International Society
ISCT
Cell & Gene Therapy

Manuscript Writing and Editing Workshop

Registered ESP and Student Attendees Only

Saturday May 7, 2022

Co-sponsored by the ISCT ESP Committee and Cytotherapy Editorial Board

8:30 – 8:35	Welcome and introductions
8:35 – 9:15	Writing an abstract that pops!
9:15 – 9:55	Manuscript tips and tricks
9:55 – 10:10	Coffee Break
10:00 – 10:45	Submitting to Cytotherapy
10:45 – 11:30	So you were asked to be a reviewer; now what?
11:30 – 12:00	Close and networking

Welcome!

International Society ISCT Cell & Gene Therapy

Objective:

To arm ESPs and students with the tools to enhance their own manuscript preparation skillset, and to provide opportunities to further understand what it means to be a peer reviewer for national and international publications

Welcome!

International Society ISCT Cell & Gene Therapy

Objective:

To arm ESPs and students with the tools to enhance their own manuscript preparation skillset, and to provide opportunities to further understand what it means to be a peer reviewer for national and international publications

International Society
ISCT
Cell & Gene Therapy

Agenda

Welcome and introductions

Writing an abstract that pops!

Manuscript tips and tricks

Coffee Break

Submitting to Cytotherapy

So you were asked to be a reviewer; now what?

Close and networking

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

- **Abstracts must include:**
  - The context or scope of the field relevant to your research topic
  - The central thesis or statement of your research
  - An establishment of what's known in the field about your specific topic
  - The rationale for your research
  - Your technical or analytical methods
  - Main findings and results that support your thesis
  - The significance or implications of your abovementioned findings
    - Do not overstate the impact of your results unless supported by data!

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

- How is a conference abstract different from a manuscript abstract?

- Conferences are often focused on a specific topic so one can be less stringent with the background
- Conference presentations may involve work in progress and as such the final conclusions may be more open ended.
- The conference abstract may be written before most of the work has actually been done and therefore "advertises" what might come.
- The conference contribution often is in the form of an oral presentation or poster and therefore abstracts may contain varying levels of finalized conclusions.

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

- **Exercise 1: Let's read through a top-scoring abstract and highlight why it excelled:**

TWIST1 and *TSG6* as Potency Biomarkers of Human MSCs in Pre-clinical Disease Models

[1,5]Ryang-Hwa Lee, [2,5]Siddaraju V. Boregowda, [1]Taeko Shigemoto-Kruda, [3,5]Luis A. Ortiz,[4,5]Donald G. Phinney

[1]Institute of Regenerative Medicine, Texas A&M University, College Station, TX; [2]Epic Bio, South San Francisco, CA; [3]Department of Environmental Health, University of Pittsburgh, Pittsburgh, PA; [4]Department of Molecular Medicine, The Scripps Research Institute, Jupiter, FL; [5]CellCue Inc., Jupiter, FL

Session 1: **Writing an abstract that pops!**

International Society ISCT Cell & Gene Therapy

Background & Aim:

Mesenchymal stem/stromal cells (MSCs) have been evaluated in over 1000 clinical trials, but patient outcomes have been disappointing when compared to results in pre-clinical models. Variables including patient-based factors, MSC donor source, and manufacturing practices all impact trial outcomes. To better inform clinical studies, we previously identified *TWIST1* as a biomarker that predicts inter-donor differences in the growth, multi-potency and pro-angiogenic activity of human MSC (hMSCs) populations, and independently identified *TSG6* as a biomarker that predicts inter-donor differences in hMSC anti-inflammatory activity.

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

Methods & Results:

Herein, we demonstrate that TWIST1 represses *TSG6* expression via direct promoter binding, that *TWIST1* and *TSG6* expression are inversely correlated in multiple hMSC donor cohorts (r = 0.826, p = 0.0003), and that *TWIST1* and *TSG6* positively and negatively correlate, respectively, with the height and weight of human donors. To confirm this relationship, we show that *TWIST1* positively correlates with growth/CFU-F activity and negatively correlates with *in vitro* immuno-suppressive activity of hMSC donors (N=8) while the opposite is true for *TSG6*. Additionally, we quantified *TWIST1* levels in hMSC donors (N=7) whose potency in a sterile inflammation model was positively correlated with *TSG6* levels and show that *TWIST1* negatively correlates with donor potency (r= -0.777, p=0.0395). Lastly, we evaluated hMSC donors (N=6) in a murine model of adoptive transfer of autoimmune Type I Diabetes and showed that *TWIST1* (r = -0.8514, p = 0.0315) and *TSG6* (r = 0.885, p = 0.002) negatively and positively correlated, respectively, with T cell-mediated immune responses in this model.

Session 1: **Writing an abstract that pops!**

International Society ISCT Cell & Gene Therapy

Conclusion:

These studies identify two functionally related biomarkers that reliably predict inter-donor differences in the potency of hMSCs in pre-clinical models of inflammatory and immune-mediated diseases. Therefore, these biomarkers may be used to pre-screen hMSC donors prior to patient administration to match their potency to the appropriate disease indication and inform how large-scale manufacturing practices impact the potency of clinical grade MSC products. By demonstrating intrinsic differences in donor potency in these pre-clinical models, our findings challenge the paradigm that interaction with the host microenvironment dictates MSC potency *in vivo*, and by doing so highlights the importance of donor selection and manufacturing processes in the design of clinical trials.

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

Strengths:

- Topic clearly (and quickly) defined
- Problem clearly outlined
- Background studies briefly outlined to frame study objectives
- Data (but not too much)
- Conclusions succinctly stated along with potential broader impacts in field

Weaknesses:

- Graphic abstract?
- Too complicated (for audience)
- Others?

