Preparing and Publishing Successful Research Papers

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Director, Center for Science Communication
March 8, 2007
Outline

- Why we publish
- Writing a research paper
- Tips for getting your paper published
- Maximizing access
- Local resources
- Center for Science Communication
Why do you publish?

• To share what you know, so that
  – Other researchers can build on that knowledge or extend it towards the clinic
  – Other researchers can employ that methodology or use that new reagent
  – Physicians or other health care professionals can use that knowledge in their practice
  – Patients can learn the outcome of a clinical trial
  – Students can learn about an area of research or get inspired to become a researcher
  – To inform policy
Why do you publish?

• If you don’t publish the results of your research, you might as well not have done it.
• If no one reads or uses the results of your research, you might as well not have done it.
• Publication record = publication • use
• That is why your publication record is critical to obtaining grants, positions, and promotions.
Publication record = publication • use

• How do you maximize use?
  – Do research that has an impact on others
  – Write your paper in a way that maximizes the likelihood that your work will be read and used
  – Maximize accessibility to your work
    • Choice of where to publish
    • Deposition in freely accessible archives
Maximizing Use: Get Your Audience

• Except in the cases when a paper is assigned to you as an editor, reviewer, or student, you choose what to read. How do you make that decision?
  – A few journals (or their TOCs) are read cover to cover
  – A newspaper article or review highlighted that article
  – Otherwise, most people decide based on
    • Title
    • Authors
    • Journal
    • Abstract
Title

• State what you have learned clearly without overstatement

• Make sure this matches your abstract and text of the paper
Inositol hexakisphosphate and Gle1 activate the DEAD-box protein Dbp5 for nuclear mRNA export.

Crosstalk between peroxisome proliferator-activated receptor delta and VEGF stimulates cancer progression.

Bradykinin B2 Receptor Does Not Contribute to Blood Pressure Lowering During AT1 Receptor Blockade.

p120-catenin and p190RhoGAP regulate cell-cell adhesion by coordinating antagonism between Rac and Rho.
Title (less good)

- Zebrafish trilobite identifies new roles for Strabismus in gastrulation and neuronal movements.
- Contribution of endothelial nitric oxide to blood pressure in humans.
- Paclitaxel-carboplatin alone or with bevacizumab for non-small-cell lung cancer.
Abstract

• Need to provide
  – Relevant background
  – Major Methodology
  – Major Conclusion
  – Significance

Many will just stop reading after the Abstract, so make sure the main points are clear
Background
Cellular localization of severe acute respiratory syndrome coronavirus (SARS-CoV) in the lungs of patients with SARS is important in confirming the etiological association of the virus with disease as well as in understanding the pathogenesis of the disease. To our knowledge, there have been no comprehensive studies investigating viral infection at the cellular level in humans.

Methods and Findings
We collected the largest series of fatal cases of SARS with autopsy material to date by merging the pathological material from two regions involved in the 2003 worldwide SARS outbreak in Hong Kong, China, and Toronto, Canada. We developed a monoclonal antibody against the SARS-CoV nucleoprotein and used it together with in situ hybridization (ISH) to analyze the autopsy lung tissues of 32 patients with SARS from Hong Kong and Toronto. We compared the results of these assays with the pulmonary pathologies and the clinical course of illness for each patient. SARS-CoV nucleoprotein and RNA were detected by immunohistochemistry and ISH, respectively, primarily in alveolar pneumocytes and, less frequently, in macrophages. Such localization was detected in four of the seven patients who died within two weeks of illness onset, and in none of the 25 patients who died later than two weeks after symptom onset.

Conclusions
The pulmonary alveolar epithelium is the chief target of SARS-CoV, with macrophages infected subsequently. Viral replication appears to be limited to the first two weeks after symptom onset, with little evidence of continued widespread replication after this period. If antiviral therapy is considered for future treatment, it should be focused on this two-week period of acute clinical disease.

