA is an undergraduate student who is working towards their MSc or PhD thesis and who has limited experience and knowledge in science and publishing and who may in fact leave science. For example, an assessment of all ( $n > 2000$ ) corresponding authors (made from covering letters and submission data) of GSB journals reveals that > 65% are students (graduate or undergraduate) who do not possess a PhD. Consequently, attempts to reach this author can often be futile. In contrast, on many occasions, when the CA is the supervisor, when a question is posed, they are not often able to give fine-scale details about the methodology because he/she did not actually conduct the experiment. The problem is further confounded because more and more journals and publishers have online submission systems that request the CA to be listed and usually truncate the submission process if the person submitting the manuscript is also not the CA (in many cases the person submitting might not be the

CA, especially in international CPCs where the lead or CA might not be familiar with or confident with the complexities of online submission). Thus two fundamental questions arise: a) who should be the CA? B) What should be the function of the CA?

Regarding online submission, in fact, most are not that complicated, although they involve multiple steps, of varied complexities which, should they not be completed correctly, would result in a default submission and the manuscript would most likely be returned to the author, causing demotivation and possible delays in submission. An inherent fear of online submission systems thus arises, possibly even a phobia, and this may lead, in extreme cases, to the corresponding author to submit to journals that accept manuscripts instantly or to submit to multiple journals simultaneously to try and ensure that at least one of the cuckoo's eggs will hatch safely, extending the risk to the ethical issue of multiple submissions.

We are of the belief that every paper should have two CAs: the person who did most of the experimental work and the supervisor. That way should the student leave, then the supervisor can be contacted, and should the supervisor fall ill or even pass away, then the student can be contacted. We are against the system employed by the contributorship model employed by BMC (BioMed Central) group, which lists the e-mails of all authors on the final published paper, which could lead to privacy problems, especially since such journals are open access. The Scielo group of journals ([www.scielo.org](http://www.scielo.org)) also employs a similar strategy. However, we do believe that any of the authors should be allowed to submit a manuscript, and not necessarily only the CA, but all author e-mails should be submitted to avoid conflicts of interest and to simply inform all authors that in fact the manuscript has been submitted, i.e. to ensure communication openness and transparency even though all formal communications held between the authors and the journal/publisher can be directed through any of the authors, whether the CA or not. In this case, one or two authors should be assigned the role of CA, but during all communications between the publisher and the authors, all authors should be contacted, for transparency, even if all communication between the research group and publisher is done officially through the designated CA(s). This rationale is currently employed by GSB.

Many new online journal publishers, which are springing up like mushrooms almost weekly, are "scalping" e-mails from online journals and using them to their advantage. In other words, the original purpose of showing a corresponding author's e-mail was for the scientific public and other scientist to contact the research group to clarify issues related to the experiment such as the design or unclear results. Regrettably, open access journals are being used to scalp e-mails to promote the growth of often suspect journals, hence the possible issue with privacy i.e., scientists being contacted by publishers, marketing agencies, biotech companies, etc. since their e-mails were exposed openly by publishers. This is an issue however, whose details lie beyond the scope of this manuscript. Responsibilities and risks regarding CAs have recently been discussed in detail in a separate paper (Teixeira da Silva *et al.* unpublished).

## New Rule 2: Referencing internet sites

The Internet has increasingly become, over the past decade or so, a vital part of reference lists in bio-medical manuscripts. However, like the weather, web-sites come and go, some close, others become dysfunctional, while others yet are totally lost or removed from the Web. In many cases in which a web reference refers to site content, the content could be updated or modified, making the original reference incorrect, and thus redundant. In general, we are of the opinion that web-sites should be avoided in reference lists, if possible, because, like Wikis, their content is unstable and subject to change at any time. Unlike journal references, in which content is published and fixed, web content is not.

