

Scientific Writing

Writing High Impact Papers

Module 1

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Module 1: Literary Genre

Module 2: Structure 1: *Abstract*

Module 3: Structure 2: *Introduction*

Module 4: Structure 3: *Results and Discussion, Conclusion*

Module 5: Style, Language 1: Complexity Problems 1

Module 6: Language 2: Complexity Problems 2, Rhythm

Module 7: Language 3: *Plain English and Topic Sentences*

Module 8: Manuscript Submission, The Editorial Process

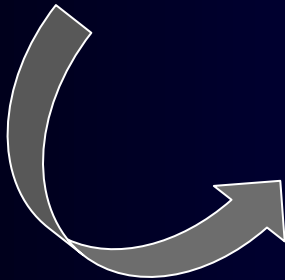
Module 1

Why?, What?, When?....

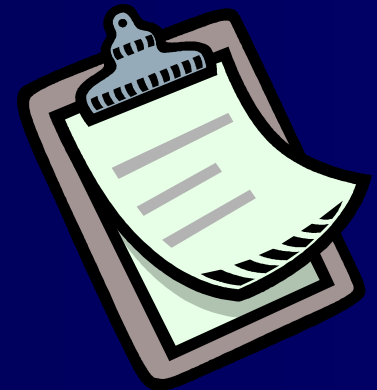
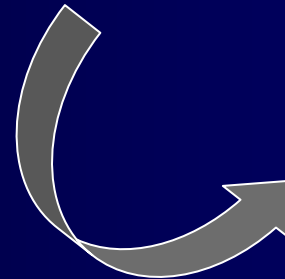
What do scientists do?

Publication is one of the most important steps
of the scientist's work

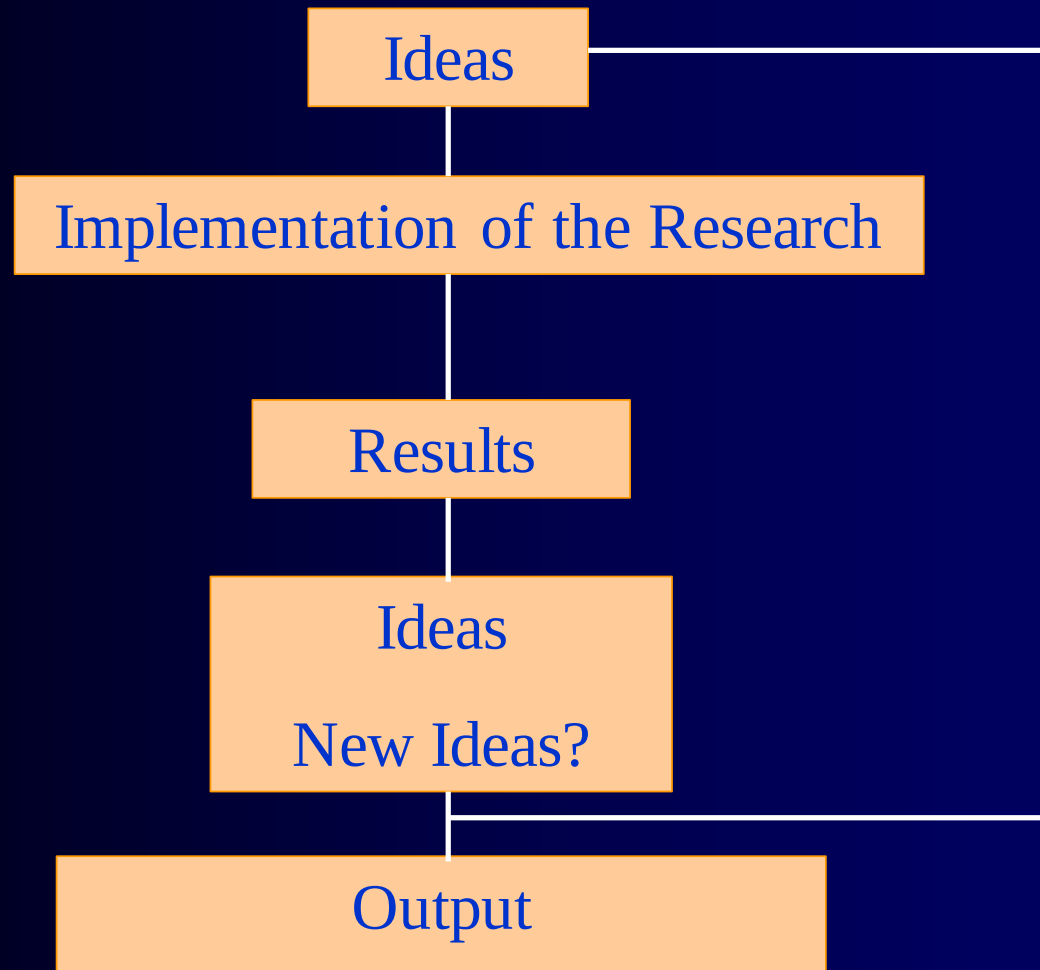
Scientists Publish Ideas!!



