Part of SPRINGER NATURE

How chameleons change colour

Career in Science Editing

Paulina Strzyz, PhD

TUD 4th Career Day

17.11.2017

nature research

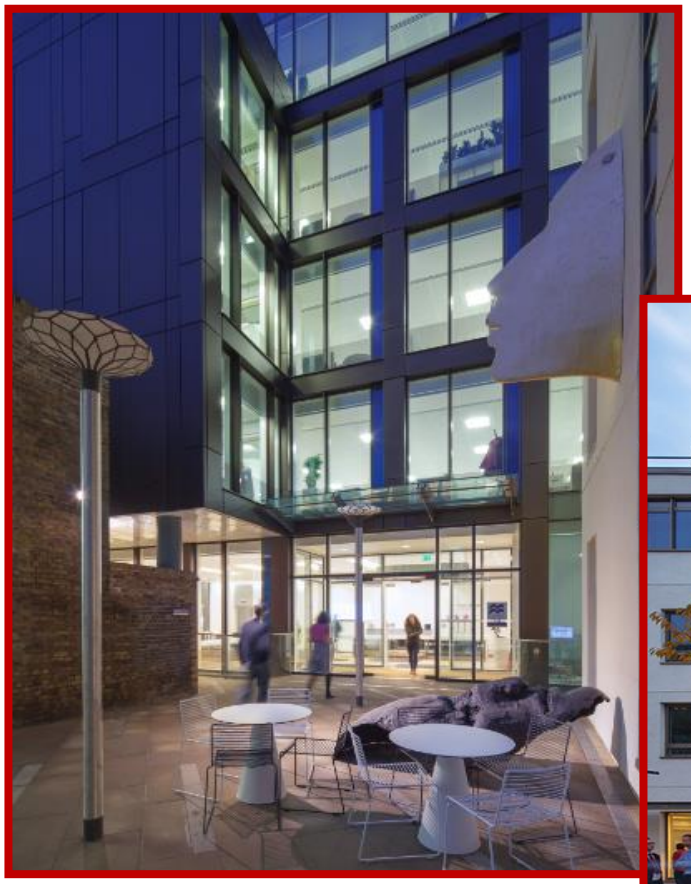
Nature Research Group

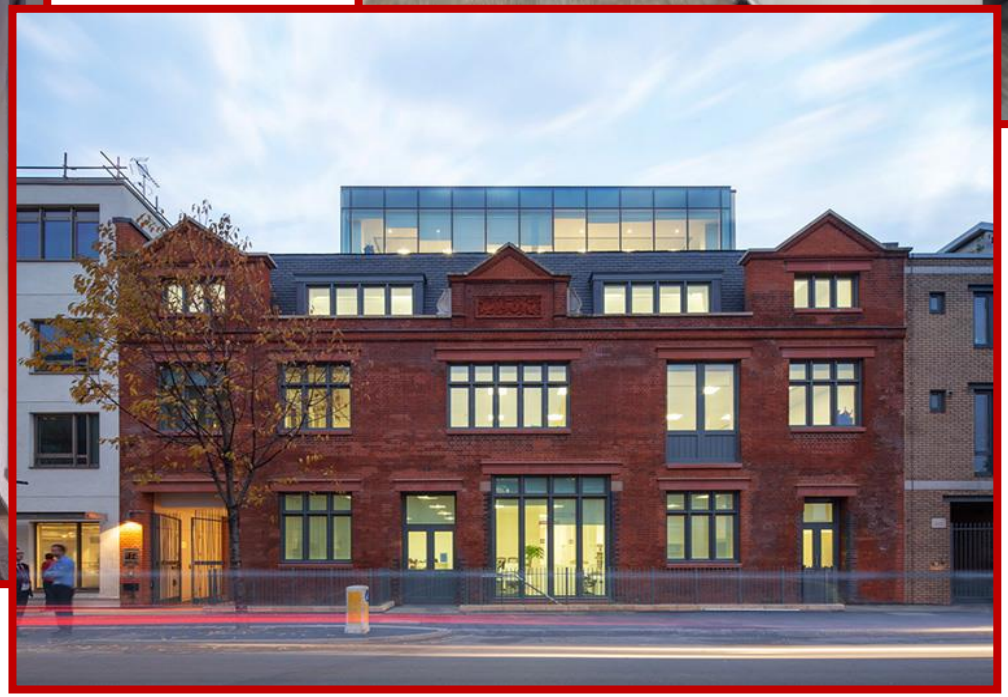
Division of **Springer Nature**, which was formed in 2015 through the merger of Nature Publishing Group, Palgrave Macmillan, Macmillan Education and Springer Science+Business Media

Nature Research includes *Nature* (founded in 1869),
all *Nature*-branded Research journals,
all *Nature*-branded Reviews journals (launched in 2000),
and *Nature Communications* (Open Access)

Offices in London, Heidelberg, Berlin, New York,
Washington DC, San Francisco, Shanghai, Tokyo, Melbourne…

London campus





Journal portfolio at Nature Research

Journal Portfolio	Type	Journal	Launch date
Multidiciplinary	Multidiciplinary	Nature (Life Sciences)	1869
Multidiciplinary	Multidiciplinary	Nature (Physical Sciences)	1870
Multidiciplinary	Multidiciplinary	Nature Communications (Life Sciences)	2009
Multidiciplinary	Multidiciplinary	Nature Communications (Physical Sciences)	2010
Life sciences	Research journals	Nature Cell Biology	1999
Life sciences	Research journals	Nature Ecology & Evolution	2017
Life sciences	Research journals	Nature Genetics	1992
Life sciences	Research journals	Nature Human Behaviour	2017
Life sciences	Research journals	Nature Immunology	2000
Life sciences	Research journals	Nature Medicine	1995
Life sciences	Research journals	Nature Metabolism	2019
Life sciences	Research journals	Nature Microbiology	2016
Life sciences	Research journals	Nature Neuroscience	1998
Life sciences	Research journals	Nature Plants	2015
Life Sciences	Research journals	Nature Structural and Molecular Biology	2004
Applied Sciences	Research journals	Nature Biomedical Engineering	2017
Applied Sciences	Research journals	Nature Biotechnology	1983
Applied Sciences	Research journals	Nature Catalysis	2018
Applied Sciences	Research journals	Nature Chemical Biology	2005
Applied Sciences	Research journals	Nature Chemistry	2009
Applied Sciences	Research journals	Nature Electronics	2018
Applied Sciences	Research journals	Nature Machine Intelligence	2019
Applied Sciences	Research journals	Nature Methods	2004
Applied Sciences	Research journals	Nature Protocols	2006

