ENHANCING THE VISIBILITY AND IMPACT OF YOUR RESEARCH

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Overview

• What is research impact (RI)?
• What are some strategies for enhancing RI?
  • Preparing for Publication
  • Dissemination
  • Keeping Track of Your Research
• How can I document and report RI?
WHAT IS RESEARCH IMPACT?
What is research impact?

Research impact “describes the effects and outcomes, in terms of value and benefit,” as a result of research outputs.

Why do we need to think about research impact?

- Quantify and document research impact
- Justify future requests for funding
- Quantify return on research investment
- Discover how research findings are being used*
- Identify similar research projects
- Identify possible collaborators
- Determine if research findings are duplicated, confirmed, corrected, improved or repudiated
- Determine if research findings were extended (different human populations, different animal models/species, etc.)
- Confirm that research findings were properly attributed/credited
- Demonstrate that research findings are resulting in meaningful health outcomes
- Discover community benefit as a result of research findings
- Progress reports
- Tenure
- Promotion dossiers

https://becker.wustl.edu/impact-assessment/model
STRATEGIES FOR ENHANCING RESEARCH IMPACT

Preparing for Publication
Dissemination
Keeping Track of Your Research
STRATEGIES FOR ENHANCING RESEARCH IMPACT

Preparing for Publication
Who are you?  
Where do you work?  
What do you do?  

• Authors should use the same variation of their name consistently throughout their academic careers.  
• Use a standardized institutional affiliation and address, using no abbreviations.  

• Add the name of study in the title of all publications and use the same title/name consistently.  

Consistency enhances retrieval.
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Consider Corporate/Group Authorship

Add the name of the research study or your center, institute, division or program as a corporate author and use the same name consistently.

- Helps with the process of tracking research output by a given group, or related to a specific project.
- Clinical trials and scientific research teams are already using the corporate author concept - for example, the Ocular Hypertension Treatment Study Group [see listing in PubMed](https://www.ncbi.nlm.nih.gov/pubmed).
- In cases where publications allow the list of everyone in the collaboration within the text of the article, PubMed lists the specific names listed within the corporate name under a "collaborators" link.
Assign **Medical Subject Headings (MeSH)** terms as keywords in the manuscript. (Contact your health sciences library for assistance with MeSH terms.)

Formulate a concise, well-constructed title and abstract. Include crucial keywords and abbreviations in the abstract.
Optimizing Your Article for Search Engines

Poorly Optimized Abstract:
Differential Glutamate Dehydrogenase Activity Profile in Patients with TLE
Summary: Purpose: Pathophysiologic mechanisms underlying TLE are still poorly understood. One major hypothesis links alterations in energy metabolism to glutamate excitotoxicity associated with seizures in TLE. The purpose of this study was to determine whether changes in the activities of enzymes critical in energy and neurotransmitter metabolism contributed to the alterations in metabolic status leading to the excitotoxic effects of glutamate.
Methods: Activities of four key enzymes involved in energy metabolism and glutamate cycling in the brain [aspartate aminotransferase (AAT), citrate synthase (CS), glutamate dehydrogenase (GDH), and lactate dehydrogenase (LDH)] were measured in anterolateral temporal neocortical and hippocampal tissues obtained from three different groups of medically intractable epilepsy patients having either MTLE, PTLE, or MaTLE, respectively.
Results: We found that activity was significantly decreased in the temporal cortex mainly in the MTLE group. A similar trend was recognized in the hippocampus of the MTLE. In all three patient groups, this activity was considerably lower, and AAT and LDH activities were higher in cortex of MTLE as compared with the corresponding activities in hippocampus (p < 0.05). In the MTLE cortex and hippocampus, GDH activities were negatively correlated with the duration since the first intractable seizure.
Conclusions: Our results support the hypothesis suggesting major alteration in activity mainly in the MTLE group. It is proposed that significant alterations in the enzyme activities may be contributing to decreased metabolism of glutamate, leading to its accumulation.