Scientific Method /
Hypothesis testing



When the initial
question/problem/hypothesis
had been answered/solved/tested !!!!!



Interesting....

2013: A new scientific paper is published every
20 s

Science, 2013

1. General Considerations

Scientific writing as a Literary Genre

In the very beginning....

- Informal Letters exchanged by scientists.
- **1665**: Creation of the first scientific periodical: *The Philosophical Transactions of the Royal Society*.

This new arena for discussion led to the development of
a new genre:

The Scientific Report

The main characteristics of Scientific Writing



Who will read your paper?

Highly technical journal vs. less specific ones.

What terms will you have to define?

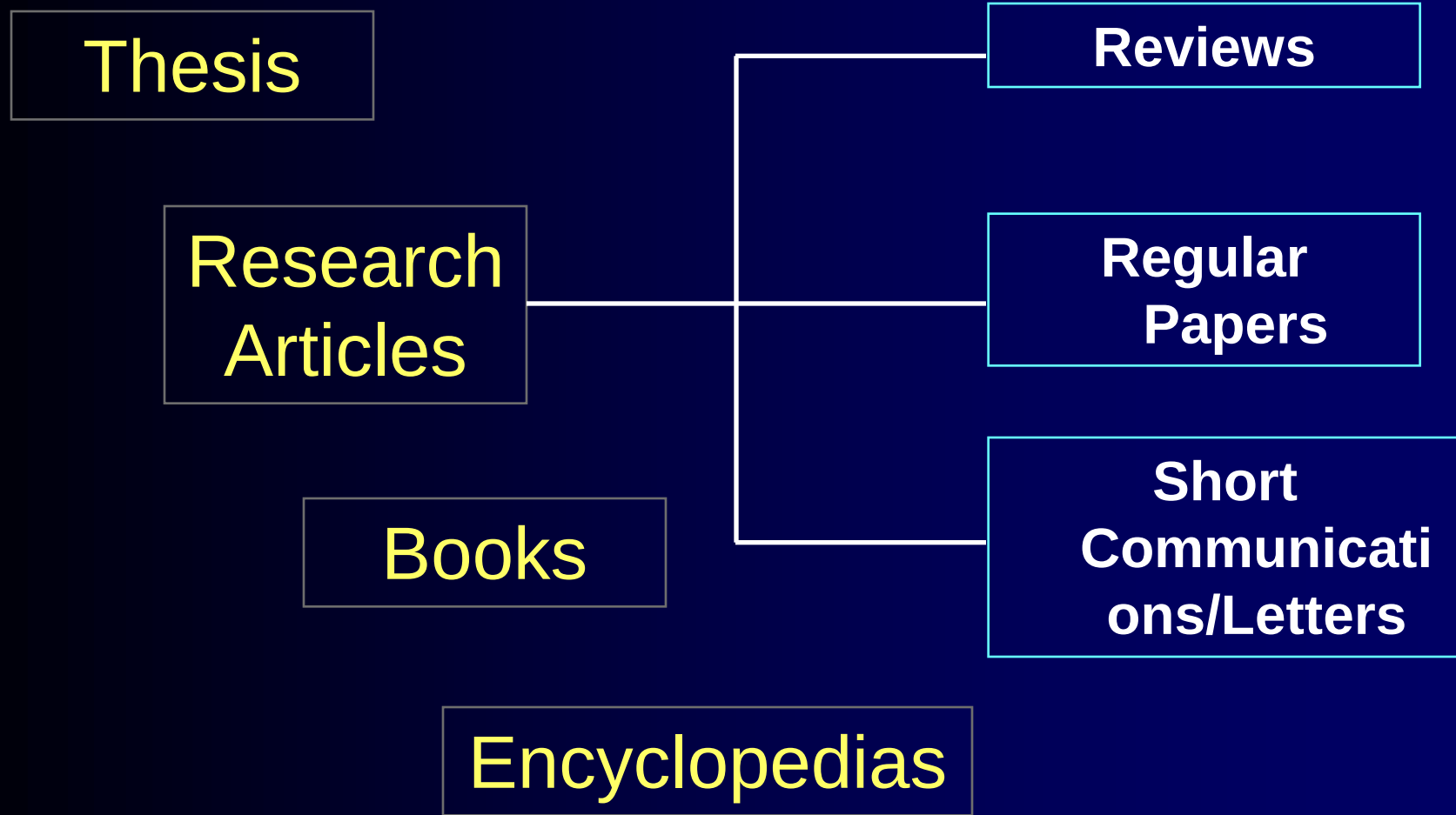
Background information included

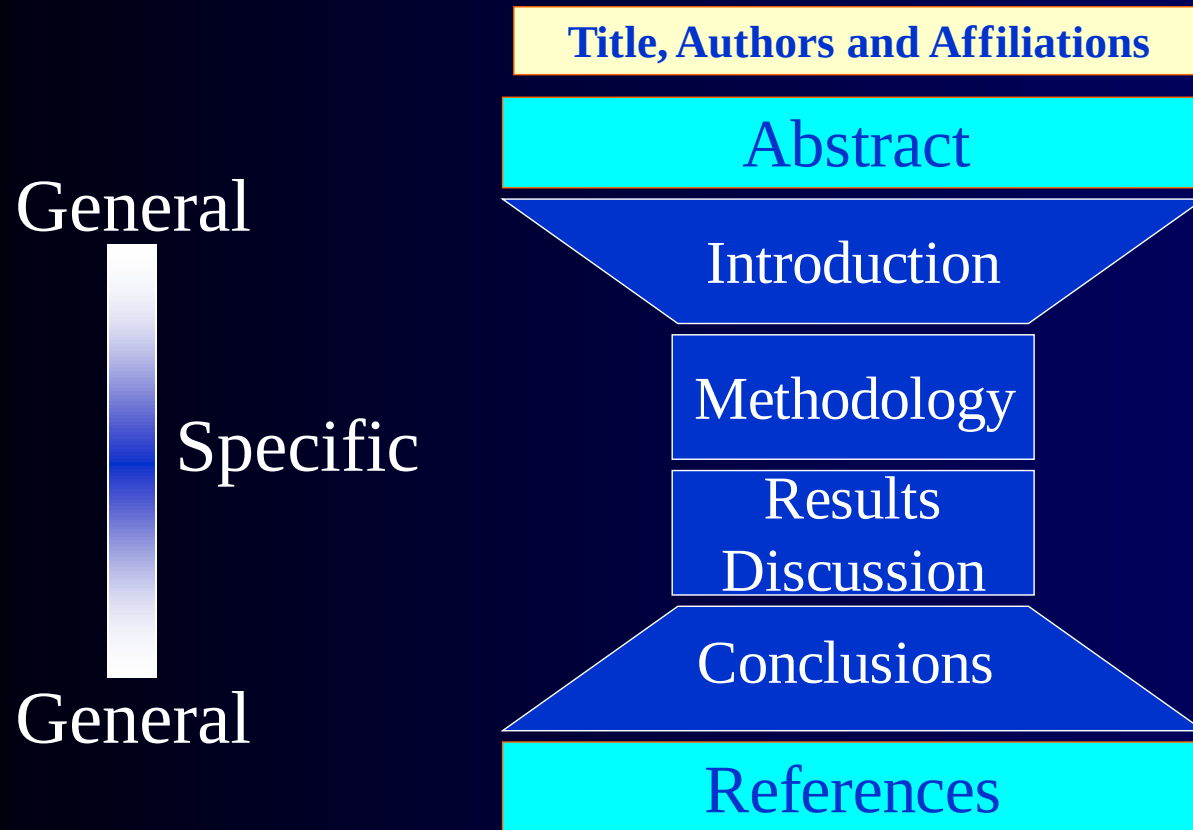
**All information or ideas must
be referenced!**

Including your own work

Provide the reader with your most important findings/contributions since the very beginning

2. *Sections of a Regular Paper*





Adapted from: Hill et al., Teaching ESL students to read and write experimental papers, TESOL Quarterly, 16: 333, 1982:

A good Title describes the contents of the paper

Function: to attract reader's attention

Use specific words strongly associated with the outcome of the paper: **Keywords**

A well-written Title is concise and clear:
Use the **minimum** number of words.

Rewrite the title in the final version of the paper.