Journal Portfolio	Type	Journal	Launch date
Physical sciences	Research journals	Nature Astronomy	2017
Physical sciences	Research journals	Nature Climate Change	2011
Physical sciences	Research journals	Nature Energy	2016
Physical sciences	Research journals	Nature Geoscience	2008
Physical sciences	Research journals	Nature Materials	2002
Physical sciences	Research journals	Nature Nanotechnology	2006
Physical sciences	Research journals	Nature Photonics	2007
Physical sciences	Research journals	Nature Physics	2005
Grand Challenges	Research journals	Nature Sustainability	2018
Life sciences	Nature Reviews	Nature Reviews Cancer	2001
Life sciences	Nature Reviews	Nature Reviews Drug Discovery	2002
Life sciences	Nature Reviews	Nature Reviews Genetics	2000
Life sciences	Nature Reviews	Nature Reviews Immunology	2001
Life sciences	Nature Reviews	Nature Reviews Microbiology	2003
Life sciences	Nature Reviews	Nature Reviews Molecular Cell Biology	2000
Life sciences	Nature Reviews	Nature Reviews Neuroscience	2000
Physical sciences	Nature Reviews	Nature Reviews Chemistry	2017
Physical sciences	Nature Reviews	Nature Reviews Materials	2016
Physical sciences	Nature Reviews	Nature Reviews Physics	2019
Clinical sciences	Nature Reviews	Nature Reviews Cardiology	2004
Clinical sciences	Nature Reviews	Nature Reviews Clinical Oncology	2004
Clinical sciences	Nature Reviews	Nature Reviews Disease Primers	2015
Clinical sciences	Nature Reviews	Nature Reviews Endocrinology	2005
Clinical sciences	Nature Reviews	Nature Reviews Gastroenterology and Hepatology	2004
Clinical sciences	Nature Reviews	Nature Reviews Nephrology	2005
Clinical sciences	Nature Reviews	Nature Reviews Neurology	2005
Clinical sciences	Nature Reviews	Nature Reviews Rheumatology	2005
Clinical sciences	Nature Reviews	Nature Reviews Urology	2004

Primary research *vs* Reviews journals

	Nature	Nature Research	*Nat Comms*	Nature Reviews
Majority of content	Unsolicited	Unsolicited	Unsolicited	Commissioned
Articles submitted	~185 per week	~30 per week	~400 per week	~1 per week
Rejection rate	High (90-95%)	High (>90%)	High (>85%)	**Low** (<5%)
Articles published	~800 per year	~150 per year	~3,000 per year	~50-60 per year
Level of editing	Light	Light	Light	Heavy

Nature Reviews journals

LIFE SCIENCES

Nature Reviews Cancer

Nature Reviews Drug Discovery

Nature Reviews Genetics

Nature Reviews Immunology

Nature Reviews Microbiology

Nature Reviews Molecular Cell Biology

Nature Reviews Neuroscience

NEW! PHYSICAL SCIENCES

Nature Reviews Materials

Nature Reviews Chemistry

Nature Reviews Physics

CLINICAL SCIENCES

Nature Reviews Cardiology

Nature Reviews Clinical Oncology

Nature Reviews Disease Primers

Nature Reviews Endocrinology

Nature Reviews Gastroenterology & Hepatology

Nature Reviews Nephrology

Nature Reviews Neurology

Nature Reviews Rheumatology

Nature Reviews Urology

+ CROSS-JOURNAL TEAM

Nature Reviews Molecular Cell Biology: our team

Kim Baumann, PhD
Chief Editor

Eytan Zlotorynski, PhD
Senior Editor

Paulina Strzyz, PhD
Senior Editor

Senior Art Editor Vicky Summersby

Production Editor Jenna Johnston

Editorial Assistant Isobel Raynsford
Marketing, Sales, Web production, etc.

www.nature.com/nrm

Impact factor*: 46.602

**2016 Journal Citation Reports* (Thomson Reuters, 2017)

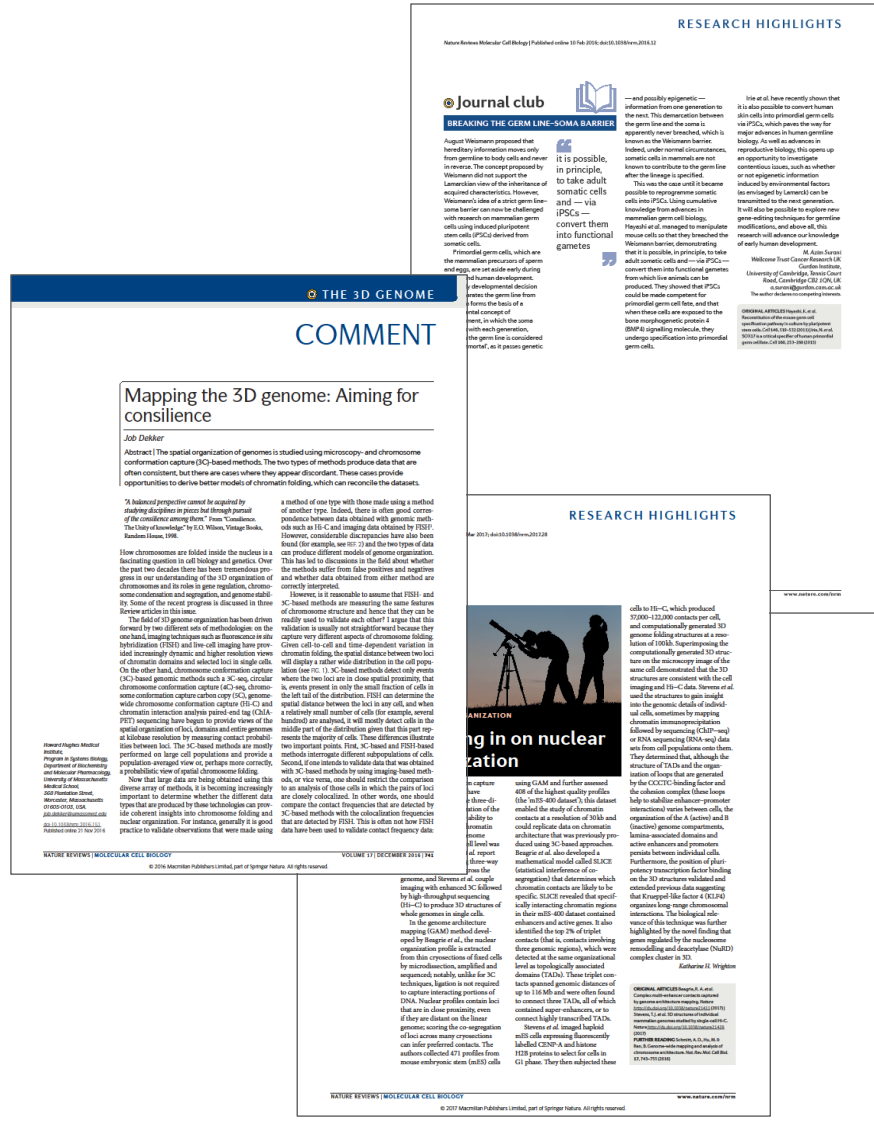
Journal content

‘Front half’ — usually not peer-reviewed

Research Highlights:
short news pieces on a recent publication of interest, written by the editors

Journal Clubs:
Written by external authors

Comments:
Invited commentary on a timely topic or event, written by key figures in the field



