EDITORIALS

A scholarship to foster future leaders in evidence based medicine

The inaugural 2019 Doug Altman Scholarship at EBMLive in Oxford

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Doug Altman (1948-2018) was *The BMJ*'s chief statistician for over 20 years. His work on improving the execution and reporting of research made him a world leader in evidence based medicine and a distinguished role model. Doug helped researchers design and report good quality studies to answer important clinical questions. His editorial, "The scandal of poor medical research," written in 1994 is essential reading for those new to evidence based medicine.[1] Its call for "less research, better research, and research done for the right reasons" remains relevant today. His passion for teaching and mentoring makes him a source of inspiration for early career researchers.

To commemorate his contribution and leadership to medical research, the EBMLive conference—a collaboration between Oxford's Centre for Evidence Based Medicine and *The BMJ*—is launching the inaugural Doug Altman Scholarship (see box). The scholarship encourages and supports future leaders in evidence based medicine by offering a valuable opportunity to early career researchers seeking to improve the quality of research and its use in clinical practice. Those who will shape the future of evidence based medicine need places to meet, learn, exchange ideas, be inspired, and help to inspire others. They also need a seat at the table, to hear what today's leaders have to say, to contribute to developments in medical research, and to learn how to lead.

In 2017, the evidence based medicine community, through EBMLive, launched the "evidence based medicine manifesto,"[2] a road map towards more trustworthy evidence that pledges to "encourage the next generation of leaders in evidence based medicine."[3] The Doug Altman Scholarship is one way to support this commitment. The scholarship aims to reinforce the importance of mentorship, which was at the heart of Doug's work and is still at the heart of the evidence based medicine movement.[4]

Several leaders in evidence based medicine emerged in the 1990s. Their shared enthusiasm for improving the development,

appraisal, quality, and dissemination of medical research led to internationally influential initiatives such as the Cochrane Collaboration and the EQUATOR network.[5 6] Since then, lives have been saved through the clinical application of synthesised and appraised evidence from randomised trials and systematic reviews, including the identification of harms from drugs, devices, and other medical interventions.[7]

Why do we need new leaders? Like most disciplines, evidence based medicine must refresh, develop, and rethink its direction as the evidence ecosystem, clinical medicine, and the world changes. Some commentators think that the movement is in "crisis."[8 9] Challenges such as reporting bias,[10] poor regulation,[11] undeclared conflicts of interest[12] and an overemphasis on surrogate endpoints[13] and statistical significance[14] are unresolved. Developing effective solutions will require leadership, mentorship, and teamwork far into the future.

Evidence based medicine needs creative leaders who are open about the limitations of research and demand full transparency in the reporting of the benefits and harms of treatments. They will need to navigate the swiftly evolving landscape of medical research, including the shift towards "big data,"[15] and remain sceptical to new, untested interventions. They will need to overcome major perverse incentives such as the culture of "publish or perish" in academic institutions and other systemic barriers that inhibit or fail to foster emerging leaders in medical research.

Improving the design, conduct, and reporting of medical research requires a wide range of individuals with diverse skills to think and work together. Doug Altman spoke about the need to attract expertise from all disciplines. He and the late Dave Sackett, another world leader in evidence based medicine, both emphasised the importance of collaborative opportunities and mentoring to their own careers,[16 17] and diligently extended these benefits to others. One of Dave Sackett's key achievements was to "infect the young" with the principles of evidence based

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medicine by creating opportunities to learn and apply those principles. EBMLive is one such opportunity.

We encourage students, junior doctors, early career researchers, and patients from anywhere in the world to apply for the 2019 Doug Altman Scholarship. We welcome applicants from diverse backgrounds including academia, industry, publishing, government, healthcare, and advocacy to share their ideas on how to make evidence relevant and replicable for everyone. Doug Altman has left a legacy that will change the way we do research. This scholarship, in his honour, signifies our commitment to continue his extraordinary work.

The Doug Altman Scholarship

The inaugural 2019 Doug Altman Scholarship, funded by the McCall MacBain Foundation, will waive EBMLive delegate fees for ten applicants, and the top submission will be awarded the full Doug Altman Scholarship. The scholarship will cover:

- travel to and from Oxford for the duration of EBMLive
- three nights' accommodation in one of Oxford's colleges
- attendance at the conference dinner

During the EBMLive conference, the Doug Altman Scholar and the nine shortlisted submissions will:

- present their ideas and participate in dedicated "future leaders" session
- contribute during debates
- learn from leaders in evidence based medicine
- develop networks
- build a community of early career researchers

Further details and how to apply can be found at https://ebmlive.org/doug-altman/