EphrinB2 was recently discovered as a functional receptor for Nipah virus (NiV), a lethal emerging paramyxovirus. Ephrins constitute a class of homologous ligands for the Eph class of receptor tyrosine kinases and exhibit overlapping expression patterns. Thus, we examined whether other ephrins might serve as alternative receptors for NiV. Here, we show that of all known ephrins (ephrinA1–A5 and ephrinB1–B3), only the soluble Fc-fusion proteins of ephrinB3, in addition to ephrinB2, bound to soluble NiV attachment protein G (NiV-G). Soluble NiV-G bound to cell surface ephrinB3 and B2 with subnanomolar affinities (Kd = 0.58 nM and 0.06 nM for ephrinB3 and B2, respectively). Surface plasmon resonance analysis indicated that the relatively lower affinity of NiV-G for ephrinB3 was largely due to a faster off-rate (Koff = 1.94 × 10−3 s−1 versus 1.06 × 10−4 s−1 for ephrinB3 and B2, respectively). EphrinB3 was sufficient to allow for viral entry of both pseudotype and live NiV. Soluble ephrinB2 and B3 were able to compete for NiV-envelope-mediated viral entry on both ephrinB2- and B3-expressing cells, suggesting that NiV-G interacts with both ephrinB2 and B3 via an overlapping site. Mutational analysis indicated that the Leu–Trp residues in the solvent exposed G–H loop of ephrinB2 and B3 were critical determinants of NiV binding and entry. Indeed, replacement of the Tyr–Met residues in the homologous positions in ephrinB1 with Leu–Trp conferred NiV receptor activity to ephrinB1. Thus, ephrinB3 is a bona fide alternate receptor for NiV entry, and two residues in the G–H loop of the ephrin B-class ligands are critical determinants of NiV receptor activity.

Maximize Use: Knowing Your Audience and Telling Your Story

• Different people read your paper for different reasons and focus on different parts of your paper:
  – A student preparing to present your paper in a journal club might read it cover to cover
  – A scientist in your field will focus on the methodology and data
  – Someone outside your field will need to know the context and significance
There are two very distinct audiences for your paper

• The Scientist in Your Field
  – Methods
  – Data (figures, tables, etc.)
  – Legends

• The Outsider (scientists, editors, others)
  – The “body” of the paper (introduction, results, discussion)

Each piece needs to individually tell your story in a way that is best suited to the appropriate audience.
What Do Specialists Want to Know?

• What is this paper about? (Title, Abstract)
• Can I trust you? (Authors, Competing Interests)
• Did other people find the work important? (Journal)
• What did you do? (Abstract, Materials and Methods)
  – Is the approach you’re taking up to the standards of the field? Do you have the right controls, statistical analysis?
  – Is there a new approach, assay, or reagent that can prove useful in their own work?
• What did you learn? (Title, Abstract, Tables, Figures, Citations)
  – Do you know what has already been shown? (citations)
  – Have you collected enough data to draw meaningful conclusions? (Ns and error bars)
  – Are the differences between the control and the experiment large enough to be meaningful over noise? (show the control, describe the study design)
  – Have you tested alternative hypotheses? (the body of experiments presented)
Preparing and Presenting Data for other Specialists in Your Field

- Methods
- Data
- Legends
Methods

• Methods need to be provided in enough detail that they can be reproduced by others

• New reagents, datasets, etc. need to be made available for researchers to use
Data

• Include all data necessary to the conclusions you stated in the title and abstract
• Do not include data that are irrelevant to those conclusions
• BUT DO NOT EXCLUDE DATA THAT CONTRADICT YOUR CONCLUSIONS!!
Data

• Organize your data into discrete pieces that each make a specific point
  – The titles of the legends associated with each piece provide the outline for your results section of your paper
  – Do not hesitate to use well-presented papers like yours to serve as models for this
Other issues

• Rules on Data and Materials Sharing
  - Controls, Selective Presentation
  - Methodology
  - Responsibilities of Authorship
  - Acknowledgments
What Do Nonspecialists Want to Know?

• **What is this paper about?** (Title, Abstract)
• **Can I trust you?** (Authors, Competing Interests)
• **Did other people find the work important? Am I likely to find it interesting?** (Journal)
• **What does the field already know and what does it need to know** (Introduction)?
  – What is the question being addressed by the research, and is it important?
  – Are there some good reviews in the area that I should read if I want to learn more?
• **What did you do?** (Abstract, Results)
  – How does your approach compare to other approaches in the field? What are the right controls, statistical analysis?
  – Is there a new approach, assay, or reagent that can prove useful in their own work?
• **What did you learn?** (Title, Abstract, Results)
  – What can you conclude from the experiments you’ve performed?
  – Have you tested alternative hypotheses? (the body of experiments presented)
• **What does it mean?** (Discussion)
  – Have you answered a long-standing question? Opened up a new avenue of research? Provided a new approach or that should prove useful to many other researchers?
  – What can I look forward to next in this line of inquiry?
Specialists vs Nonspecialists