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

- **Exercise 2 (time permitted): In your groups, try to identify <u>what doesn't work</u> in the below abstract**

We report for the first time the effect of anti-CRMPT-A CAR-T cells as the most potent therapeutic for tea-itis. Using predictive modeling we predicted the binding affinities for single chain variable fragment CRMPT-A vs. CRMPT-B and validated the *in silico* results in mouse models. Indeed, the increased helical elements in isoform A yielded a decreased EM and S, and resultant stress was correspondingly negligible. Additionally, we determined the size of CRMPT-A cells by SEM to be <6um, which is a known prognostic indicator of a favorable product. CRMPT-A CAR-T cells demonstrated increased infiltration into teapots, and exhibit enhanced cytotoxicity (85 +/- 7 % vs. 40 +/- 4%) as compared to unmodified T cells. In conclusion, CRPMT-A CAR-T cells are effective.

Session 1: Writing an abstract that pops!

International Society ISCT Cell & Gene Therapy

- Discussion: identify what doesn't work in the below abstract

Context/background/rationale?

We report for the first time the affect of anti-CRMPT-A CAR-T cells as the most potent therapeutic for tea-itis. Using predictive modeling we predicted the binding affinities for single chain variable fragment CRMPT-A vs. CRMPT-B and validated the *in silico* results in mouse models. Indeed, the increased helical elements in isoform A yielded a decreased EM and S, and resultant stress was correspondingly negligible. Additionally, we determined the size of CRMPT-A cells by SEM to be <6um, which is a known prognostic indicator of a favorable product. CRMPT-A CAR-T cells demonstrated increased infiltration into teapots, and exhibit enhanced cytotoxicity (85 +/- 7 % vs. 40 +/- 4%) as compared to unmodified T cells. In conclusion, CRPMT-A CAR-T cells are effective.

Punchline?

Welcome and introductions

Writing an abstract that pops!

Manuscript tips and tricks

Coffee Break

Submitting to Cytotherapy

So you were asked to be a reviewer; now what?

Close and networking

Session 2: Manuscript Tips and Tricks

International Society ISCT Cell & Gene Therapy

- **A good manuscript should be clear and accessible for Editors:**
  - **Be in the scope of the desired journal**
    - **Research other published articles, get a pulse on current hot topics in recent publications/abstract, understand readership**
  - **Follow the specific Author Guide for the desired journal**
    - **Adheres to accepted article type/formatting, is prepared according to text and reference and illustration guidelines, uses appropriate language for journal**
  - **Adhere to publication ethics**
    - **Avoid plagiarism of self/others, ensure work to be submitted is unique and not under review elsewhere, appropriately cite and acknowledge all co-authors/contributors**

Roughly 35% of all submitted manuscripts are rejected BEFORE peer review! Make sure you revise before you submit!

Session 2: Manuscript Tips and Tricks

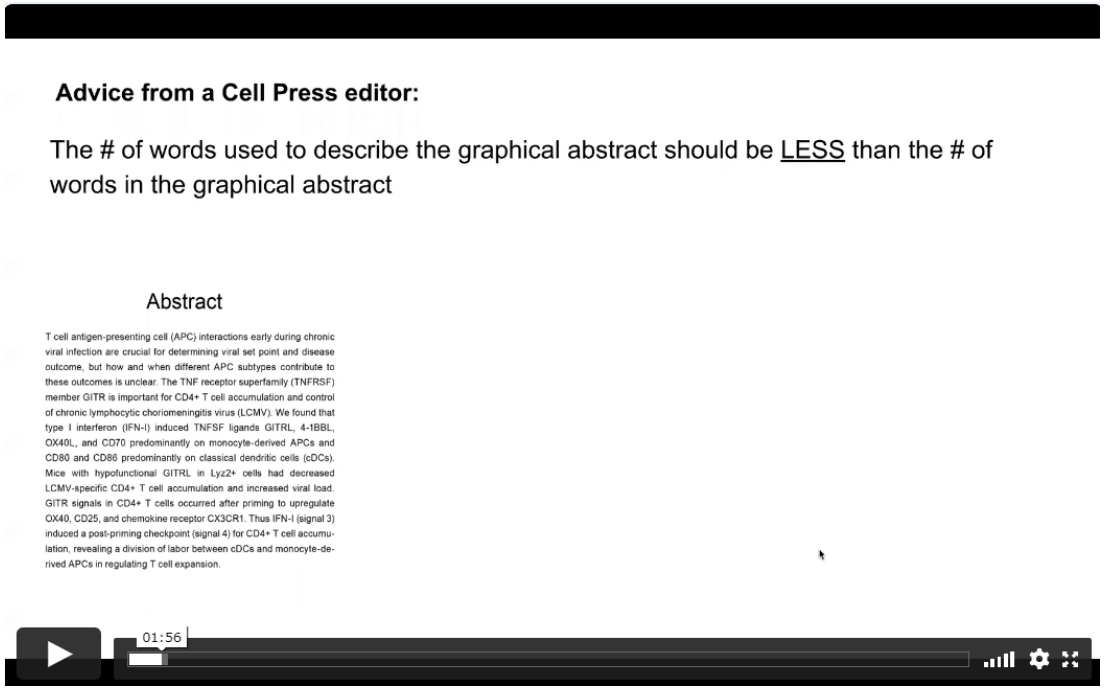
International Society ISCT Cell & Gene Therapy

- Paramount to a good manuscript is efficient and supportive illustrations
  - Figures and tables are often the most clear and concise way to present results
  - Results are the driving force of the publication
  - Captions and legends must be detailed enough to make figures and tables stand-alone and self-explanatory
  - There can be no duplication of results as described in other illustrations/text
- Illustrations are rapidly gaining favor as a way to enrich and expand the utility of research
  - Figure 1 schematics/overview, graphical abstracts

Session 2: Manuscript Tips and Tricks

International Society ISCT Cell & Gene Therapy

- How to produce a valuable visual abstract or schematic
  - Introduce the context of your research
  - Showcase your methodology
  - Explain the main outcome of your work and/or impact to the field



1:57 – 41:00; https://learn.biorender.com/tutorial/designing-graphical-abstracts

Shiz Aoki; BioRender Learning Hub

International Society
ISCT
Cell & Gene Therapy

Agenda

Welcome and introductions

Writing an abstract that pops!