Competing interests: We have read and understood the BMJ policy on declaration of interests and declare the following interests: GCR receives funding from the NHS National Institute of Health Research (NIHR) School for Primary Care Research (SPCR), the Naji Foundation and the Rotary Foundation to study for a Doctor of Philosophy (DPhil) at the University of Oxford. She is a member of the 2019 EBMLive steering committee and has been working with members of the Centre for Evidence Based Medicine and *The BMJ* to develop the 2019 Doug Altman Scholarship. HM is part of the steering group of EBMLive. PJG has received grant funding from the Canadian Paediatric Society, and the Canadian Institute of Health Research (CIHR) in the past five years. He is on the CMAJ Editorial Advisory Board and on the Institute Advisory Board for the CIHR Institute of Human Development, Child and Youth Health (IHDCYH) where he has expenses reimbursed to attend meetings. He is on the editorial board of *BMJ Evidence Based Medicine*. He is a member of the 2019 EBMLive steering committee and has been working with members of the Centre for Evidence Based Medicine and *The BMJ* to develop the 2019 Doug Altman Scholarship, and he has expenses reimbursed to attend the conference.

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1 Altman DG. The scandal of poor medical research. *BMJ* 1994;308:283-4. 10.1136/bmj.308.6924.283 8124111
2 Heneghan C, Mahtani KR, Goldacre B, Godlee F, Macdonald H, Jarvies D. Evidence based medicine manifesto for better healthcare. *BMJ* 2017;357:j2973. 10.1136/bmj.j297310.1136/bmj.j2973 28634227
3 Heneghan C, Mahtani KR, Goldacre B, Godlee F, Macdonald H, Jarvies D. Evidence based medicine manifesto for better healthcare. *BMJ* 2017;357:j2973. 10.1136/bmj.j2973 28634227
4 Sackett DL. On the determinants of academic success as a clinician-scientist. *Clin Invest Med* 2001;24:94-100.11368152
5 Chalmers IThe Cochrane collaboration. The Cochrane collaboration: preparing, maintaining, and disseminating systematic reviews of the effects of health care. *Ann N Y Acad Sci* 1993;703:156-63, discussion 163-5. 10.1111/j.1749-6632.1993.tb26345.x 8192293
6 Altman DG, Simera I, Hoey J, Moher D, Schulz K. EQUATOR: reporting guidelines for health research. *Lancet* 2008;371:1149-50. 10.1016/S0140-6736(08)60505-X 18395566
7 Academy of Medical Royal Colleges. Evidence based medicine matters. Sense About Science. 2013. https://archive.senseaboutscience.org/data/files/resources/124/Evidence-Based-Medicine-Matters.pdf.
8 Greenhalgh T, Howick J, Maskrey NEvidence Based Medicine Renaissance Group. Evidence based medicine: a movement in crisis?*BMJ* 2014;348:g3725. 10.1136/bmj.g3725 24927763
9 Goldacre B, Heneghan C. How medicine is broken, and how we can fix it. *BMJ* 2015;350:h3397. 10.1136/bmj.h3397 26105810
10 Kirkham JJ, Altman DG, Chan A-W, Gamble C, Dwan KM, Williamson PR. Outcome reporting bias in trials: a methodological approach for assessment and adjustment in systematic reviews. *BMJ* 2018;362:k3802. 10.1136/bmj.k3802 30266736
11 Cohen D. FDA official: "clinical trial system is broken". *BMJ* 2013;347:f6980. 10.1136/bmj.f6980 24309077
12 Roseman M, Turner EH, Lexchin J, Coyne JC, Bero LA, Thombs BD. Reporting of conflicts of interest from drug trials in Cochrane reviews: cross sectional study. *BMJ* 2012;345:e5155. 10.1136/bmj.e5155 22906823
13 Yudkin JS, Lipska KJ, Montori VM. The idolatry of the surrogate. *BMJ* 2011;343:d7995. 10.1136/bmj.d7995 22205706
14 Greenland S, Senn SJ, Rothman KJ, etal . Statistical tests, P values, confidence intervals, and power: a guide to misinterpretations. *Eur J Epidemiol* 2016;31:337-50. 10.1007/s10654-016-0149-3 27209009
15 Christodoulou E, Ma J, Collins GS, Steyerberg EW, Verbakel JY, van Calster B. A systematic review shows no performance benefit of machine learning over logistic regression for clinical prediction models. *J Clin Epidemiol* 2019;S0895-4356(18)31081-3.30763612
16 MiRoR. Interview with Professor Doug Altman. Projet MiRoR. 2018.http://miror-ejd.eu/2018/03/20/interview-with-professor-doug-altman/.
17 Straus SE, Haynes RB. David Sackett's legacy includes evidence-based mentorship. *J Clin Epidemiol* 2016;73:61-3. 10.1016/j.jclinepi.2016.02.015 26931290