Well-Optimized Abstract:
Differential Glutamate Dehydrogenase (GDH) Activity Profile in Patients with Temporal Lobe Epilepsy
Summary: Purpose: Pathophysiologic mechanisms underlying temporal lobe epilepsy (TLE) are still poorly understood. One major hypothesis links alterations in energy metabolism to glutamate excitotoxicity associated with seizures in TLE. The purpose of this study was to determine whether changes in the activities of enzymes critical in energy and neurotransmitter metabolism contributed to the alterations in metabolic status leading to the excitotoxic effects of glutamate.
Methods: Activities of four key enzymes involved in energy metabolism and glutamate cycling in the brain [aspartate aminotransferase (AAT), citrate synthase (CS), glutamate dehydrogenase (GDH), and lactate dehydrogenase (LDH)] were measured in anterolateral temporal neocortical and hippocampal tissues obtained from three different groups of medically intractable epilepsy patients having either mesial, paradoxical, or mass lesion associated temporal lobe epilepsy (MTLE, PTLE, MaTLE), respectively.
Results: We found that GDH activity was significantly decreased in the temporal cortex mainly in the MTLE group. A similar trend was recognized in the hippocampus of the MTLE. In all three patient groups, GDH activity was considerably lower, and AAT and LDH activities were higher in cortex of MTLE as compared with the corresponding activities in hippocampus (p < 0.05). In the MTLE cortex and hippocampus, GDH activities were negatively correlated with the duration since the first intractable seizure.
Conclusions: Our results support the hypothesis suggesting major alteration in GDH activity mainly in the MTLE group. It is proposed that significant alterations in the enzyme activities may be contributing to decreased metabolism of glutamate, leading to its accumulation.

This abstract appears on the first page of results in Google for GDH+epilepsy.
Know (and retain!) Your Rights

- Retain rights to manuscripts that allow for maximum flexibility to re-use the work. Some rights include:
  - Post on an institutional website such as a laboratory or research study website
  - Post on an institutional or subject repository
  - Present the work at a meeting or conference
  - Distribute copies to colleagues
  - Include the work in a thesis or dissertation
  - Prepare derivative works

- WU Customized Copyright Addendum: [http://becker.wustl.edu/forms/WUaddendum-form.html](http://becker.wustl.edu/forms/WUaddendum-form.html)
Translational Medicine

If your work involves potential translational medicine applications, include a discussion of how the research could translate to clinical outcomes.

- Impact of journal articles will be improved if they provide a direct line of reasoning for how findings might translate into useful information for real-world behaviors or technologies.
- This will enhance the probability that the article will affect public policy and thus increase its impact.

Nature.com
STRATEGIES FOR ENHANCING RESEARCH IMPACT

Dissemination
Picking a journal

• **Consider the desired audience** when choosing a journal for publication.
  • More specialized journals, even with a potentially smaller readership, may offer an author broader dissemination of relevant research results to their peers in their specific field of research.

• **Publish your work in a journal currently indexed by PubMed.**
  • Citations in PubMed are crawled by Google Scholar. Google Scholar can help promote visibility and accessibility of your work.
Be open!

- Publish in an Open Access Journal
  - Open access journals allow authors to retain rights to the manuscript to allow for many options for dissemination of the research.
  - Open access articles often garner greater impact than traditional models of publication.
- Share your research data
  - Deposit research data in appropriate repositories such as GenBank or GEO at NCBI or with publishers of journals who are willing to post the data.
  - Sharing of research data can lead to more rapid analysis and identification of genetic contributions to diseases and medical conditions.
- Submit the manuscript to a digital subject repository such as arXiv, bioRxiv, or to the institutional repository, DigitalCommons@Becker.
Be open!
Project Websites & Wikis

Set up a web site devoted to the research project and post manuscripts of publications, conference abstracts, and supplemental materials such as images, illustrations, slides, specimens, and progress reports on the site.

- Learning about the technology
- Adopters, maps
- Key workgroups
- Listserv signups
- Project efforts on GitHub
- Software and ontology files
- Wiki documentation
Present! Present! Present!