- **What is this paper about?** (Title, Abstract)
- **Can I trust you?** (Authors, Competing Interests)
- **Did other people find the work important?** (Journal)
- **What did you do?** (Abstract, Materials and Methods)
  - Is the approach you’re taking up to the standards of the field? Do you have the right controls, statistical analysis?
  - Is there a new approach, assay, or reagent that can prove useful in their own work?
- **What did you learn?** (Title, Abstract, Tables, Figures, Citations)
  - Do you know what has already been shown? (citations)
  - Have you collected enough data to draw meaningful conclusions? (Ns and error bars)
  - Are the differences between the control and the experiment large enough to be meaningful over noise? (show the control, describe the study design)
  - Have you tested alternative hypotheses? (the body of experiments presented)

- **What is this paper about?** (Title, Abstract)
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- **Did other people find the work important?** Am I likely to find it interesting? (Journal)
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  - Have you tested alternative hypotheses? (the body of experiments presented)
- **What does it mean? (Discussion)**
  - Have you answered a long-standing question? Opened up a new avenue of research? Provided a new approach or that should prove useful to many other researchers?
  - What can I look forward to next in this line of inquiry?
The Nonspecialist Reader

- Introduction
- Results
- Discussion
Providing Context for Scientists and Others Outside Your Field

• The Introduction gives readers the relevant background, defines the question that will be answered, explains why the answer to this question is worth knowing, and describes the approach that will be used. This should be related to what was provided much more briefly at the beginning of the Abstract.
Placing Work in Context

Introduction

↓

Question

Experimental Design
Results: State them clearly and objectively

- The results provide a textual version of the methods and data. It explains clearly and plainly (without the level of detail required to reproduce the results) what was done and what you learned.
- The organization of the Results matches the organization of the Data
- Do not speculate within the results, unless that speculation drives the next part of the paper
Discussion: how does this fit with what is known? Where does this lead?

- Do not simply repeat everything you’ve done and learned, but start by reiterating the main point of the paper (i.e., the answer to the question you posed in the introduction)

- THEN:
  - How does this fit with other reported studies and expectations?
  - Why is this important?
  - What are the caveats?
  - What interesting questions does this raise?
Other issues:

• Giving Credit to Others
  - Discriminating between What You Have Shown and What It May Mean
  - How Far Can You Speculate?
Getting Your Paper Published:

What Editors Are Trained to Do, and What You Can Do to Help
Who are professional editors?

• At high profile journals with professional editorial teams, editors are
  – Trained in Research (most have PhDs or MDs and postdoctoral experience)
  – Oriented towards the research community, rather than the publishing community
  – Generalists (like to think broadly, and don’t know your work as well as you do)
  – Try to make each decision consistent with journal policy and with other decisions being made by the journal
What does this mean for you?

- You can treat professional editors as your colleagues
- You need to help editors appreciate the significance of your work
- You need to appreciate that sometimes “larger forces” are at play than confidentiality allows an editor to explain
The job of an editor

• Determine whether a paper might “in principle” be appropriate for a journal (evaluate)
• Identify appropriate reviewers to help then decide whether to publish a paper (oversee peer review)
• Explain that decision to you in as constructive and transparent a manner possible (communicate with authors)
• Respond to comments from you that might lead them to reconsider that decision (re-evaluate)
• Identify important new areas of research (imagine the future)
What Do Editors Need to Know?

• **What is this paper about?** (Cover Letter, Title, Abstract)

• **What does the field already know and what does it need to know** (Cover Letter, Introduction, PubMed)?

• **What did you do?** (Cover Letter, Abstract, Results, Reviews)

• **What did you learn?** (Cover Letter, Title, Abstract, Results)

• **What does it mean?** (Cover Letter, Discussion)

• **Do experts find the work sound, important and interesting** (Reviews)?