Manuscript tips and tricks

Coffee Break

Submitting to Cytotherapy

So you were asked to be a reviewer; now what?

Close and networking

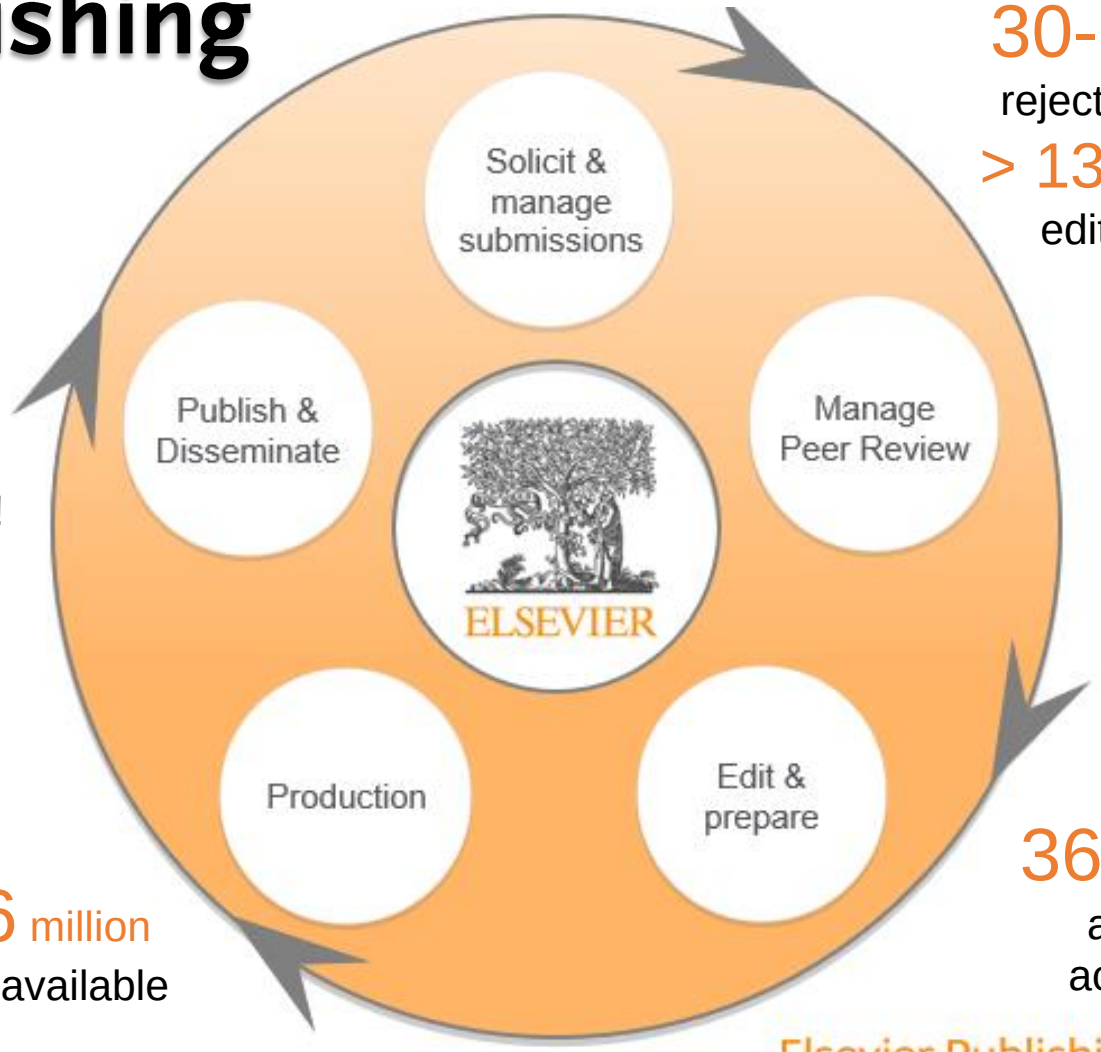
Session 3: Submitting to Cytotherapy

International Society ISCT Cell & Gene Therapy

Academic Publishing

30-60% rejected by > 13,000 editors

>700 million downloads by >11 million researchers in >120 countries!



557,000+ reviewers

12.6 million articles available

365,000 articles accepted

Elsevier Publishing Campus

General Structure of your article

International Society ISCT Cell & Gene Therapy

- Title
- Abstract
- Keywords

- Introduction
- Methods
- Results and Discussion

- Conclusion
- Acknowledgements
- References
- Supporting Materials

Building the article

International Society ISCT Cell & Gene Therapy

Effective Manuscript Titles

- Attract reader's attention with fewest possible words
- Adequately describe content
- Identify main issue

Abstract

- Summarizes the problem, methods, results, and conclusion in a single paragraph
- Interesting and understandable
- Accurate, Specific, Brief

Keywords

- Labels of the manuscript
- Used by Indexing & abstracting services
- Should be specific and only use established abbreviations

Authorship

- ***Follow the ICMJE criteria***
- ***Consistency***
- ***First author + Corresponding author***
- ***AVOID: Ghost & Gift authorship***

Highlights section is optional but highly encouraged for Cytotherapy articles to enhance discoverability!