Moreover, anything may be found on the net and may contradict the information published in scholarly journals, making the validity of the information questionable in many cases. Many recent so-called "publishers" of pay-to-publish instant-publishing journals do not conduct peer reviews, do no language editing, and publish the final findings in a poor state with reckless editing. These publications appear freely online, are open to the science community and to the wider public and no one challenges or questions these journals or publishers. The ISSN is partly responsible for assigning an ISSN number, hence (indirectly) approving or condoning such fraudulent practices. However, there is no alternative to the ISSN and the ISSN only assign numbers and most likely does not take responsibility for fraudulent journals or publishers. Consequently, when a scientist is doing a topical search on a public data-base such as Yahoo or Google, this open access PDF may appear and that non-peer reviewed data and information may be referenced in a reference list of another scientific paper, almost validating the fraud. In this sense even top publishers have no way of validating the fraudulent journals or publishers, but simply ensure that the referencing is correctly done.

In general, web-sites are referenced in a reference list as follows (APA rule; <http://www.apastyle.org/apa-style-help.aspx>):

**The US Composting Council (2001) *Field Guide to Compost Use*.** [Online] Available at: [http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/1330/Field\\_Guide\\_to\\_Compost\\_Use.pdf](http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/1330/Field_Guide_to_Compost_Use.pdf) [Accessed 28 November 2009].

In this particular case, which refers to a PDF file, the original file is neither corrupted, nor has it been changed. Thus the "Accessed" date remains valid. However, imagine that the file was no longer there or that the content changed or disappeared, this would invalidate the reference and mislead the reader to false information. And, finally, the desired content would in fact not be valid, invalidating thus the manuscript claims within the manuscript itself. We thus suggest a slight change to the way in which a web site is referenced to reflect the actual status at the time the manuscript goes to print:

**The US Composting Council (2001) *Field Guide to Compost Use*.** Available online: [http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/1330/Field\\_Guide\\_to\\_Compost\\_Use.pdf](http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/1330/Field_Guide_to_Compost_Use.pdf)

By using this new style, the "Access" is implicitly understood to be the date that will appear on the "Published on" date published in the manuscript. To be most correct and up to date, the content should be checked in the proof stage, i.e. just before the manuscript is published. It should be the responsibility of both the authors and the publisher to click one last time on the link at the proof stage to ensure that it works and corresponds to the content indicated.

A simplified referencing style and a last-minute confirmation will ensure that the web-site serves as a useful tool and source of information (independent of its reliability as a scientific source).

## New Rule 3: Excessive use of abbreviations

As science writers, we often like to abbreviate words as much as possible. This makes writing easier to digest (or so we think) and (apparently) reduces the volume of the manuscript. One word which we believe should never be abbreviated in the text or tables is the word "and". Frequently, scientists from Africa, the Middle East and mainly the Indian sub-continent tend to substitute "and" with the symbol &. Thus, typically, a sentence that reads normally: "Callus & shoot regeneration were achieved with 2 mg/l 2,4-D & 1

mg/l KIN, & with 2 mg/l BA & 1 mg/l NAA, respectively” would now read “Callus and shoot regeneration were achieved with 2 mg/l 2,4-D and 1 mg/l KIN, or with 2 mg/l BA and 1 mg/l NAA, respectively”. For additional clarity, this would then be modified to “Callus was regenerated by using 2 mg/l 2,4-D and 1 mg/l KIN while shoots were regenerated by using 2 mg/l BA and 1 mg/l NAA”, although this latter change would be related to language and not to the excessive use of abbreviations but also affects the scientific content of the sentence.

Although abbreviations can be useful in science, when used in excess, as for &, they can distract the reader from a free flow of ideas.

What about i.e., approx., e.g., etc.? Should these be written as that is, approximately, for example and etcetera? In these cases, these are very widely used and acceptable abbreviations that do not disturb the flow of reading and should thus be used freely as such.

Exceptions to this rule would be cases which do not cause a misunderstanding, including referencing style where the journal has determined the style to include &, for example Smith & Jones (2011), or the name of a journal that inherently includes an & in its title, such as *Compost Science & Utilization*.