Journal content

‘Back half’— mostly commissioned, all peer-reviewed (except interview-style Viewpoints)

Reviews: authoritative information on a topic, placing it in the context of a field's history and development

Perspectives: topical discussion and opinions on controversial areas; historical articles; technical articles

Analysis: review-type article that includes re-analysis of published data with existing methods

Progress: An update of a rapidly moving field (shorter)


PERSPECTIVES

TECHNOLOGIES AND TECHNIQUES

INNOVATION

Metabolomics: beyond biomarkers and towards mechanisms

Caroline H. Johnson, Julijana Ivanisevic and Gary Siuzdak

Abstract | Metabolomics, which is the profiling of metabolites in biofluids, cells and tissues, is routinely applied as a tool for biomarker discovery. Owing to innovative developments in informatics and analytical technologies, and the integration of orthogonal biological approaches, it is now possible to expand metabolomic analyses to understand the systems-level effects of metabolites. Moreover, because of the inherent sensitivity of metabolomics, subtle alterations in biological pathways can be detected to provide insight into the mechanisms that underlie various physiological conditions and aberrant processes, including diseases.

NATURE REVIEWS | MOLECULAR CELL BIOLOGY

REVIEWS

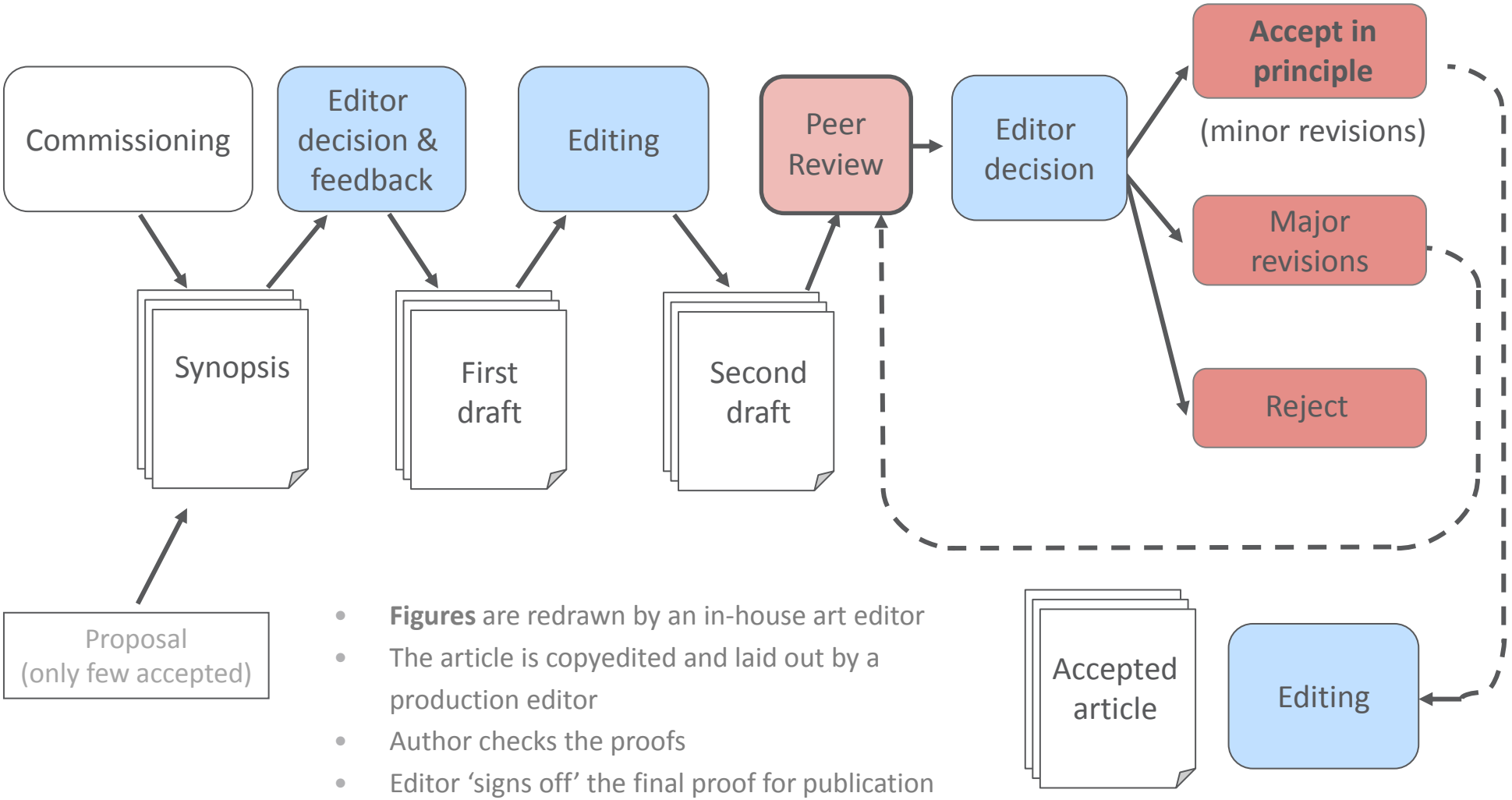
Histone exchange, chromatin structure and the regulation of transcription

Swaminathan Venkatesh and Jerry L. Workman

Abstract | The packaging of DNA into strings of nucleosomes is one of the features that allows eukaryotic cells to tightly regulate gene expression. The ordered disassembly of nucleosomes permits RNA polymerase II (Pol II) to access the DNA, whereas nucleosomal reassembly impedes access, thus preventing transcription and mRNA synthesis. Chromatin modifications, chromatin remodellers, histone chaperones and histone variants regulate nucleosomal dynamics during transcription. Disregulation of nucleosome dynamics results in aberrant transcription initiation, producing non-coding RNAs. Ongoing research is elucidating the molecular mechanisms that regulate chromatin structure during transcription by preventing histone exchange, thereby limiting non-coding RNA expression.

nature research

The life of a Review: from idea to publication



- **Figures** are redrawn by an in-house art editor
- The article is copyedited and laid out by a production editor
- Author checks the proofs
- Editor 'signs off' the final proof for publication