• **Can I trust you?** (Authors, Competing Interests/Disclosure Form, Special Requests in Cover Letter)
Editors are (Savvy) Nonspecialists

• What is this paper about? (Title, Abstract)
• Can I trust you? (Authors, Competing Interests)
• Did other people find the work important? Am I likely to find it interesting? (Journal)
• What does the field already know and what does it need to know (Introduction)?
• What did you do? (Abstract, Results)
• What did you learn? (Title, Abstract, Results)
• What does it mean? (Discussion)

• What is this paper about? (Cover Letter, Title, Abstract)
• What does the field already know and what does it need to know (Cover Letter, Introduction, PubMed)?
• What did you do? (Cover Letter, Abstract, Results, Reviews)
• What did you learn? (Cover Letter, Title, Abstract, Results)
• What does it mean? (Cover Letter, Discussion)
• Do experts find the work sound, important and interesting (Reviews)?
• Can I trust you? (Authors, Competing Interests/Disclosure Form, Special Requests in Cover Letter)
The Evaluation Stage

• Assume that all the data are correct, and the interpretations are valid – is this paper appropriate for the journal? (scope, significance)

• If yes, is the paper logically sound?
Assume that all the data are correct, and the interpretations are valid – is this paper appropriate for the journal? (significance)

- Placing the paper in the context of what is already known, how significant is the advance?
  - could the result have been predicted based on what was already known?
  - does the result change the way you think? answer a longstanding question? open a new line of research?
  - does the result belong in a textbook? Should the speaker be invited to give a seminar?
Explaining Significance to Editors: The Good News

• If you’ve written the text of the paper as I’ve already advised, you are going to help the editor (a professional outsider scientist) do her job

• But there’s something else you can do
What else can you do? Send a detailed cover letter!

• Take advantage of the cover letter (sometimes you will find it easier to convey why the work is interesting and important outside the context of the paper)
• Mention the fields that you expect will find the work interesting
• Send a presubmission inquiry. If you’re not sure a paper is appropriate, you can ask an editor for advice. But be prepared to accept their advice if you ask for it.
What else can you do?

Pre-Review

- Show your paper to colleagues both inside and outside the field to see if they can understand the points you are trying to make and find your arguments persuasive (I have some guidelines that may help)
- Vanderbilt Editor’s Club
We, the Vanderbilt Editors' Club, are a group of postdoctoral fellows and graduate students who volunteer to provide editorial services for our peers. We review manuscripts, abstracts, posters, and slide sets for language usage, organization, and clarity. There is no charge for this service. To learn more, please read our Mission Statement.

Here’s how it works:

- Postdoc and grad student authors submit documents for review via our online submission system.
Mission of the Editors' Club

- To offer valuable editorial advice regarding language usage, organization, and clarity to VUMC graduate students and postdoctoral fellows
- To help graduate students and postdoctoral fellows develop essential written communication skills
- To provide professional development for individuals interested in careers in academia, technical writing, or editing
- To help editors improve their own scientific writing skills
- To maintain Vanderbilt’s institutional reputation in the field of biomedical research by striving for clarity in all forms of written communication.

https://medschool.mc.vanderbilt.edu/editors_club/
Document Information

Type of Document to be Reviewed: Primary Research Paper
Title of Manuscript or Presentation:
Document Format:
Journal or Meeting Title:
Draft Stage: Early
Research Area: Biochemistry

Edit Checklist

The Editors' Club will edit the materials only to the extent requested by the Author. From the following nine types of edits, please choose all that apply.

- Substantive Edit (emphasis on organization)
- Format Edit (emphasis on layout and typography)
- Screening Edit (emphasis on spelling and sentence structure)
- Mechanical Style Edit (emphasis on capitalization and abbreviation)
- Language Edit (emphasis on grammar and punctuation)
- Policy Edit (emphasis on adherence to guidelines and company policies)
- Integrity Edit (emphasis on accuracy of tables, references, footnotes, etc.)
- Coordination Edit (emphasis on planning and production of final product)
- Copy Clarification Edit (emphasis on preparation for printing)
Office Hours for the Editor’s Club

- Tuesdays 1-2pm
- S-3408 Medical Center North (my office!)
The Peer Review Stage

If the paper seems appropriate and logically sound, who would be best to assess the technical aspects of a paper?

- Methodologies
- Model Systems
- Big Picture
- Sense of Journal
What can you do to help?

