

# Medical Student Journals and Scientific Credibility

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**V Simpósio AMP**  
4 de novembro de 2016  
Secção Regional Norte da Ordem dos Médicos



## Pedro Alberto Escada, MD, PhD



Invited Assistant Professor, Head

Nova Medical School, New University of Lisbon

Investigator: 27 *peer reviewed* publications, 516 citations

Coordinator of:

- [Otolaryngology](#): Clinical Training Site
- [Medical Writing](#): Undergraduate Elective Course
- [Medical Writing](#): Continuing Medical Education (CME) E-learning Course
- [Science Communication](#): Elective Curricular Unit, PhD Course

## Topics

1. Medical writing as an educational strategy
2. Scientific credibility of the medical students
3. Current status of medical students journals
4. Medical student journals: pros e cons
5. Conclusions and solutions



# Medical writing is an effective educational strategy

Florek and Dellavalle *Journal of Medical Case Reports* (2016) 10:86  
DOI 10.1186/s13256-016-0851-5

Journal of  
Medical Case Reports

EDITORIAL

Open Access

## Case reports in medical education: a platform for training medical students, residents, and fellows in scientific writing and critical thinking



Aleksandra G. Florek<sup>1\*</sup> and Robert P. Dellavalle<sup>2</sup>

# Writing case reports

- Of minor importance in evidence-based medicine
- Undergraduate students' first experience with medical writing
- Provide a solid foundation for manuscript preparation and publication



# Medical writing training should be available on undergraduate medical education

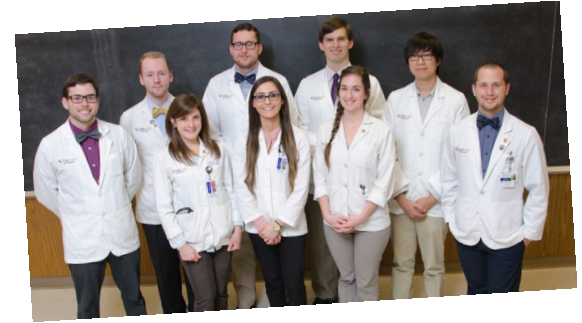
- Medical Writing: Undergraduate Elective Course
- Nova Medical School: 2<sup>nd</sup> to 4<sup>th</sup> year
- <http://web.fcm.unl.pt/moodle/course/view.php?id=320&sesskey=1pEcsAk0UT&switchrole=5>

# Medical writing training should be available on undergraduate medical education

- Lifelong learning
- Evidence-informed practice
- Structured critical appraisal
- Participation in research
- Dissemination of research findings



# Are medical students credible ?



ORIGINAL ARTICLE

ANZ J Surg 79 (2009) 901–908

## Famous discoveries by medical students

Mark D. Stringer and Omid Ahmadi

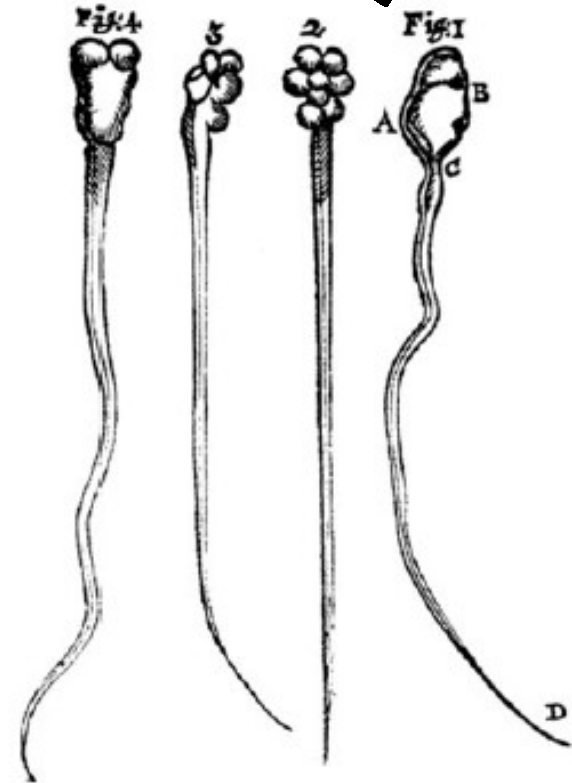
Department of Anatomy & Structural Biology, University of Otago, Dunedin, New Zealand



## Johan Ham (Leiden, 1651-1723): medical student



- *Animalcules* with tails – spermatozoa (1667)
- He shared the discovery with van Leeuwenhoek
- van Leeuwenhoek studied his own semen  
(obtained by “conjugal coitus” and not by “sinfully defiling” himself)
- van Leeuwenhoek credited Ham with the discovery

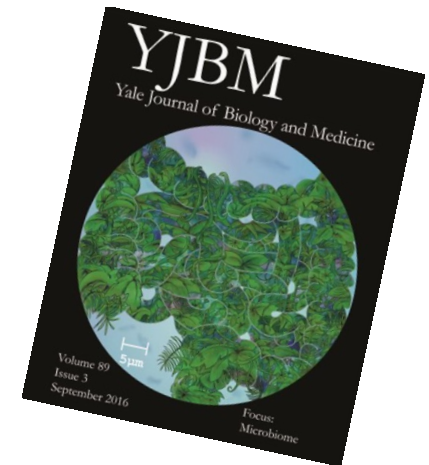


## Other famous discoveries by medical students

Medical student	Discovery	Year	Publication?
William Clarke	Ether anesthesia	1842	No
Auguste-Maurice Raynaud	Episodic vasoconstriction of the digits	1862	MD thesis
Paul Langerhans	Pancreatic islets	1868	Yes
Augusta Klumpke	Inferior brachial plexus injury	1885	Yes
Ruggero Oddi	Bile duct sphincter	1887	Yes
Martin Flack	Sinoatrial node	1906	Yes
Jay Mclean	Heparin	1916	Yes
Charles Best	Insulin	1921	Yes
Thomas Fogarty	Embolectomy catheter	1963	Yes