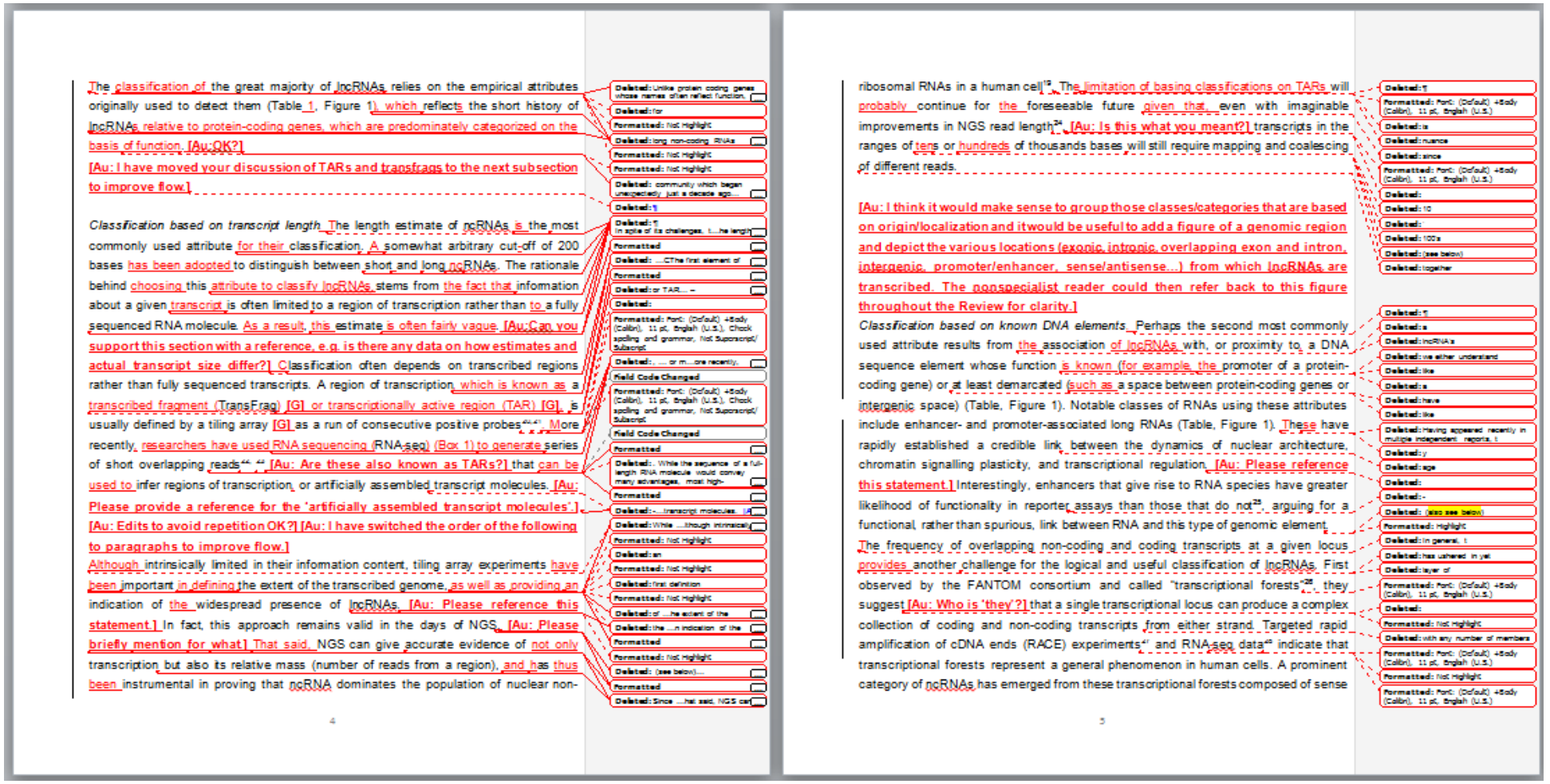
Article commissioning

A bit like research

- Formulate and research the idea
- Present and defend it in the team
- Find the best possible author
- Convince them to write!

Finalized Review => Satisfaction

Developmental Editing



The classification of the great majority of lncRNAs relies on the empirical attributes originally used to detect them (Table 1, Figure 1), which reflects the short history of lncRNAs relative to protein-coding genes, which are predominately categorized on the basis of function. [Au: OK?]

[Au: I have moved your discussion of TARs and transfrags to the next subsection to improve flow.]

Classification based on transcript length. The length estimate of ncRNAs is the most commonly used attribute for their classification. A somewhat arbitrary cut-off of 200 bases has been adopted to distinguish between short and long ncRNAs. The rationale behind choosing this attribute to classify lncRNAs stems from the fact that information about a given transcript is often limited to a region of transcription rather than to a fully sequenced RNA molecule. As a result, this estimate is often fairly vague. [Au: Can you support this section with a reference, e.g. is there any data on how estimates and actual transcript size differ?] Classification often depends on transcribed regions rather than fully sequenced transcripts. A region of transcription, which is known as a transcribed fragment (TransFrag) [G] or transcriptionally active region (TAR) [G], is usually defined by a tiling array [G] as a run of consecutive positive probes[40,41]. More recently, researchers have used RNA sequencing (RNA-seq) (Box 1) to generate series of short overlapping reads[42, 43]. [Au: Are these also known as TARs?] that can be used to infer regions of transcription, or artificially assembled transcript molecules. [Au: Please provide a reference for the 'artificially assembled transcript molecules'.] [Au: Edits to avoid repetition OK?] [Au: I have switched the order of the following to paragraphs to improve flow.]

Although intrinsically limited in their information content, tiling array experiments have been important in defining the extent of the transcribed genome, as well as providing an indication of the widespread presence of lncRNAs. [Au: Please reference this statement.] In fact, this approach remains valid in the days of NGS. [Au: Please briefly mention for what.] That said, NGS can give accurate evidence of not only transcription but also its relative mass (number of reads from a region), and has thus been instrumental in proving that ncRNA dominates the population of nuclear non-ribosomal RNAs in a human cell[13]. The limitation of basing classifications on TARs will probably continue for the foreseeable future given that, even with imaginable improvements in NGS read length[24]. [Au: Is this what you meant?] transcripts in the ranges of tens or hundreds of thousands bases will still require mapping and coalescing of different reads.

[Au: I think it would make sense to group those classes/categories that are based on origin/localization and it would be useful to add a figure of a genomic region and depict the various locations (exonic, intronic, overlapping exon and intron, intergenic, promoter/enhancer, sense/antisense...) from which lncRNAs are transcribed. The nonspecialist reader could then refer back to this figure throughout the Review for clarity.]

Classification based on known DNA elements. Perhaps the second most commonly used attribute results from the association of lncRNAs with, or proximity to, a DNA sequence element whose function is known (for example, the promoter of a protein-coding gene) or at least demarcated (such as a space between protein-coding genes or intergenic space) (Table, Figure 1). Notable classes of RNAs using these attributes include enhancer- and promoter-associated long RNAs (Table, Figure 1). These have rapidly established a credible link between the dynamics of nuclear architecture, chromatin signalling plasticity, and transcriptional regulation. [Au: Please reference this statement.] Interestingly, enhancers that give rise to RNA species have greater likelihood of functionality in reporter assays than those that do not[25], arguing for a functional, rather than spurious, link between RNA and this type of genomic element.