#### New Rule 4: Capitalization and the colon

After a colon, should the word start with a capital letter or not? In general, yes. Thus, the sentence “... xyz: a true story...” should be written as “... xyz: A true story...”. This would apply to both regular text and to references.

#### New Rule 5: Edition versus editor

The current abbreviation for editor and edition is the same: ed. Naturally, in a reference list this can lead to some confusion. To fully differentiate the two, we suggest the use of two clear abbreviations for each. For editor, Ed and for editors, Eds. For edition or editions, Edn.

#### New Rule 6: The S. No. in tables

Many authors submit tables with a first column entitled the S. No. or Sample Number column. In 99% of cases it is absolutely redundant and wastes valuable space.

S. No.	Cultivar name	Origin
1	CV 1	India
2	CV 2	Iran
3	CV 3	Turkey

Could be easily reduced to (without any loss of valuable information):

Cultivar name	Origin
CV 1	India
CV 2	Iran
CV 3	Turkey

#### New Rule 7: The degree sign

The degree (Celsius or Fahrenheit) is grossly misused, and there is a wide ignorance (cultural and related to Word-processing skills) regarding this point, even among publishers and journal editors. This is most likely because authors do not know where to look for it. It appears listed in the Symbol section of the Insert Tool Bar in Windows, listed as DEGREE SIGN. It appears as follows: °. Unfortunately many authors either try to create the degree sign by either minimizing the size of the letter “o” and then making it superscript thus creating ° or by introducing the Latin masculine ordinate °, both of which look similar to the degree symbol, but which are NOT the degree symbol. These choices are incorrect and can make editing by editors and

publishers tiresome (when detected). Thus: 5°C is correct, but 5° C and 5° C are incorrect even though to the author and even the reader (and sometimes even to editors and publishers who were not even aware of the differences), these might appear to be small redundancies, they are not. This could appear as a sub-set of a journal or publisher’s Instructions for Authors.

#### New Rule 8: Spacing between units and values

There is considerable confusion about what spacing to use between values and units. In general, a space should be introduced between a value and unit, for example, 2 mg/l, 35 µmol s<sup>-1</sup> m<sup>2</sup>, 16 h, 10.9 Hz, or 5 mm. However, we recommend opening up two exceptions because, visually, they look better in scientific writing. The first is the percentage sign, such as 8%. The second is the degree sign, such as 5°C. However, this style might depend on the style of that journal, which needs to be respected first. Therefore, some journals might encourage 8 % and 5 °C. We are of the opinion that for degree and percentage there should not be a space between the unit and the value, so 5°C and 5% and not 5 °C and 5 %.

#### New Rule 9: Weight vs mass

The use of the term weight *versus* mass is often confusing and used inter-changeably, although they are scientifically entirely different concepts (www.av8n.com). The most simple explanation of the difference uses the gravitational definition (and takes into consideration a motionless object): weight is the name of the force on an object (even leaf, callus, shoots, roots in plant tissue culture) due to gravity, therefore weight = mass × gravitational acceleration. Gravitational acceleration is the acceleration on an object caused by gravity. In the SI system the unit of measurement for weight is the *Newton* (N), which means that one object with a mass of 1 kg has a weight of 9.8 N in the Earth where the gravitational acceleration is 9.8 m/s<sup>2</sup> (and it would be nearly zero in space because of the lack of gravitational influence). However, the mass of an object is always constant; it measures the quantity of the matter and energy in an object. That means, objects with the same mass can differ in their weights when are placed in places with different gravitational strength. On the surface of the Earth, the “strength of gravity” (gravitational acceleration) is approximately constant therefore the ratio of the weight force of a motionless object to its mass is independent of its location (theoretically). Therefore the weight of an object may stand as a substitute for its mass. Thus, we encourage the use of weight rather than mass as it is a more widely acceptable term even then if the unit of measurement is kilogram which is the SI unit for mass. When using it, however, the author should of course understand the above mentioned differences in the concepts of weight vs. mass.