Article title	Keywords
"Current protocols and clinical efficacy of human fetal liver cell therapy in patients with liver disease: A literature review"	cell therapy; cirrhosis; EpCAM; fetal stem cells; Obstetrics; progenitors

Building the article

International Society ISCT Cell & Gene Therapy

Introduction

- Provide a brief context to the readers
- Address the problem
- Identify solutions / limitations
- Identify what work is trying to achieve
- Provide a perspective consistent with Journal

Write a unique introduction for every article. Do not reuse!

Methods

- Describe how the problem was studied
- Include detailed information
- Do not describe previously published procedures
- Identify the equipment and materials used

Ethics committee approvals

- *Experiments on humans or animals must follow applicable ethics standards*
- *Approval of the local ethics committee is required and should be specified in the manuscript, cover letter, or online submission system*
- *Editors can make their own decisions on ethics*
- *Reporting guidelines now exist for must study types: https://www.equator-network.org/reporting-guidelines/.*

Building the article

International Society ISCT Cell & Gene Therapy

Results

- Include only data of primary importance
- Use sub-headings to keep results of the same type together
- Be clear and easy to understand
- Highlight the main findings
- Feature unexpected findings
- Provide statistical analysis
- Include illustrations and figures

Discussion

- Interpretation of the results
- Most important section
- Make the discussion correspond to the results and complement them
- Compare published results with your own

In Discussion, be careful not to use:

- ***Statements that go beyond what results can support***
- ***Non-specific expressions***
- ***New terms not already defined/mentioned***
- ***Speculations on possible interpretations based on imagination***

Building the article

International Society ISCT Cell & Gene Therapy

Conclusion

- Be clear and provide justification for the work
- Explain how your work advances the present state of knowledge
- Suggest future experiments

Acknowledgements

- Advisors
- Financial supporters and funders
- Proofreaders and typists
- Suppliers who donated materials

References

- Don’t use too many
- Avoid excessive self citations and citations of publications from the same region or institute
- Conform to the style given in the Guide for Authors

Open Access

International Society ISCT Cell & Gene Therapy

- *Cytotherapy* supports 2 types of Open Access
- ISCT members do receive a discount on the APC

	Gold Open Access	Green Open Access
Access	▪ Free public access to the final published article ▪ Access is immediate and permanent	▪ Free public access to a version of your article ▪ Time delay may apply (embargo period)
Fee	▪ Article publishing charge (APC) is paid	▪ No fee is payable by the author, as costs are covered by library subscriptions
Use	▪ Determined by your user licence	▪ Authors retain the right to use their articles for a wide range of purposes ▪ Open versions of your article should have a user license attached
Options	▪ Open access journal ▪ Hybrid journal	▪ Link to your article ▪ Selected journals feature open archives ▪ Self-archive a version of your article

Submitting your paper

International Society ISCT Cell & Gene Therapy

Purpose of Peer Review

- Assesses the originality and significance of the work
- Improves the quality of the submitted manuscript
  - Design, Statistics, etc.
  - Layout, presentation, etc.
- Ensures previous work is acknowledged both in text and reference list
- Highlights any ethics concerns

Ethics for Authors: the essentials

- Be wary of self-plagiarism
- Don't submit a paper to more than one journal at a time
- Don't send an incomplete paper just to get feedback
- Always include and/or acknowledge all co-authors (and communicate with them that you've submitted the paper)
- Always note sources of funding
- State any potential conflicts of interest
- If you are using data sets gathered by someone else, check that you have permissions to use them in your article

You've Been Accepted – Now what?

International Society ISCT Cell & Gene Therapy

Paper Accepted

- You will receive a formal acceptance email from Editor. All files are transferred to production.

Paper Received in Production

- If any additional info/files are required, you will be contacted. You will also receive a link to the forms you will need to complete.

Proofs Created

- We begin creating the proof. You will receive an estimate for when your proofs are expected to be ready via email.

Proofs ready for Author Approval

- When proofs are ready, you will receive instructions about how to access and submit corrections.

Corrections submitted

- All corrections should be included before you submit to Proof Central.