The frequency of overlapping non-coding and coding transcripts at a given locus provides another challenge for the logical and useful classification of lncRNAs. First observed by the FANTOM consortium and called "transcriptional forests"[26], they suggest [Au: Who is 'they'?] that a single transcriptional locus can produce a complex collection of coding and non-coding transcripts from either strand. Targeted rapid amplification of cDNA ends (RACE) experiments[41] and RNA-seq data[43] indicate that transcriptional forests represent a general phenomenon in human cells. A prominent category of ncRNAs has emerged from these transcriptional forests composed of sense

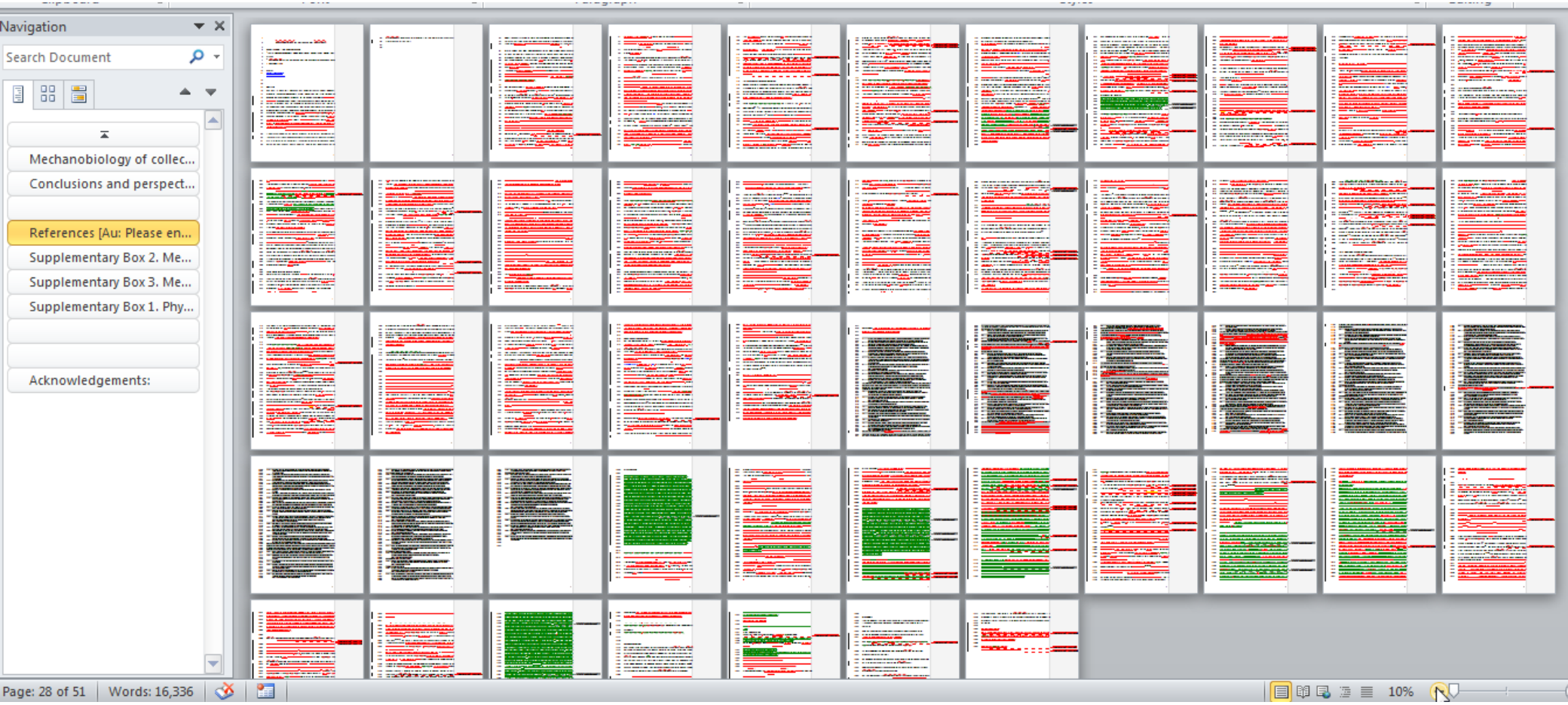
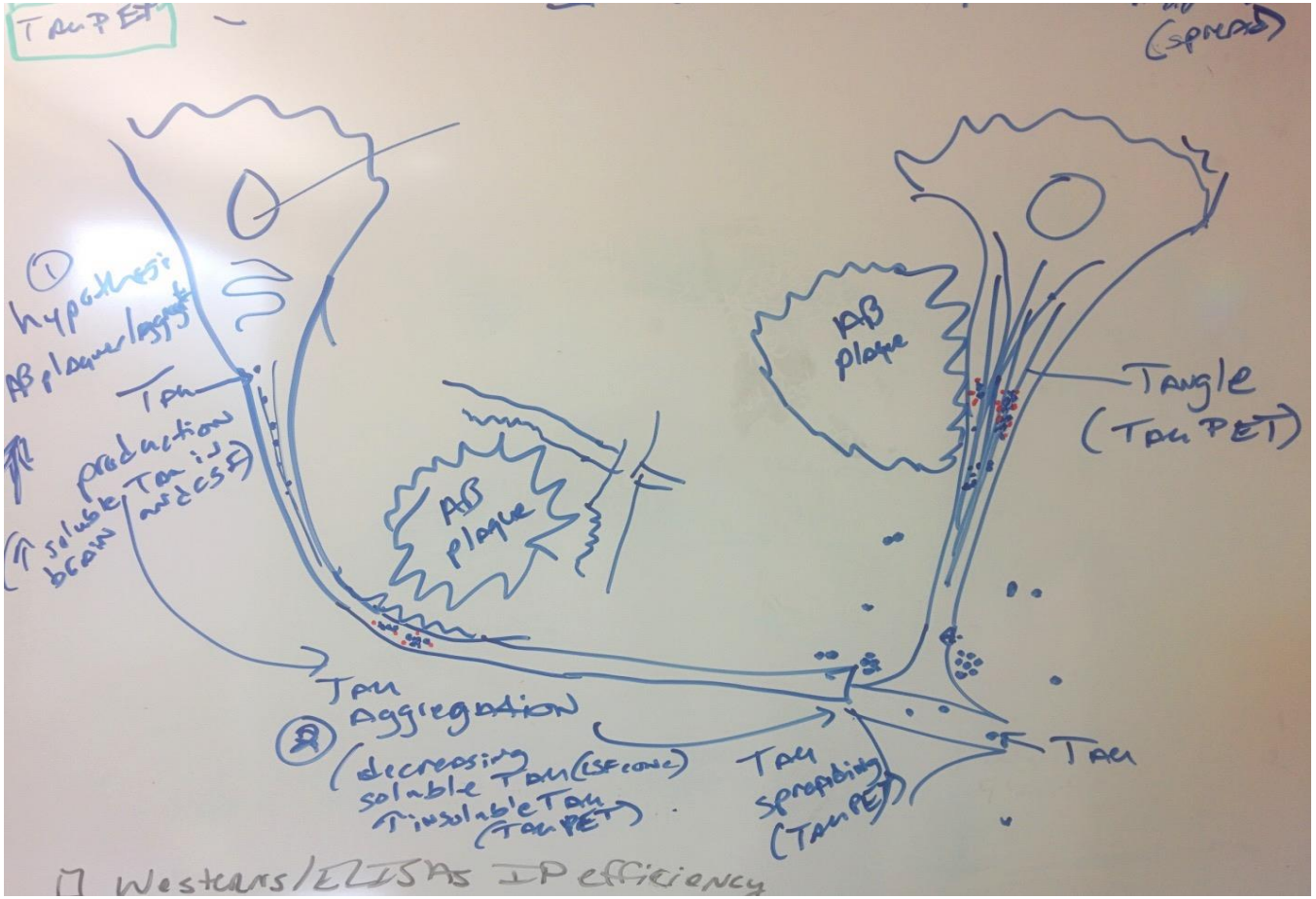
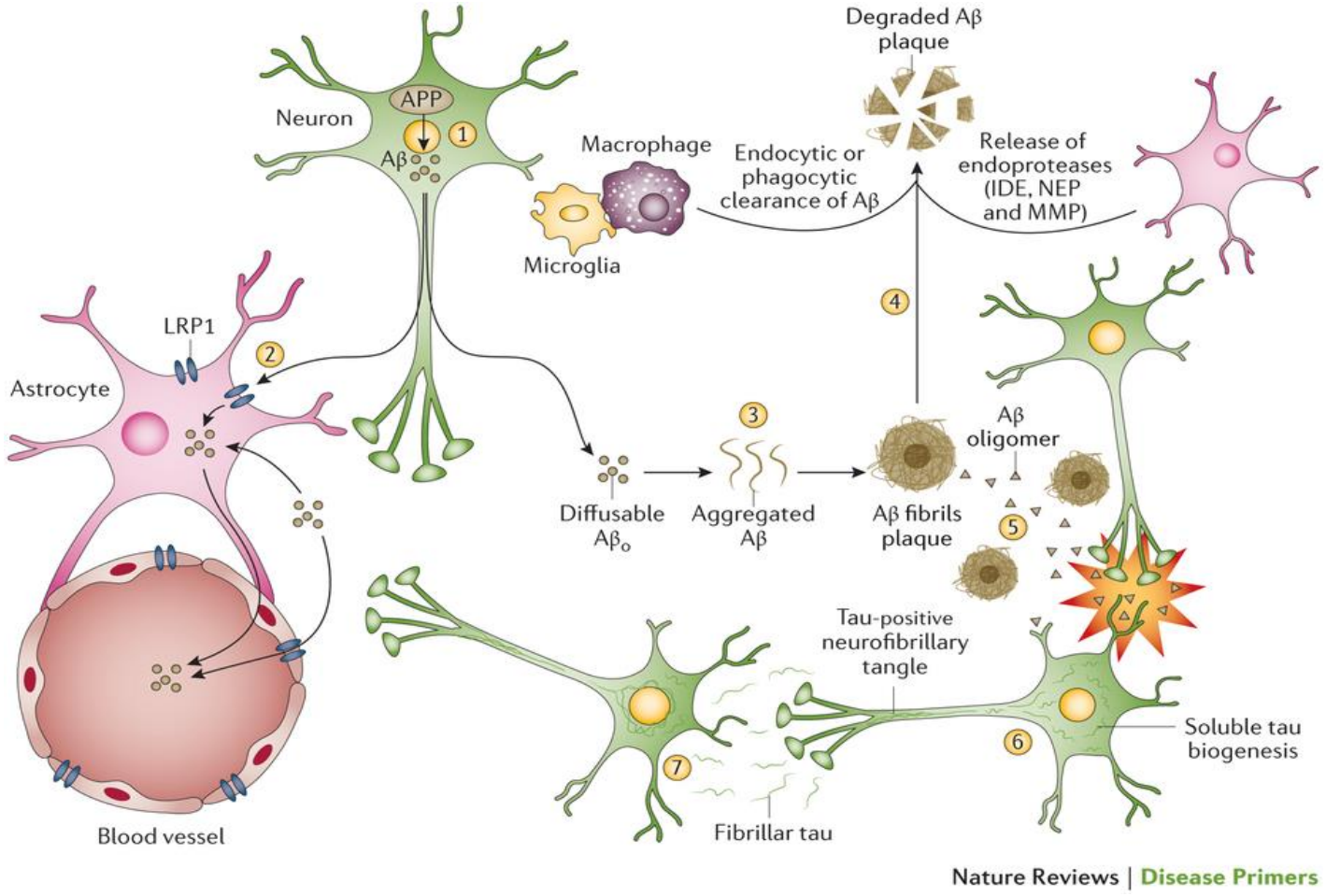