• Don’t be afraid to suggest reviewers, along with their expertise (esp. for papers that use unusual methodologies)

• If there are conflicts that would lead to a reviewer not being able to offer an objective opinion, don’t be afraid to ask that this person be excluded, but explain why.
Do not…

• Exclude an entire field from reviewing your paper (editors will generally respect 2 or 3 exclusions, but if you exclude everyone, then they will have a hard time reviewing the paper)

• Offer as potential reviewers only people who have collaborated with you in the past
Remember, most reviewers are insiders

They will focus on the data in the paper and the validity of the conclusions that you draw, as well as the importance of those conclusions to and beyond the field

They will also check to see that you cite the literature appropriately
What can you do?

• Make sure your title matches your conclusions
• Present your data appropriately, and show controls and error bars
• Cite the literature (including your competitors)
Recap

• Make your results, and their significance, clear (using your colleagues – including the Editor’s Club, and me - for feedback before sending the paper)
• Don’t try to hide related papers that impact on the significance of your work.
• Express your enthusiasm for your work but be careful not to oversell it.
• The editor is part of your community, there to work with you and offer constructive feedback, and you can help by building a relationship of mutual respect.
Other issues:

- Revisions
- Recognizing rejection – and acceptance
- Appeals
- Can you get special treatment?
- Meeting an editor
Maximize use: maximize access

• Access=Impact=Value
How to maximize access

• Select journals with lots of real or potential readers
• Submit your papers directly to publicly available archives, such as PubMed Central
Maximizing Use: Finding the Right Journal

• Does the journal publish research papers that are similar to yours in scope and significance?
• Does it have editorial and publishing policies that you want to promote?
What factors to consider when deciding where to send your paper

- **“Prestige”** – does your paper match your perceived level of significance of other papers in the journal?
- **Readership** – will the paper be visible to your target audience (scope of journal, circulation, access policies, on PubMed)?
- **Service** – how quickly do editors provide a decision, how constructive are they, how long does it take a paper to appear once accepted, what other “value-added” services are offered (reviews, press releases, etc.)?
- **Access policies** – can only subscribers see the work? Is the work deposited in a public database?
- **Copyright** – taken by the journal? If so, for what reason? Do they allow you to distribute your pdf? Reuse your figures?
- **Length restrictions** - Will they ask you to remove half your data to publish the paper?
- **Cost** – what are journal policies for author correction charges, color reproduction, page charges? If access-controlled, what is the cost of an institutional subscription or site license?
PubMed Central (PMC) is the U.S. National Institutes of Health (NIH) free digital archive of biomedical and life sciences journal literature.

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The PMC journal list comprises journals that deposit material in PMC on a routine basis and generally make all their published articles available here. Find out how to include your journal in PMC.

PMC also has the author manuscripts of articles published by NIH-funded researchers in various non-PMC journals. Increasing free access to these articles is the goal of the NIH Public Access policy. Similar manuscripts from researchers funded by the Wellcome Trust are available in PMC as well.

Eligible researchers should use the NIH Manuscript Submission system to deposit manuscripts.

Browse PMC journals: [A-B] [C-H] [I-M] [N-S] [T-Z] [Full List] [New Journals]
NIH Manuscript Submission System

News & Updates

Please note: submissions of Wellcome Trust funded articles now need to be made with the UK Manuscript Submission System (UKMSS).

NIHMS (NIH Manuscript Submission) is currently accepting submissions from:

- eRA Commons (for NIH Extramural principal investigators, grantees or applicants)
- NIH Login (for Intramural NIH scientists and staff)
- MyNCBI (for third party submitters)
- Publishers that have registered for an NIHMS Publisher Login account

Sign up with the NIHMS News list to get email notification of significant updates with the system.

Help

What is the NIH Public Access Policy? The NIH maintains a web page with information relating to the Public Access Policy.

Do you have questions about the submission process? Refer to the NIHMS FAQ. Illustrated submission tutorials are also available.

Publishers may find information on how to submit on behalf of authors as well as other concerns in the Publisher FAQ.

The NIHMS also maintains a help desk to assist users with manuscript submissions, and answer any questions related
Submit New Manuscript to start the submission process.
Jennifer Ann Lyon, M.S., M.L.I.S.

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Eskind Biomedical Library
2209 Garland Avenue
Nashville, TN 37232-8340

Area(s) of Responsibility:
- Research Services
- Filtering/Evidence-Based Services

Emphasis:
- Research Informatics Consult Service
- Bioinformatics
Author Manuscripts in PMC

Many of the scientists who receive research funding from NIH publish the results of this research in journals that are not available in PubMed Central (PMC). In order to improve access to these research articles, NIH’s Public Access policy asks these authors to give PMC the final, peer reviewed manuscripts of such articles once they have been accepted for publication.