#### New Rule 10: Repetition of units

When listing a list of values which all carry the same unit, we encourage the elimination of the unit from all values except for the last one. When the list is small, the repetition might not seem that bad (e.g., Expression was 3%, 19% and 24% in apical leaves, nodes and stamens, respectively), but when the list is long, the repetition is unbearable to read or to edit, and difficult to match (e.g., Expression was 2%, 3%, 8%, 19%, 24%, 64% and 88% in axillary buds, apical leaves, internodes, nodes, pistils, peduncles and stamens, respectively). We thus suggest reducing to, for example, Expression was 2, 3, 8, 19, 24, 64 and 88% in axillary buds, apical leaves, internodes, nodes, pistils, peduncles and stamens, respectively. Such a listing would eliminate considerable “noise” and redundancy.

### New Rule 11: Simplistic statistical data layout

When representing data in table format that involves statistical analyses that describe differences between means following ANOVA such as Duncan's, Bonferroni's, Tukey's, etc., we suggest a layout of data that shows the most essential components in an easy to read way. Thus, we consider Option C in the table below to be easiest to represent and read/interpret data by not using superscript and by incorporating spaces between all essential elements. The asterisk (\*) indicates where a description of the choice of the type of data analysis should appear, for example "Different letters within a column indicate significant differences at  $P < 0.05$  according to Duncan's multiple range test".

In option D the standard deviation of individual cases is not indicated. For example, in the case of Tukey's test, the analysis uses a group's standard deviation and not the standard deviations of individual cases. In this case it is possible to indicate the individual standard deviation of each case but it does not make too much sense. To test all pair-wise comparisons among means using the Tukey HSD,  $t$  must be computed for each pair of means using the formula:

$$t_s = \frac{M_i - M_j}{\sqrt{\frac{MSE}{n_h}}}$$

where  $M_i - M_j$  is the difference between the  $i^{\text{th}}$  and  $j^{\text{th}}$  means, MSE is the Mean Square Error, and  $n_h$  is the harmonic mean of the sample sizes of groups  $i$  and  $j$  (Available online: <http://davidmlane.com/hyperstat/B95118.html>).

Therefore, case D would also be good as indicated in the table (depending on the type of statistical analysis used).

**Table 1** Differences in leaf width.

Layout option	Leaf width (mm)
A	22 <sup>a</sup> 12 <sup>b</sup>
B	22±1.2 <sup>a</sup> 12±0.8 <sup>b</sup>
C	22 ± 1.2 a 12 ± 0.8 b
D	22 a 12 b

### New Rule 12: Capitalization of common nouns

Should the names of techniques and methods be written in upper-case letters? We believe not because, as for other common nouns in English, these should be written in lower-case letters. Thus Random Amplified Polymorphic DNA (RAPD) should be written as random amplified polymorphic DNA, Gas Chromatography – Mass Spectroscopy (GC-MS) as gas chromatography – mass spectroscopy, and Fourier Transform Infrared (FT-IR) spectroscopy as Fourier transform infrared (FT-IR) spectroscopy. In the latter case, Fourier refers to a person's name, so this should be capitalized. Other examples include: water-soluble total Kjeldahl nitrogen (TKN<sub>w</sub>), germination index (GI).

### New Rule 13: Spelling and accents of authors' names

The spelling and accents on foreign names and the referencing of those names should be respected. Often names must be modified to suit data-bases. The logic is inverse. The data-bases should be modified to be able to read actual names. One practical problem which is causing an increasing number of authors to remove accents from their birth-given names is that a search on most data-bases only recognizes the basic English 26 letters of the alphabet on QWERTY keyboards. Thus accents like é, ç, ã, ñ, ô, ü, ç, è, ð, ð, and æ (for example), so typical of many European languages, would not be able to be written by a Chinese scientist. An author who thus publishes with their original accent

loses thus the ability of being tracked on data-bases. It is a great pity that culture is being sacrificed to technology without a concomitant advance in the latter to meet the challenges of the former. Therefore, if possible, the author should provide both versions of their names just in case a data-base can accommodate both.