# Medical student journals are:

- Dedicated to the publishing of student research:
  - Articles authored or co-authored by medical students
- Student-led:
  - Undergraduates as editors and reviewers
  - May have the support of senior editors and reviewers
- Student friendly peer review process



**Table 1: Summary of current medical student-journals**

Journal	Origin	Student author required	Senior co-author required	Original articles	Reviews	Case reports	Other	MEDLINE-indexed
AMSJ	Australia	Yes (in an Australian or NZ university)	No	Yes	Yes	Yes	Feature articles, book reviews and letters	No
AMSRJ	USA	Yes (must be current)	No	Yes	Yes	Yes	Letters, essays and artwork	No
CMJ	Britain	No	No	Yes	Yes	Yes	Perspective articles, study resources and clinical images	No
DMJ	Canada	No	No	Yes	Yes	Yes	Multiple categories	No
HMSR	USA	No	No	Yes	Yes	Yes	No specific categories	No
IJMS	N/A	Yes (or graduated <2 years)	No	Yes	Yes	Yes	Letters, experiences and interviews	No
JAMSA	Asia-Pacific	No	No	Yes	Yes	Yes	Letters, perspective articles and book reviews	No
JMSG	Ireland	Yes (must be a student at NUIG)	No (but must be reviewed by one)	Yes (only abstracts)	Yes	Yes	Elective reports, photographs and competition essays	No
JPMS	Pakistan	No	No	Yes	Yes	Yes	Letters, news and clinical images	No
MSRJ	USA	Yes (must be current)	No	Yes	Yes	Yes	Brief reports and reflections	No
MUMJ	Canada	No	No	Yes	Yes	Yes	Commentary	No
NZMSJ	NZ	No	No	Yes	Yes	Yes	Letters and book reviews	No
RCSI SMJ	Ireland	Yes (must be the first author)	No	Yes	Yes	Yes	Abstracts, news, careers and ethical challenges	No
sBMJ	Britain	No	Yes (for reviews)	No	Yes	No	Multiple categories	No
TMSJ	Turkey	No	No	Yes	Yes	Yes	Letters and diagnostic challenges	No
UBCMJ	Canada	No	No	Yes	Yes	Yes	Multiple categories	No
UTMJ	Canada	No	No	Yes	Yes	Yes	Perspective articles, book reviews and letters	No
YJBM	USA	No	No	Yes	Yes	Yes	Multiple categories	Yes

AMSJ=Australian medical student journal, AMSRJ=American medical student research journal, CMJ=Cambridge medicine journal, DMJ=Dalhousie medical journal, HMSR=Harvard medical student review, IJMS=International journal of medical students, JAMSA=Journal of the Asian medical students' association, JMSG=Journal of medical students, Galway, JPMS=Journal of Pakistan medical students, MSRJ=Medical student research journal, MUMJ=McMaster University medical journal, NUIG=National University of Ireland, Galway, NZ=New Zealand, NZMSJ=New Zealand medical student journal, RCSI SMJ=Royal College of Surgeon in Ireland student medical journal, sBMJ=Student British medical journal, TMSJ=Turkish medical student journal, UBCMJ=University of British Columbia medical journal, USA=United States of America, UTMJ=University of Toronto medical journal, YJBM=Yale journal of biology and medicine, N/A=Not applicable

Table 2: List of medical student journals that had ceased publication

Journal	Country	Years active
Medical student journal of Australia	Australia	2009-2012
Trinity student medical journal	Ireland	2000-2011
Asian student medical journal	India	2010-2013
Genesis	USA	2001-2002
MJM	Canada	1994-2011*
International journal of students' research	N/A	2011-2014
Dares Salam medical students' journal	Tanzania	2006-2012
Scottish universities medical journal	Scotland	2012-2014

\*MJM is re-launching in 2015/2016. MJM=McGill journal of medicine, N/A=Not applicable

### Premature discontinuation:

- Lack of enthusiasm or time
- Lack of faculty support
- Poor funding



## Medical student journals pros:

- Educational experience
- Motivate students to participate in research
- Encourage students to develop writing competencies
- An opportunity to experience the submission and peer review process
- Develop critical appraisal skills
- Editorial opportunities (ex: sBMJ)



## Medical student journals cons:

- Peer review process is managed mainly by undergraduates
- Lack of clinical and critical appraisal skills (editors, reviewers)
- Low quality studies
- Lack of indexing and readability (only 1 MSJ is indexed)
- Lack of sustainability

## Conclusions and solutions for MSJs:

- Value as an educational experience
- May lack quality and sustainability
- Solutions:
  - Peer review leaded by experts
  - Partnership with academic institutions or professional groups
  - “Student corners” in peer reviewed journals (Ex: AMP and AMP Student)





# Thanks