- Take every opportunity to present your work at meetings, department seminars, journal clubs and events for the general public.
- Present preliminary research findings at a meeting or conference and consider making your figures available through FigShare and your presentation materials available in your institutional repository or on a sharing site such as SlideShare so that others may discover and share your materials post-event.

How to find a conference:
- EurekAlert! Meeting Calendar
- Web of Conferences
- Conference Alerts
STRATEGIES FOR ENHANCING RESEARCH IMPACT

Keeping track of your research
How are others using your work?

• Become acquainted with how your work is being used in the online world via bookmarks and links to the article or data, conversations on twitter and in blogs about the work, and various methods of sharing and storing content.

• Some great tools that provide this type of information for articles and individuals include Altmetric and ImpactStory.

• You can also track use from sources like SlideShare and FigShare directly.
Put your best foot forward

- **Keep track of your author name.** Your name as an author is key to establishing a unique public profile for dissemination and promotion of your research.
  - Authors should use the same variation of their name consistently throughout their academic and research careers.

- **Keep your profile data up to date** on social networking sites aimed at scientists, researchers and/or physicians.
  - Inquire about these tools at your institution or within your organization.
  - Some highly adopted institution-wide platforms include VIVO and Profiles.
  - These institutional efforts leverage structured data about researchers to provide current and validated data which can be used to visualize your efforts and identify new collaborators.

See [http://beckerguides.wustl.edu/authors](http://beckerguides.wustl.edu/authors) and click on *Establishing Your Author Name* for more information.
What is ORCID?

- ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

Why do you want an ORCID ID?

- Include your ORCID identifier on your Webpage, when you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.

Register for an ORCID ID and curate your ORCID record with your scholarly contributions. ORCID identifiers provide you a way to differentiate yourself and highlight your professional activities.
1. Register for an ORCID iD
2. Add your info
   - Publications
   - Other stuff
3. Use your ORCID iD
   - Automatically ingest publications from Scopus
   - Edit your record with keywords, links to meaningful websites and other IDs.
   - Add personal information and publications
Use your ORCID iD!

- View the ORCID integration information to see how you can use your ORCID iD
  - Current integrations [http://orcid.org/organizations/integrators/current](http://orcid.org/organizations/integrators/current)
  - Planned/in-progress work [http://orcid.org/organizations/integrators/integration-chart](http://orcid.org/organizations/integrators/integration-chart)
HOW CAN I DOCUMENT AND REPORT RESEARCH IMPACT?
Pathways

Advancement of Knowledge
Clinical Implementation
Legislation and Policy Enactment
Economic Benefit
Community Benefit
THE MODEL FOR ASSESSMENT OF RESEARCH IMPACT IS A FRAMEWORK FOR TRACKING DIFFUSION OF RESEARCH OUTPUTS AND ACTIVITIES TO LOCATE INDICATORS THAT DEMONSTRATE EVIDENCE OF BIOMEDICAL RESEARCH IMPACT.

- **Research Output and Activities**
  
  What was CREATED by a research study? How was the research output DISSEMINATED? What activities were UNDERTAKEN by the members of the research group?

- **Advancement of Knowledge**
  
  How were research output and activities USED? How was AWARENESS of research output demonstrated?

- **Clinical Implementation**
  
  How was TRANSLATION of research output and activities into clinical applications demonstrated?

https://becker.wustl.edu/impact-assessment
The Becker Model

• Provides a supplement to publication analysis to provide a more robust and comprehensive perspective of biomedical research impact.
  • reporting templates, glossary of resources and terms, examples of relevant indicators of impact across the research process, and readings

• Straightforward framework for tracking diffusion of research outputs and activities to locate indicators that demonstrate evidence of biomedical research impact
  • individual, core, and institutional-level

• Guidance for quantifying and documenting research impact as well as resources for locating evidence of impact.
• Even more strategies for enhancing the impact of research.
The value of curating oneself
How to make this work?

- High-tech and low-tech options for keeping track of outputs and interactions
- Reach out to your library
  - People
  - Resources
- Consider how your work is used and built upon
  - who, what, where?
- Be open-minded and forward thinking
- Be curious!

http://globintech.com/
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Becker Medical Library

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THANKS!

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