Respecting the spelling and accents on foreign names and the referencing of those names. Often names are incorrectly referenced.

Xia L, Yang W, Xiufeng Y (2007) Effects of water stress on berberine, jatrorrhizine and palmatine contents in amur corktree seedlings. *Acta Ecologica Sinica* 27 (1), 58-63

Boerjan W, Cervera MT, Delarue M, Beekman T, Dewitte W, Bellini C, Caboche M, Van Onckelen H, Van Montagu M, Inze/Inzé D (1995) Superroot, a recessive mutation in *Arabidopsis*, confers auxin overproduction. *The Plant Cell* 7, 1405-1419

Even Elsevier, a top science publisher, made a mistake in the first example. While Xia and Yang are the correct family names, Xiufeng is not, it is the first name. The last author's name is likely to be Yang or Yu, or other. Consequently, searches in data-bases for the third author will be lost, at least this one in *Acta Ecologica Sinica*. In this case it is clearly the publisher's error since they did not responsibly represent the authors' names even if the author did not clearly indicate the error. An editorial staff member that has more cultural "tact" should be employed.

Some publishers publish names in different ways and in different orders, so, for example, J.A. Teixeira da Silva, Jaime A. Teixeira da Silva or even Teixeira da Silva J.A. In some cases, where cultural ignorance is shown, the name might appear as J.A.T. da Silva. In this case, the author must decide what is the professional name that they would like to use in a publication and the publisher has the responsibility to respect that decision, although the order of first and family name is decided by the publisher, although we recommend, to avoid problems with referencing, that the order First Name + Family Name (as shown for all the authors' names of this paper), be used. This can be already avoidable - theoretically, if the first name and family name are filled in correctly in the on-line submission systems; the data base would then use the information from this system. Even so, the final published name will eventually be modified according to that journal's style. The problem in fact may be two-fold: a) in the way in which the journal publishes the name and b) the way in which the end-user reading that paper references the name based on their personal (cultural) interpretation of what is the first and family name. The other odd thing about the names, which can cause citation problems, is that the order of the first name and the family names differ from that in English (western order) in certain languages, e.g., in Hungarian, or in certain Asian languages (eastern order). In Hungarian, for example, the correct order of the name is not Judit Dobránszki, but Dobránszki Judit. However, most targeted journals publish in English, so the English system of nomenclature needs to be respected. Journals such as *Caryologia* confound the problem by mixing the order of names using one format for the first author and then reversing the format for all other authors (e.g., Zhang *et al.* 2010). Fortunately, not too many journals used such confusing systems such as *Caryologia*.

This "First name + Family name" rule is currently employed by GSB.

### New Rule 14: Choice of font in figures

In general most journals use a Times New Roman (TNR) or Arial-based print font, or similar. Thus a graph designed in one of these two fonts will most likely be acceptable for publication, unless specifically requested by the journal to format otherwise. In Japan and China, where word processors in Mac and Windows have a dual language setting, in Japanese four language settings (Romaji, hiragana, kata-



kana and kanji), it is common for authors to leave the Chinese or Japanese functions activated, but in alphabet mode. What results is a graph, for example, with very odd-looking text, which is difficult to review and may irritate the reviewer. Chinese authors should remember to switch from SimSun to TNR and Japanese from Japanese alphabet (e.g., MS 明朝) to TNR. This includes punctuation marks such as ( ) , ‘X’ , 。 and 、 which should appear as ( ) [parentheses], ‘X’ [inverted commas] and , [comma]. In the case of Japanese/Chinese punctuation, odd spacing can result, for example:

The chlorophyll content (SPAD value) of leaves, stems, pedicels, and petioles was measured.

vs

The chlorophyll content (SPAD value) of leaves, stems, pedicels, and petioles was measured.