Get a list of author manuscripts available in PMC.

How does the author manuscript in PMC differ from the article published in the journal?

[Though specific procedures vary from journal to journal, the publication process outlined here is typical for most research articles.]

When an author submits an article to a journal, it is reviewed by one or more independent peer reviewers and the journal’s editors, who decide whether to accept it for publication. As part of this process, the author may be asked to revise the article to meet the journal’s standards for acceptance. The final manuscript supplied to PMC is the version that the journal accepted for publication, including any revisions that the author made during the peer review process.

The published version of the article usually includes additional changes made by the journal’s editorial staff after acceptance of the author’s final manuscript.
1. Dictyostelium Discoideum Expresses a Malaria Chloroquine Resistance Mechanism upon Transfection with Mutant, but not Wild-type, Plasmodium Falciparum Transporter PfCRT.
Naudé B, Brzostowski JA, Kimmel AR, Wellemes TE.
J Biol Chem. Author manuscript; available in PMC 2007 January 20.
PMCID: 1779819
Manuscript: | Abstract | Full Text | PDF-0.8M |

Neurosci Lett. Author manuscript; available in PMC 2007 January 19.
PMCID: 1779764
Manuscript: | Abstract | Full Text | PDF-362K |

3. Age effects on atrophy rates of entorhinal cortex and hippocampus.
Du AT, Schuff N, Chao LL, Konnak J, Jagust WJ, Kramer JH, Reed BR, Miller BL, Norman D, Chui HC, Weiner MW.
Neurobiol Aging. Author manuscript; available in PMC 2007 January 19.
PMCID: 1779763
Manuscript: | Abstract | Full Text | PDF-184K |
1. The anatomy of decision support during inpatient care provider order entry (CPOE): Empirical observations from a decade of CPOE experience at Vanderbilt.

Miller RA, Waitman LR, Chen S, Rosenbloom ST.

*J Biomed Inform.* Author manuscript; available in PMC 2006 December 1. PMCID: 1518541

Manuscript: | Abstract | Full Text | PDF-1.1M | Supplementary Material |

2. Implementing the American Academy of Pediatrics Attention-Deficit/Hyperactivity Disorder Diagnostic Guidelines in Primary Care Settings.

Leslie LK, Weckerly J, Plemons D, Landsverk J, Eastman S.

*Pediatrics.* Author manuscript; available in PMC 2006 July 25. PMCID: 1519417

Manuscript: | Abstract | Full Text | PDF-172K |


*J Infect Dis.* Author manuscript; available in PMC 2006 October 3. PMCID: 1586246

Manuscript: | Abstract | Full Text | PDF-271K |
Human Metapneumovirus Infection Plays an Etiologic Role in Acute Asthma Exacerbations Requiring Hospitalization in Adults

John V. Williams,1 James E. Crowe, Jr.,1,2 Rachel Enriquez,3 Patricia Minton,3 R. Stokes Peebles, Jr.,3 Robert G. Hamilton,5 Stanley Higgins,3 Marie Griffin,3,4 and Tina V. Hartert3

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Reprints or correspondence: Dr. Tina V. Hartert, Vanderbilt University Medical Center, Div. of Allergy, Pulmonary, and Critical Care Medicine, Center for Health Services Research, Ste. 6100 MCE, Nashville, TN 37232-8300 (Email: tina.hartert@vanderbilt.edu)

The publisher’s final edited version of this article is available at J Infect Dis
Human metapneumovirus infection plays an etiologic role in acute asthma exacerbations requiring hospitalization in adults.


Departments of Pediatric, Vanderbilt University Medical Center, Nashville, TN 37232-8300, USA.

We determined the prevalence of human metapneumovirus (hMPV) infection in adults with asthma who were prospectively enrolled after hospitalization for an acute asthma exacerbation. Nasal wash specimens collected at admission and 3 months after discharge were tested for hMPV by real-time reverse-transcription polymerase chain reaction assays. hMPV was detected in 7 (6.9%) of 101 subjects at hospitalization and in 1 (1.3%) of 75 subjects at follow-up (odds ratio, 7 [95% confidence interval, 0.9-312]; P = .03). None of the patients with hMPV infection at hospitalization tested positive at follow-up, strongly suggesting that hMPV plays a direct etiologic role in acute asthma exacerbations.