Paper Is Finalized

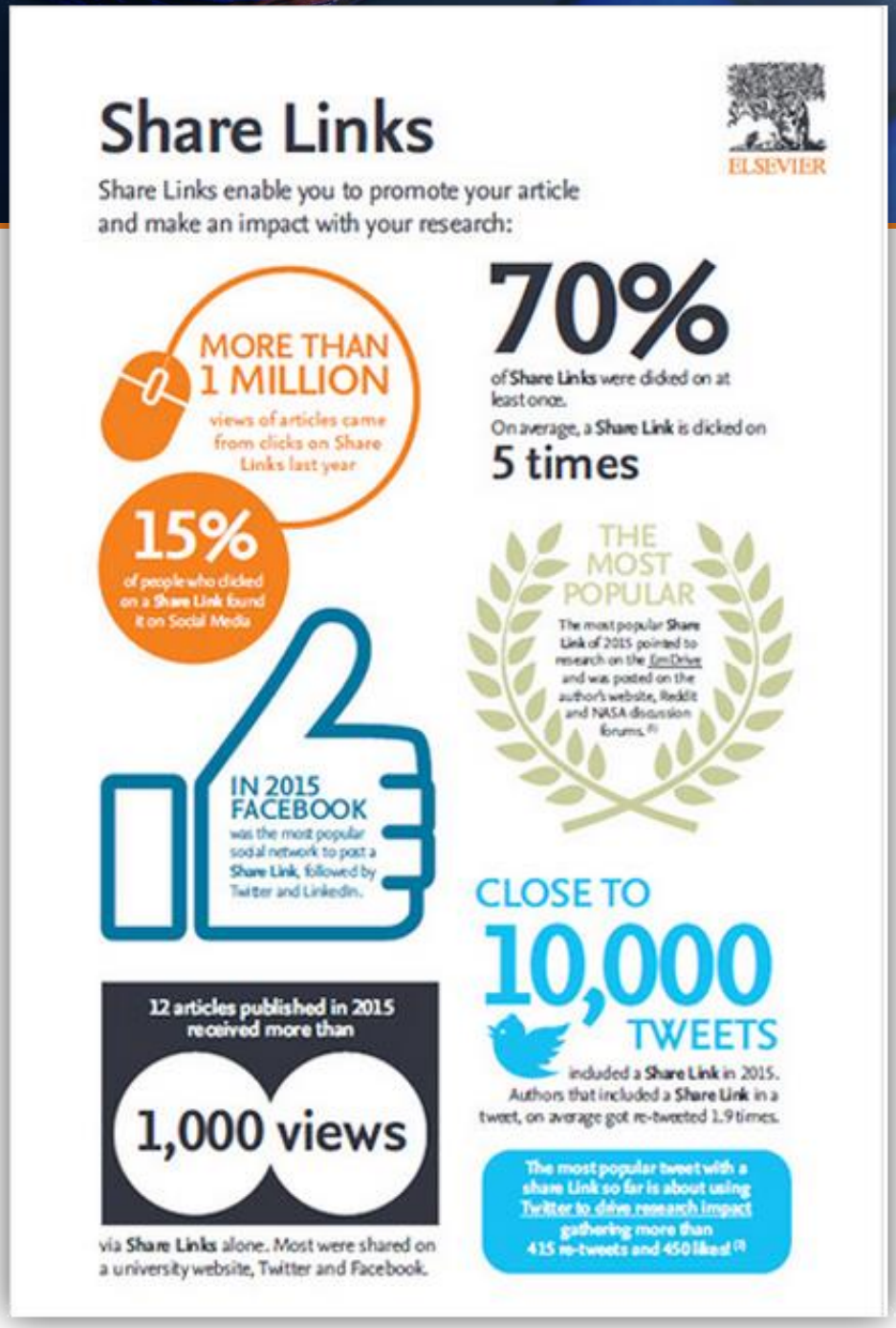
- Your corrections are incorporated, and you will receive confirmation when your paper is finalized. You will be provided with guidance on how to cite your paper.

Issue is Finalized

- When your paper is finalized, you will receive your Sharelink for your paper via email.

Promoting your article

International Society ISCT Cell & Gene Therapy



1. Conferences
   - Prepare to network / connect online
   - Poster sessions / presentations
2. Media Relations
   - Press Release
   - Your institution's communication channels
3. Sharing widely
   - Share via a customized link that provides access
     - university & personal websites, social media, email signature
   - ORCID
   - Mendeley
     - Scholarly collaboration network with fully searchable library

Monitoring your article

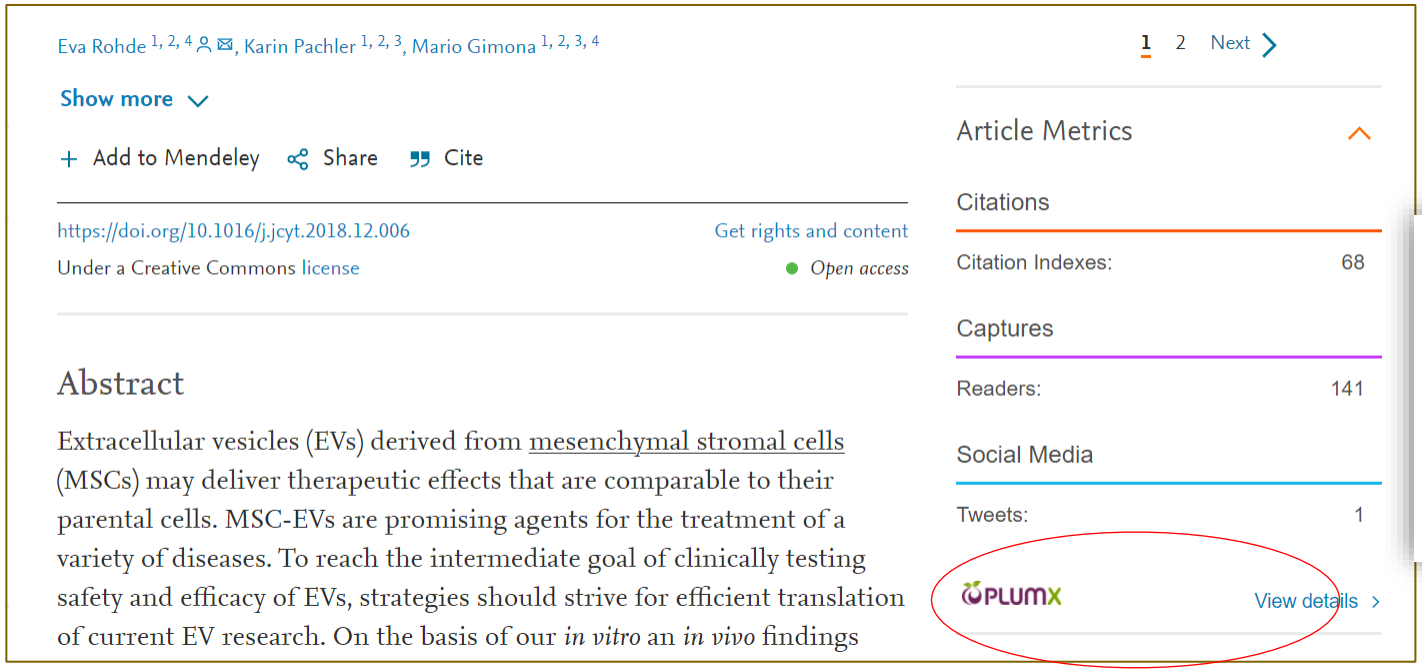
International Society ISCT Cell & Gene Therapy