As is evident, the second sentence appears extremely odd and badly spaced due to the incorrect PC settings by not de-activating the Chinese/Japanese cursor functions.

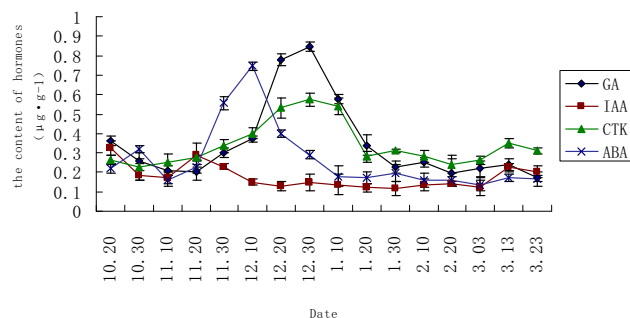
In Japan, the default setting of alphabetized letters is Century, which also gives a poor impression, thus making it look like:

The chlorophyll content (SPAD value) of leaves, stems, pedicels, and petioles was measured.

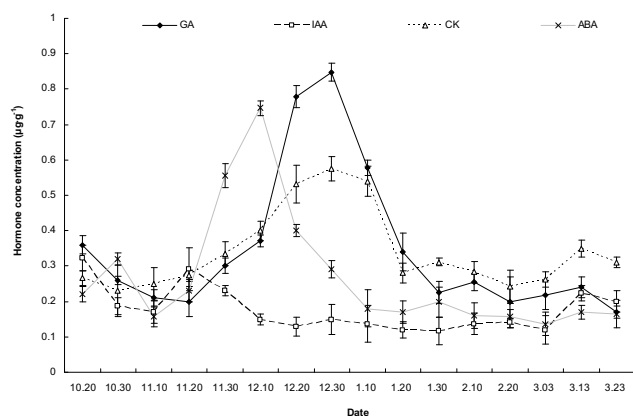
In China, the default setting of alphabetized letters is SimSun, which also gives a poor impression, thus making it look like:

The chlorophyll content (SPAD value) of leaves, stems, pedicels, and petioles was measured.

An example of a graph that is submitted with Chinese/Japanese font would typically look like this:



But should be set with improved font to look like this:

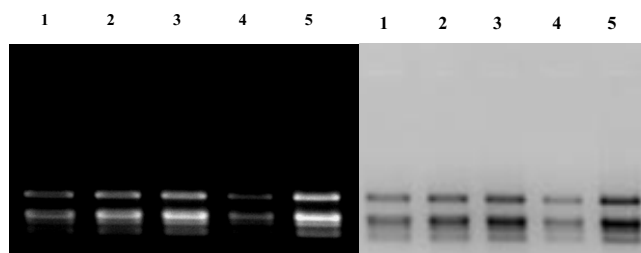


### New Rule 15: Colour negative gel images

Many manuscripts that employ molecular techniques such as PCR, RT-PCR, RAPD, SSR, ISSR, RFLP, etc. usually photograph the gels (agarose or polyacrylamide) using a black background with white banding showing. This does not occur with silver staining in SDS-PAGE. In most cases, we are talking about 95% black background with a 5% white overlay. For the publisher, this is an excessive waste of black ink, and for those scientists who are conscientious about the environment, a waste of resources. We recommend that the colour negative image of gels i.e. black bands

on a white background, be used. Use free software in Windows (Paint) to convert the jpg file which you should then use for the figure. Paint software in Windows PCs is usually free software that can be accessed in the Accessories section of your Menu.

Thus a typical gel image would be transformed into a much better (visibility and environmentally friendly) image:



### New Rule 16: Manufacturer of chemicals and reagents

Almost every bio-medical manuscript uses one or more chemicals and reagents in the experimental research phase. It is common to see different results caused by the choice of such chemicals or reagents that originate from different sources (e.g., different countries or different companies) and of different grades.