PMID: 16136455 [PubMed - indexed for MEDLINE]
Human metapneumovirus infection plays an etiologic role in acute asthma exacerbations requiring ...
JV Williams, JE Crowe Jr, R Enriquez, P Minton, RS ... - J Infect Dis, 2005 - journals.uchicago.edu
The Journal of Infectious Diseases 2005;192:1149-1153 © 2005 by the Infectious Diseases Society of America. All rights reserved. ...
Cited by 7 - Related Articles - Web Search - BL Direct

Human Metapneumovirus Infection Plays an Etiologic Role in Acute Asthma Exacerbations Requiring ...
JV Williams, JE Crowe Jr, R Enriquez, P Minton, RS ... - J Infect Dis, 2005 - pubmedcentral.nih.gov
Related material: PubMed record ...
Web Search

Human metapneumovirus infection plays an etiologic role in acute asthma exacerbations requiring ...
Web Search
Human natural killer T cells are heterogeneous in their capacity to reprogram their effector functions.

Eger KA, Sundrud MS, Motsinger AA, Tseng M, Kaer LV, Unutmaz D.

Department of Microbiology and Immunology, Vanderbilt University School of Medicine, Nashville, Tennessee, United States of America.

BACKGROUND: Natural killer T (NKT) cells are a subset of T cells that help potentiate and regulate immune responses. Although human NKT cell subsets with distinct effector functions have been identified, it is unclear whether the effector functions of these subsets are imprinted during development or can be selectively reprogrammed in the periphery. RESULTS: We found that neonatal NKT cells are predominately CD4+ and express higher levels of CCR7 and CD62L and lower levels of CD94 and CD161 than adult CD4+ or CD4+NKT cell subsets. Accordingly, neonatal NKT cells were more flexible than adult CD4+ NKT cells in their capacity to acquire Th1- or Th2-like functions upon either cytokine-mediated polarization or ectopic expression of the Th1 or Th2 transcription factors T-bet and GATA-3, respectively. Consistent with their more differentiated phenotype, CD4-NKT cells were predominantly resistant to functional reprogramming and displayed higher cytotoxic function. In contrast to conventional T cells, neither the expression of CXCR3 nor
Environmental tobacco smoke and mortality in Chinese women who have never smoked: prospective cohort study.

Wen W, Shu XQ, Gao YT, Yang G, Li Q, Li H, Zheng W.

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OBJECTIVE: To evaluate the association of environmental exposure to tobacco smoke from husbands and from work, as well as from family members in early life, with all cause mortality and mortality due to cancer or cardiovascular disease in Chinese women.

DESIGN: Ongoing prospective cohort study in Shanghai, China. PARTICIPANTS: Of 72,829 women who had never smoked, 65,180 women provided information on smoking by their husbands, and 66,520 women provided information on exposure to tobacco smoke at work and in early life from family members. MAIN OUTCOME MEASURES: All cause mortality and cause specific mortality with the main focus on cancer and cardiovascular disease. Cumulative mortality according to exposure status, and hazard ratios. RESULTS: Exposure to tobacco smoke from husbands (mainly current exposure) was significantly associated with increased all cause mortality (hazard ratio 1.15, 95% confidence interval 1.01 to 1.31) and with increased mortality due to cardiovascular disease (1.37, 1.06 to 1.78). Exposure
Crosstalk between peroxisome proliferator-activated receptor delta and VEGF stimulates cancer progression.


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Peroxisome proliferator-activated receptor (PPAR) delta is a member of the nuclear hormone receptor superfamily. PPARdelta may ameliorate metabolic diseases such as obesity and diabetes. However, PPARdelta's role in colorectal carcinogenesis remains controversial. Here, we present genetic and pharmacologic evidence demonstrating that deletion of PPARdelta decreases intestinal adenoma growth in Apc(Min/) mice and inhibits tumor-promoting effects of a PPARdelta agonist GW501516. More importantly, we found that activation of PPARdelta up-regulated VEGF in colon carcinoma cells. VEGF directly promotes colon tumor epithelial cell survival through activation of PI3K-Akt signaling. These results not only highlight concerns about the use of PPARdelta agonists for treatment of metabolic disorders in patients who are at high risk for colorectal cancer, but also support the rationale for developing PPARdelta antagonists for prevention and/or treatment of
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