Elsevier's free Article Tracking Service

- Personalized homepage for all *Cytotherapy* articles & articles published with Elsevier
- View bibliographic info and Scopus citation counts

PlumX

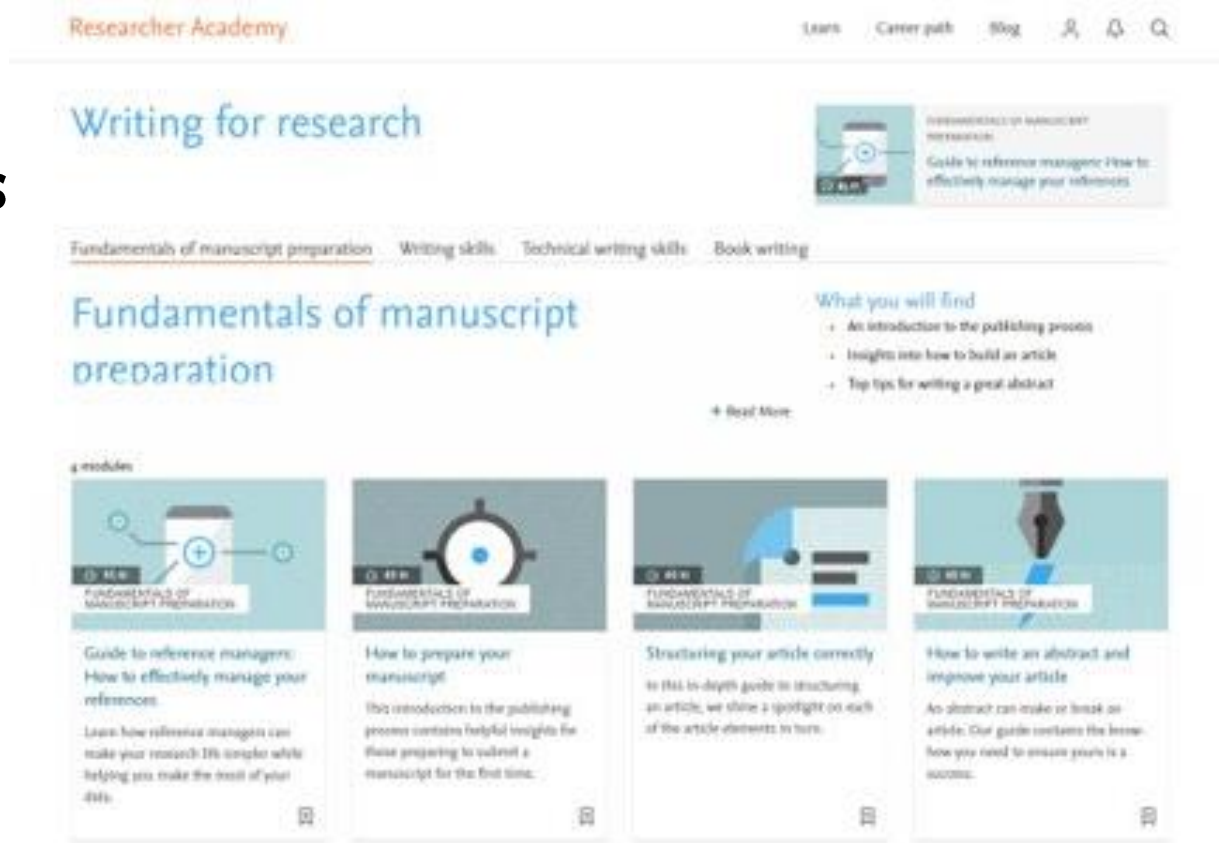
- Tracks social media mentions, Mendeley readers, and citations
- Can be viewed online for any article



Researcher Academy

International Society ISCT Cell & Gene Therapy

- https://researcheracademy.elsevier.com/
- Certified Peer Review Course
- Free e-learning platform with modules including:
  - Research data management
  - Funding
  - Manuscript preparation / Writing skills
  - Open science
  - Ethics
  - Social impact
  - I&D for Researchers
  - *And much more!*



International Society
ISCT
Cell & Gene Therapy

Agenda

Welcome and introductions

Writing an abstract that pops!