History

:

The Sugar Trade: Brazil, Portugal and the Netherlands (1595-1630)

AMERICAN HISTORICAL REVIEW ,119 (5), 1631-1634, 2014

Did patents of introduction encourage technology transfer? Long-term evidence from the Spanish innovation system

CLIOMETRICA , 8 (1), 49-78, 2014

Tariffs and income: a time series analysis for 24 countries

CLIOMETRICA , 7 (3), 207-235 , 2013

Geo

:

*People as sensors: Mass media and local
temperature influence climate change
discussion on Twitter*

GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS , 30, 92, 2015

Education

:

*Dimensional Comparison Theory: Paradoxical
relations between self-beliefs and
achievements in multiple domains*

LEARNING AND INSTRUCTION , 35, 16-32, 2015

Law

:

*Getting to Rights: Treaty Ratification,
Constitutional Convergence, and Human
Rights Practice*

HARVARD INTERNATIONAL LAW JOURNAL , 54 (1), 61-95, 2013

Social

:

From Vigilance to Busyness: A Neo-Weberian Approach to Clock Time

SOCIOLOGICAL THEORY , 31 (3), 243-266 , 2013

Commitment to business ethics in UK organizations

European Business Review, Vol. 24 Iss: 4, pp.331 – 350, 2012.

The effect of forest land use on the cost of drinking water supply: A spatial econometric analysis

Ecological Economics, 92, 126–136, 2013

Emphasize your key findings whenever possible

Title:

NLRP6 negatively regulates innate immunity and host defence against bacterial pathogens

Nature, 2012, doi:10.1038/nature11250

*Factors influencing accountants' behavioural intentions
to use and actual usage of enterprise resource planning
systems in a global development agency*

Journal of Financial Reporting and Accounting, Vol. 11 Iss: 2, pp.179 – 200, 2013.

Be concise:

The following phrases do not add any useful information:

A Report of a Case of...

The Treatment of...

A Study of...

The Effects of...

Who are the authors of a paper?

Guidelines to define authorship:



Authorship credit should be based on

- 1) Substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- 2) Drafting the article or revising it critically for important intellectual content; and
- 3) Final approval of the version to be published.

Authors should meet conditions 1, 2, and 3.

Sources: -Scientific Writing, Easy When ou Know How, Peat, J., Elliot, E., Baur, L., Keena, V.,
BMJ Books, 2009

-Int. Committee of Medical J. Editors, Ann. Intern. Med., 1997, 126, 36.

All authors must be able to present/discuss/defend the paper.

1. The citation-sequence system

References are numbered in the order they appear in the text.

Examples

“....However, recent reports have been made on the fabrication of ultrathin films of metallic phthalocyanines and polyelectrolytes via the electrostatic layer-by-layer technique (LBL).¹⁰

(10) Lutt, M.; Fitzsimmons, M. R.; Li, D. Q. *J. Phys. Chem. B* **1998**, 102, 400.

2. The name-year system

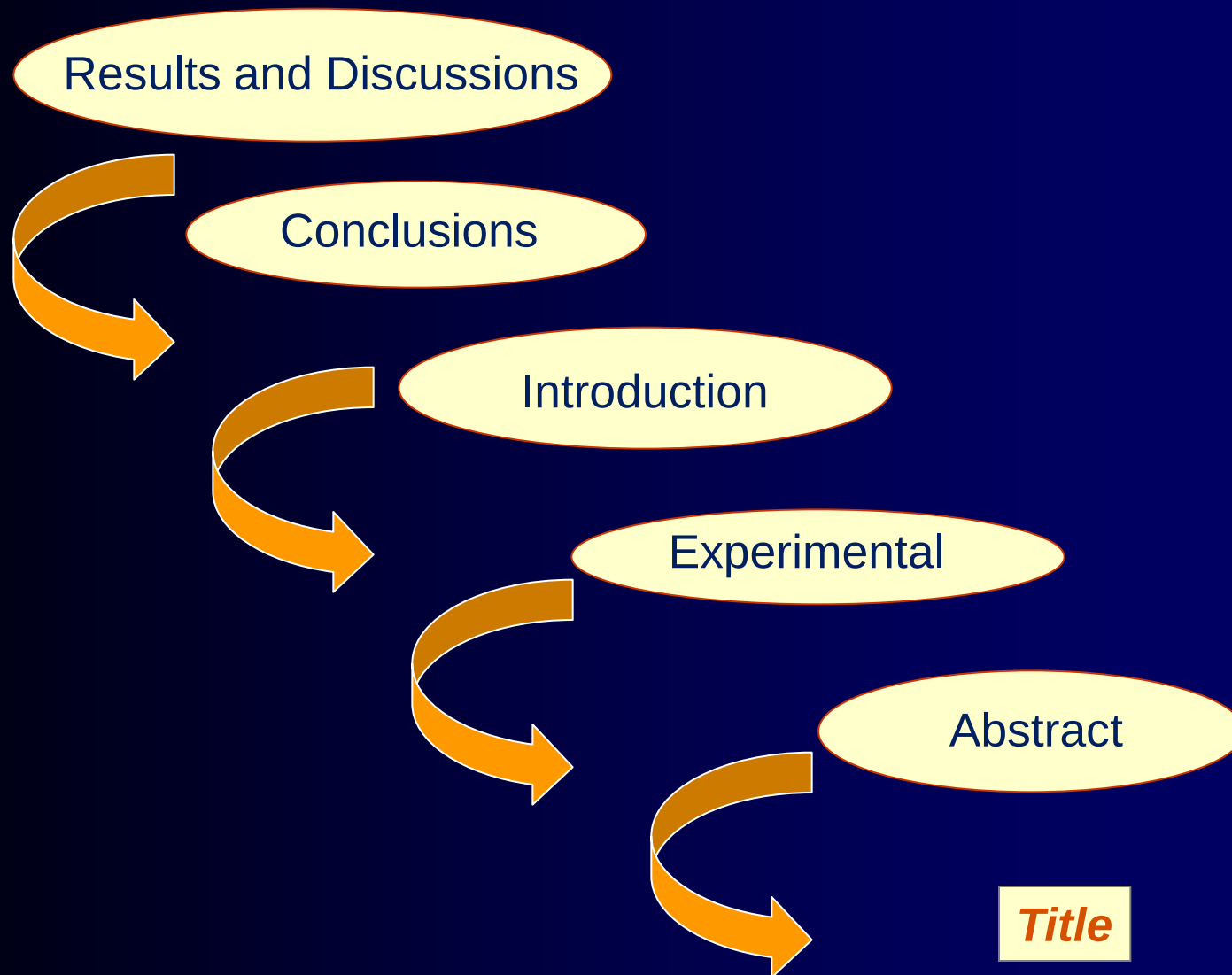
References are listed alphabetically, using the first author's last name.