For example, agar, one of the most frequently used gelling agents for the preparation of semi-solid plant tissue culture media, derives from the cell walls of some species of red algae (mainly from *Gelidiaceae* and *Graciliaceae*) from the sea (McLachlan 1985; Thorpe *et al.* 2008) and differs according to the country and year where and when it was collected, moreover according to the ways of collection, extraction and process. Consequently, different agars available commercially differ in their purities, mineral composition, gelling capacities, diffusion abilities of different media components and water which can influence plant differentiation and developmental process (Debergh 1983; Pereira-Netto *et al.* 2007). Pereira-Netto *et al.* (2007) studied the effects of five agar brands originating from different companies, such as agars A-7002, A-7921 (Sigma Chemical, St. Louis, MO), BBL GIBCO 750324, Phytagar GIBCO or Select Ágar (GIBCOBRL, Life Technologies, Paisley, Scotland, UK), on the proliferation and physiological state of *Malus prunifolia* (Willd.) Borkh ‘Marubakaido’. They found differences in the rate of multiplication and hyperhydricity. According to the analysis of HPSEC (high-performance size exclusion chromatography) profiles the proliferation and performance of *in vitro* shoots were related to the degree of polydispersity and to the amount of higher molecular weight fractions in the agar brands and they were not connected to agar gel strength.

Although fairly standard in most high level journals, many lower level journals tend to be extremely lax about the details. Therefore, it should be the responsibility of the author (independent of the journal) to indicate the full source and, where necessary, grade of the chemicals and reagents. This can be represented as a completely separate section, especially where many chemicals or reagents are used, or interspersed within the materials and methods section. A typical description could look like this: The mycotoxins, DON, T-2, HT-2 and ZEN were purchased from Sigma-Aldrich Japan (St. Louis, MI, USA). LC/MS-grade methanol, acetonitrile and reagent-grade ammonium acetate were purchased from Wako Chemicals (Osaka, Japan). Pure water was purified with a Milli-Q system (Millipore, Tokyo, Japan). Phosphate-buffered solution (PBS) at pH 7.4 was prepared by dissolving commercial phosphate-buffered saline tablets (Sigma-Aldrich) in Milli-Q water. The immunoaffinity column, DZT MS-PREP®, the multi mycotoxin IAC was purchased from R-BIOPHARM RHÔNE Ltd. (Glasgow, UK). The multifunctional cartridge column of MultiSep® #226 (Romer Labs, Inc., Union, MO, USA) was purchased from Showa Denko Ltd. (Tokyo, Japan).

Wherever appropriate, trademarks or copyrights should always be honoured by including a <sup>TM</sup> or a <sup>®</sup> mark, respectively.

### **New Rule 17: Acknowledgement of English revision services**

It is a general understanding that any person or entity that provides assistance in any form or to any level should be either listed as a co-author or as a contributor of sorts, usually listed in the Acknowledgements. Those individuals who have made any contribution to the manuscript, small or large, but who are neither listed nor acknowledged, constitute ghost authors and the authors who then publish that paper, are in breach of publishing ethics. It is the experience of the first author that in 98-99% of cases (n > 2000 manuscripts), that Japanese scientists use paid English language revision services, but never acknowledge them, even though those services almost ultimately lead to the successful publication of manuscripts that are scientifically sound. The 17<sup>th</sup> rule thus insists that English language revision services be included in the Acknowledgements, for example, "The authors thank the professional language editing services offered by SciRevision (<http://scirevision.client.jp/>)".

### **CONCLUSIONS**

Most journals in the bio-medical sciences and humanities carry their own styles. Overall, most scientists learn basic notions of scientific writing, manuscript structure. But there are many minor points which can become repetitively irritating (for both submitting authors and reviewers/editors).

Those stylistic and linguistic aspects have been dealt with in this paper. We are of the belief, through experience, that taking these 17 new rules into consideration will go a long way forward to improving the image of submitted manuscript, ultimately having some positive effect on the outcome of the review process, and thus acceptance.

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