Manuscript tips and tricks

Coffee Break

Submitting to Cytotherapy

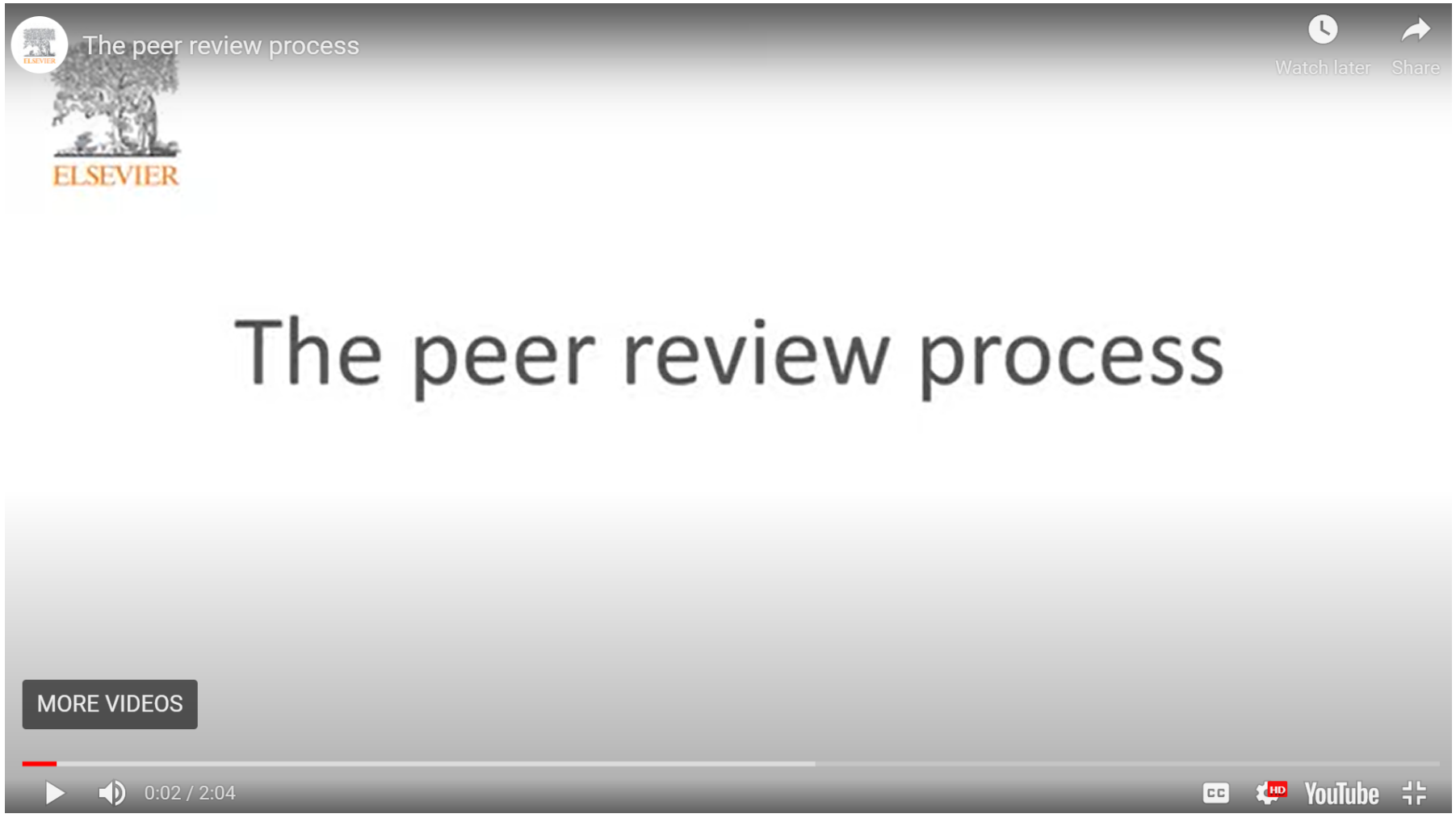
So you were asked to be a reviewer; now what?

Close and networking

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- The Peer Review Process video (2 min)



Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- What should you consider before accepting or declining an invitation to be a reviewer for an article?
  - Does this topic suit my area of expertise?
  - Is there any potential conflict of interest?
  - Do I have the bandwidth to get this done within the current timeline?
  - Am I comfortable/do I understand what being a reviewer entails? ← let's help with this one!
  - It's important to communicate your decision in a timely manner so the editorial team can move forward
- How does the reviewer process work/what's your approach to reading a manuscript to review (if different than reading a manuscript for other purposes)?
- How many comments are too much? Too little? Too nitty gritty?
- Get a sense for what the paper is about and then check that the experiments support the hypothesis or the conclusions

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Reading a manuscript as a review may look different than reading a manuscript for other purposes
- As a reviewer, it's important to look for:
  - Clear statement of objectives/hypotheses and the importance of the research question being addressed
  - Originality of thought and contribution of the findings to the field
  - A clear link between the author's interpretation of their results and their conclusions
    - Are they clearly supported by the data presented in the manuscript?
  - Are data sets presented with appropriate statistical power?
  - Is the methodology clear and easy to follow (could an independent scientist repeat?)
  - Are the figures accurate, a reflection of the raw data, and are the appropriate controls presented?
  - Is there any reason to suggest that the data/figures have been manipulated in any way?

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- **Important considerations:**
  - Appropriate statistics?
  - Does the paper flow?
  - Does the introduction provide sufficient background and a statement of the problem/rationale for the work done?
  - How many replicates were done for each experiment? Did they cherry pick data? Are the experiments designed in a way to accurately characterize the data? [Example – Figure 1 expansion, Figure 2 phenotype – same cells?]
  - Does the title match the data? Does the title use hyperbole or sensationalism?

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- After evaluating a manuscript as a whole, take a step back and assess the article for:
  - **Originality**: Is the work original and does it make a further contribution to what is already in the published literature?
  - **Quality**: Is the research question or hypothesis clearly defined and appropriately answered? Are the claims justified?
  - **Quantity**: Is there enough experimentation/results to substantiate the authors' claims?
  - **Readability**: Is there a way to improve readability if needed? Is the central point obscured?