Navigation
Search Document
Mechanobiology of collec...
Conclusions and perspect...
References [Au: Please en...
Supplementary Box 2. Me...
Supplementary Box 3. Me...
Supplementary Box 1. Phy...
Acknowledgements:
Page: 28 of 51
Words: 16,336
10%

Figure development

From this…

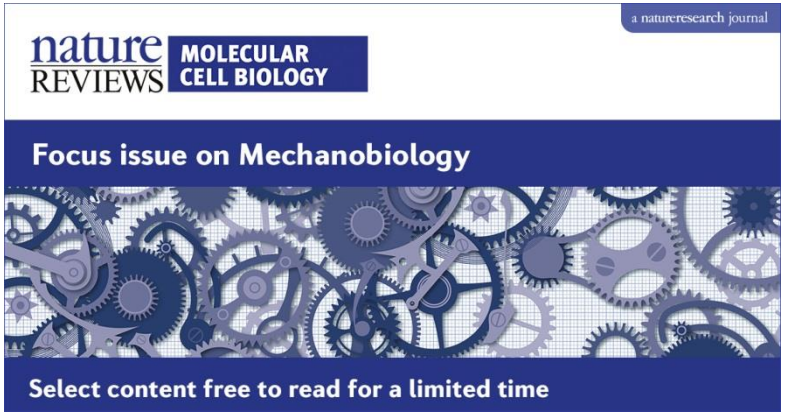


...to this


Degraded Aβ plaque
Neuron
APP
1
Aβ
Macrophage
Endocytic or phagocytic clearance of Aβ
Release of endoproteases (IDE, NEP and MMP)
Microglia
4
LRP1
2
Astrocyte
3
Aβ oligomer
Diffusable Aβo
Aggregated Aβ
Aβ fibrils plaque
5
Tau-positive neurofibrillary tangle
Soluble tau biogenesis
6
7
Fibrillar tau
Blood vessel
Nature Reviews | Disease Primers

What else do Reviews editors do?

- Write research highlights
- Read! Scan the literature to select material for research highlights, get commissioning ideas
- Attend conferences/labs (networking, promote the journal, remain updated)
- Design and execute special projects: focus issues, web collections, posters, animations and podcasts



Key skills for the job

- Broad interest in science
- Strong analytical skills
- Strong science writing skills
- Ability to handle multiple tasks simultaneously, to juggle between projects
- Ability to see ‘the big picture’ (for example emerging themes from individual articles)
- Ability to conceptualize complex problems
- Ability to give and receive feedback
- Confidence in defending your decisions and ideas
- Good eye for detail

Selection process

1. CV + covering letter

- Expert evaluation by the journal team
- Focus on science

2. Editorial test + Interview

In Reviews a two-step process

- Test to complete at home, including all major editorial tasks: editing, commissioning writing => usually to return within 1 week
- Interview with the journal team: your background, interests in science publishing, journal background (focus, scope, recent content, competitors), your test

In primary research journals

- Manuscript test (critical evaluation of real submissions, decision making)
- Interview with the journal team

Career progression

Associate Editor

An Associate Editor is an editor who is still learning aspects of the job and working toward acquiring the skills and experience needed for promotion to Senior editor

Associate Editors undergo a period of initial training of approximately 6 months supervised by a Senior Editor, Team Manager or Chief Editor.