Examples

“....The layer-by-layer (LbL) technique has been largely employed in the immobilization of proteins and other biomolecules following the pioneering work of Lvov et al. [Lvov et al., 1993; Lvov et al., 1995]....”

Lvov, Y., Ariga, K., Ichinose, I., Kunitake, T., 1995. Assembly of protein films by means of electrostatic layer-by-layer multicomponent adsorption. J. Am. Chem. Soc. 117, 6117- 6123.

Lvov, Y., Decher, G., Sukhorukov, G. 1993. Assembly of Thin Films by Means of Successive Deposition of Alternate Layers of DNA and Poly(allylamine). Macromolecules 26, 5396-5399.



**Final version of a paper translated into
English**



You may cite others' words, data, etc. using your own words;

Do not paraphrase other author's text

Do not paraphrase your early papers.

From the Editors of ACS Journals:

*Recycling Is Not Always Good: The
Dangers of Self-Plagiarism*, ACS Nano, 6 (1), 1–4, 2012

- 1. The Importance of Writing in a Scientist's Life*
- 2. What is a Scientific Paper?*

-Introduction to Journal-Style Scientific Writing:

<http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWgeneral.html>

-<http://www.inter-biotec.com/biowc/style.html>

-Scientific Writing, Easy When ou Know How, Peat, J., Elliot, E., Baur, L., Keena, V., BMJ Books, 2009

-Hill et al., Teaching ESL students to read and write experimental papers, TESOL Quarterly, 16: 333, 1982:

-Int. Committee of Medical J. Editors, Ann. Intern. Med., 1997, 126, 36.

Prof. Zucolotto as a Scientific Editor

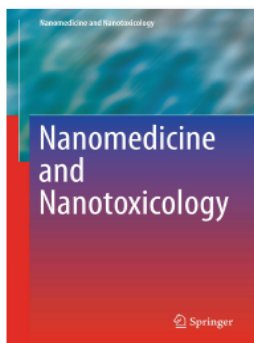
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Prof. Valtencir Zucolotto, Associate Editor

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springer.com



Nanomedicine and Nanotoxicology

Series Ed.: Zucolotto, Valtencir

Nanomedicine and Nanotoxicology" is a book Series dedicated to the application of nanotechnology to achieve breakthroughs in healthcare as well as its risks and impact on the human body and environment. This book Series welcomes manuscripts on in vivo and in vitro diagnostics to therapy including targeted delivery, magnetic resonance imaging (MRI) and regenerative medicine; interface between nanomaterials (surfaces, particles, etc.) or analytical instruments with living human material (cells, tissue, body fluids); new tools and methods that impact significantly existing conservative practices; nanoparticles interaction with biological systems, and their risk assessments; among others.

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