AAAS Peer Review Guidelines

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

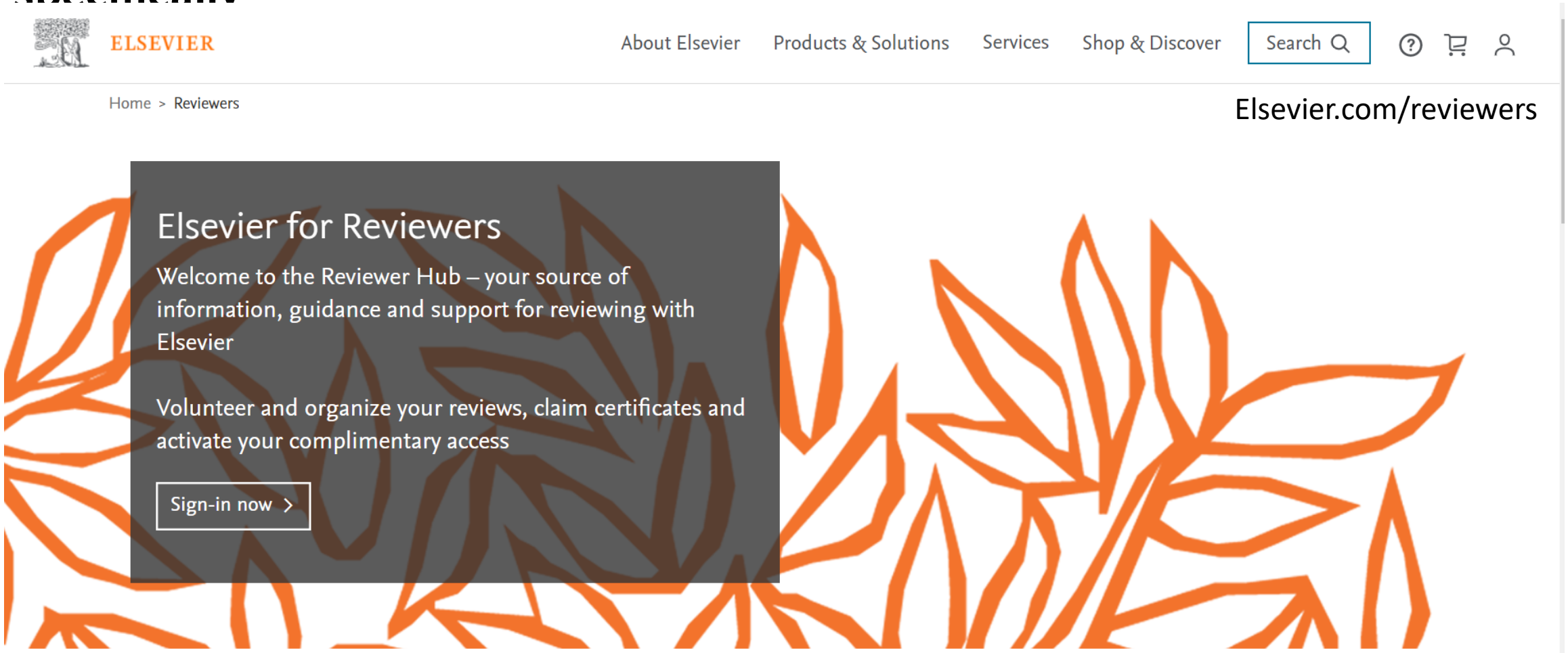
- How do you form your responses and structure your review?
  - Restate the title and first author and give a BRIEF summary of the manuscript.
  - State what you liked about the paper – strengths, flow of the paper, that it is relevant to the field and novel
  - State high level weaknesses of the paper (too few replicates, lacking key experiments, etc)
  - Provide point-by-point critiques to address
  - I use third person to make it more objective

- How many comments are too much? Too little? Too nitty gritty?

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Discussion points about being a reviewer for Cytotherapy specifically



Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- **Exercise 1: Together let's read and improve on some ways to write a constructive peer review:**

"The authors don't seem to know what they are writing about. They don't have appropriate references to the literature on this subject matter"

AAAS, PLOS, Elsevier resources

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Together let's read and improve on some ways to write a constructive peer review:

"The authors don't seem to know what they are writing about. They don't have appropriate references to the literature on this subject matter"

"This study falls short at addressing how the main findings relate to the current state of research in this area. The authors should revise their Introduction to include an assessment of the field including references to the related literature, for instance the recently published work by Bobson et al. and Smith et al."

AAAS, PLOS, Elsevier resources

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Together let's read and improve on some ways to write a constructive peer review:

"Figure 5A: It was a big mistake that the authors didn't include a Western blot in their assessment of protein expression"

AAAS, PLOS, Elsevier resources

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Together let's read and improve on some ways to write a constructive peer review:

"Figure 5A: It was a big mistake that the authors didn't include a Western blot in their assessment of protein expression"

"Figure 5A: The authors are trying to make conclusions about protein expression levels, but would benefit from additional experiments, particularly, Western blots, to more accurately demonstrate the varied protein expression in their construct. Alternately, the authors should include more information that clarifies and justifies their current choice of methods"

AAAS, PLOS, Elsevier resources

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Together let's read and improve on some ways to write a constructive peer review:

"The authors make statements in the Discussion section that are blatantly false. Please remove"

AAAS, PLOS, Elsevier resources

Session 4: You're a Reviewer; now what?

International Society ISCT Cell & Gene Therapy

- Together let's read and improve on some ways to write a constructive peer review:

"The authors make statements in the Discussion section that are blatantly false. Please remove"

"On line X in the Discussion, the authors state that _____ is the conventional understanding of how these cells work. However, multiple reports such as those by Barney et al. and Bert et al. state that in fact these cells _____. Can you comment on this disparity?"

AAAS, PLOS, Elsevier resources

International Society
ISCT
Cell & Gene Therapy

Agenda

Welcome and introductions

Writing an abstract that pops!

Manuscript tips and tricks

Coffee Break

Submitting to Cytotherapy

So you were asked to be a reviewer; now what?

Close and networking

International Society
ISCT
Cell & Gene Therapy

Thank You!

Cytotherapy

Donald Phinney, PhD - Senior Editor

Patrick Hanley, PhD – Commissioning Editor

Rachel Burga, PhD – Assistant Editor

Ande Nichols – Publisher

Felix Grignon – ISCT Liaison

Associate Editors

Editorial Board

ESP Committee

Emily Hopewell, PhD – Co-chair

Kevin Bosse, PhD – Co-chair

Rachel Burga, PhD – Co-chair elect

Meagan Patsternak – ISCT Liaison

Follow us @Cytotherapy @ISCT_ESP