Senior Editor

A Senior Editor is an experienced editor who has mastered all the requirements of the job. Promotion to Senior Editor is merit-based requires formal application. As a guideline, editors should aim to fulfill the promotion criteria within 2 years.

Chief Editor

The Chief Editor is the leader of a journal's editorial team.

Executive Editor

The Executive Editor oversees the editorial direction of multiple titles.

How did I get here?

- **Background**

PhD as a part of DIPP, group of Caren Norden

- **Why publishing?**

I did not feel that I belong in academia (narrow focus, ‘luck factor’, effort not immediately translated to outcome)

But I did not want to lose contact with research

Interest in science writing, analysing research articles

- **Why Reviews?**

Not planned; opportunity-based

The timeline

- **PhD Thesis**

November 2010-November 2014

- **Graduation**

January 2015

- **Applications**

January 2015-June 2015

One response! *Locum* Assistant Editor at NRMCB (6-month contract; maternity cover)

- **Editorial test and interview**

June 2015

Offer within 24 hrs from the interview

- **Job start**

September 2015

- **Contract extensions….**

- **Application for a permanent position**

October 2016

Permanent contract

- **Promotion to Senior Editor**

October 2017

What worked for me?

- Highly relevant background
- Broad exposure to science and research (regular attendance of seminars, travel to international meetings)
- *Locum* position => typically entry jobs; no guarantee of extension
- Ready to make the next step in my career
- A couple of unsuccessful attempts => improving CV and cover letter with each attempt

What do I particularly enjoy about this role

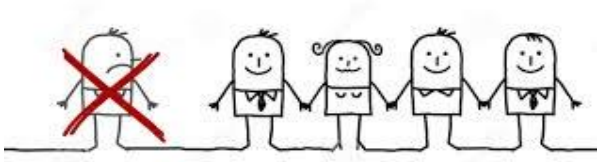
- Very close contact with academia and research
- Work-to-life balance certainly better than in academia
- Highly stimulating job => each day brings something new
- Opportunity to develop many skills
- Direct translation of effort to outcome => you can really see the articles changing and developing!
- Ability to travel
- Rather flexible hours; possibility of working remotely

What are the cons?

"I love deadlines. I love the whooshing noise they make as they go by."

Douglas Adams

- Tight, sometimes unpredictable deadlines (for which authors have a blatant disregard!)
- Disgruntled authors (e.g. with regard to level of editing), referees (e.g. if we overrule their recommendations) or readers
- High pressure
- No role in discoveries



What else to consider?

- There is no course/internship you could take to prepare for this job=> sink or swim
- Not a 9-5 job!
- Most office locations are in expensive, big cities
- Office job
- Very few job opportunities in general + geographical considerations

My personal tips: how to prepare

- Develop and be prepared to demonstrate the breadth of knowledge in a particular discipline => know what is going on and who is 'on top'
- Engage in writing/proofreading opportunities
- Have a go at writing research highlights and ask others for feedback!
- Try to identify bigger topics, overarching themes emerging from literature => What is 'hot' right now? Where is your field going?
- Analyse papers you read => Is the paper good (on scientific and writing level)? If not, why not? What are the shortcomings?

My personal tips: application process

- Look for opportunities as close to your research area as possible => highlight your expertise and knowledge
- Look for *Locum*/temporary positions => less competition! It gives you time to think whether this is really something YOU want to do
- Develop your CV and cover letter => application tailored for a particular position (addressed directly to the chief editor)
- Always have a plan B! => doing a PostDoc* is a good idea

*Although Postdoctoral experience is not mandatory it is often desired (particularly for editorial positions in primary research)

Register your interest in an editorial role at Springer Nature

Talent Pool

- Upload your CV and cover letter to register your interest for Associate and Senior Editor roles
- We will send you an email when we have job opportunities available
- You can then decide whether to apply for a specific position
- Do remember to mention ME in your cover letter☺

Job opportunities and more information

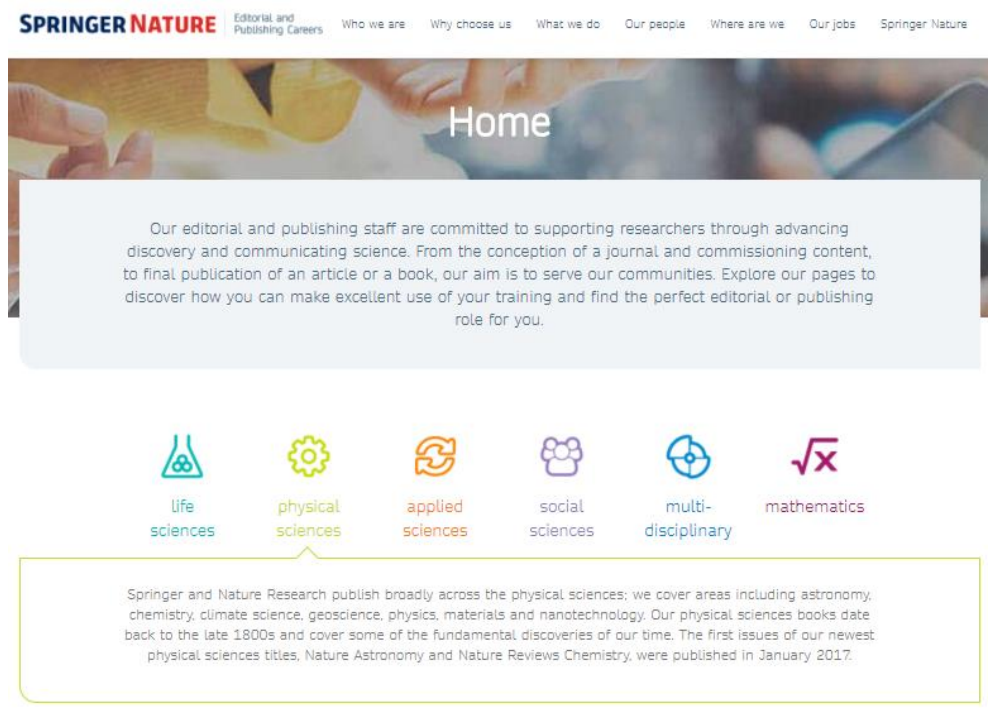
Find out more

All of our editorial and publishing opportunities in the research division are advertised on our website : www.springernature.com/editorial-and-publishing-jobs

Contact

More questions? Ask our Global Editorial Talent Manager Dr Katie Ridd

k.ridd@nature.com



Now hiring in Berlin

Our editorial hub

We're expanding our editorial presence in Berlin to develop and strengthen our relationship with mainland Europe.

- Join us to increase the awareness and value of journal in the region
- Visit key institutes in your field of expertise to develop networks

WE ARE RECRUITING A NUMBER OF EDITORIAL AND PUBLISHING ROLES IN BERLIN

ADVANCING DISCOVERY

Thank you

Any questions?

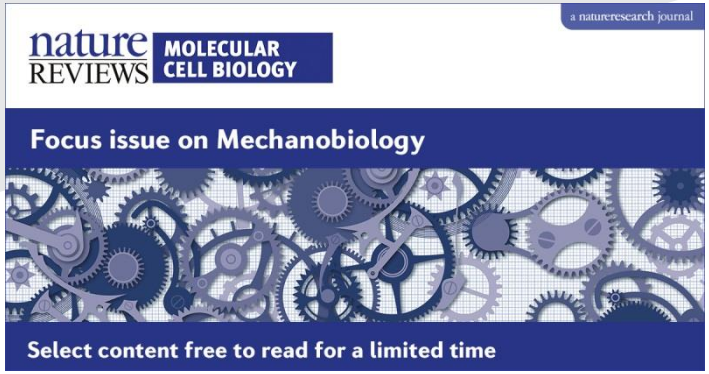
Paulina Strzyz

paulina.strzyz@nature .com

@NatureRevMCB |
facebook.com/NatureReviews

nature.com/nrm | springernature.com

Focus on Mechanobiology!



The story behind the image

How chameleons change colour

Chameleons are well known for their potential to change colour but recent research on panther chameleons is the first to find two layers of crystal containing cells, each with a potentially different purpose. Researchers from the University of Geneva have speculated that the deeper crystal containing cells may help with the regulation of temperature, whilst the more superficial layer of colour changing cells could be responsible for camouflage or mating displays.

nature research

Nature Research Group - Editorial and Publishing Job Family Anchor Roles

Overview of career levels/bands

Job Family Discipline	Individual Contributor							Management				
	Business Support		Professional									
	Entry	Competent	Entry	Advanced Beginner	Competent	Specialist	Expert	Supervisor	Manager	Senior Manager	Group Manager	Snr Group Manager
Journals Editorial					Associate Editor	Senior Editor		Team Manager/Leader	Chief Editor Chief Editor, Nature/NComms	Executive Editor		Editorial Director
Editorial Admin	Editorial Assistant	Senior Editorial Assistant						Editorial Assistant Team Leader	Editorial Administration Manager	Head of Editorial Administration		
Magazines Editorial					Associate Editor Reporter	Senior Editor Senior Reporter			Chief Editor	Managing Editor	Executive Editor	Editorial Director
Subediting & Copy Editing			Copy/Sub Editing Assistant	Associate Copy/ Sub Editor	Senior Copy/ Sub Editor			Copy/Sub Editing Team Leader	Copy/Sub Editing Manager	Managing Copy/ Sub Editor		
Editorial Technical & Support							Head of Editorial Policy			Head of Editorial Services	Head of Researcher Services	
Publishing			Publishing Assistant	Associate Publishing Manager	Publishing Manager	Senior Publishing Manager	Head of Publishing (Specific area)			Head of Publishing, NRG Journals	Publishing Director	
Art & Multimedia												
Art Editing				Assistant Art Editor	Art Editor	Senior Art Editor			Managing Art Editor	Creative Director		
Design				Assistant Designer	Designer	Art Director		Designer	Art Director			
Multimedia			Multimedia Intern		Associate Multimedia Editor	Senior Multimedia Editor			Chief Multimedia Editor	Managing Multimedia Editor		

SPRINGER NATURE

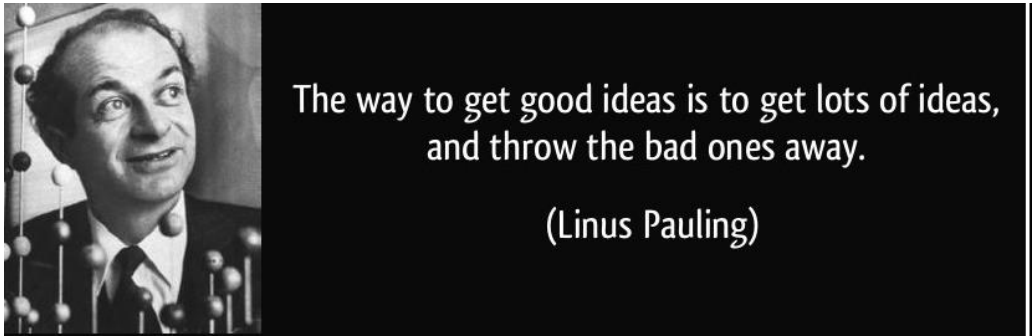
The need for Reviews

- They help to digest and analyse the primary literature
- An invaluable teaching tool
- Useful for grant writing
- They provide an introduction to new fields; can inspire future research; can connect different fields
- Some of the most interesting concepts emerge in Reviews; they provide an opportunity to reflect on the development of a research field

(a service to the research community -- rewarding…)

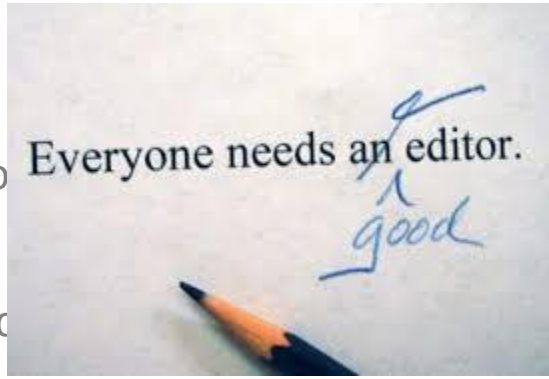
Commissioning: what do we consider?

- Current hot topics (and likely future hot topics)?
- Are there areas or topics that require an update?
- Current controversies?
- What would be the scope of the proposed article?
- Is now the right time to commission this article?
- Do we have another article in the pipeline that will overlap?
- Who would be a good author?



Editing a Review into shape

- Does the title match the content?
- Does the author give a good introduction?
- Is the article in a logical order, or do sections need to
- Does the text flow well from one section to the next (tell a story)?
- Is the author's meaning clear and do sentences make sc sense?
- Does the author insightfully synthesize existing data?
- Do the figures work?
- Is the text properly referenced?
- Is the review too long or too short?



Peer review and decisions

- All back-half content (except Viewpoints) is peer reviewed
- Reviewers (especially if representing different expertise) will often disagree with each other, and some issues are subjective: our job is to guide the author in terms of which comments are (and are not) essential to address
- Editors discuss and make decisions based on arguments; we don't simply count votes
- Editors, not reviewers, ultimately decide what is published in all *Nature*-branded journals, and take full responsibility for decisions
- Rejection is rare but does happen – even for invited reviews

Recognizing what makes a good review

The ‘killer’ Review: summarizing a field at exactly the right time, with a truly original perspective; an article that generates a shift in perspective.