How can Open Access increase the possibilities to be seen? Experiences from collaboration with Russia and Latvia

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The Pulmonary Vasoconstrictor Response to Acute Alveolar Hypoxia

With special reference to the effects of anesthetic agents

By

Lars J. Bjertnæs

Oslo 1980

INTRODUCTION

The pulmonary vasoconstrictor response to hypoxia

The ability of blood vessels to constrict in response to local hypoxia appears to be unique for the pulmonary circulation. In 1946 von Euler & Liljestrand proposed that this vasoconstriction played a role in diverting blood away from hypoventilated areas to more properly ventilated areas of the lungs. Their suggestion was based on the observation that in cat the pulmonary artery pressure increased when the animal was breathing a gas mixture deprived of oxygen.

In the ensuing years, investigations of the pulmonary vasoconstrictor response to hypoxia ("hypoxic response") have been carried out on a large scale. Among the most puzzling basic problems have been to pinpoint the location of a "receptor-area" where hypoxia acts to elicit vasoconstriction. Since the hypoxic response can be evoked in isolated lungs, as well as in lungs in situ, such a hypoxia-sensitive area must be situated within the lungs themselves.

It is still debated whether hypoxia acts directly on the smooth muscle cells of the pulmonary vasculature (Fishman 1976) or some distance away from these. The latter hypothesis assumes some kind of transmission of the signal from the receptor site to the constricting vessels. Presently, most investigators favour the view that transmission is brought about by one or more chemical mediators. There is no experimental evidence of a reflex mechanism.

The lungs constitute quite a trove of vasoactive substances, most of them have been tested for a potential role as mediator of the pulmonary vasoconstrictor response to hypoxia. A number of

The emergence of personal computers and the internet

- In the middle of the 1980th personal computers became generally available
- At the University Hospital of North Norway, an electronic patient journal system was introduced first about 10 years ago. Successively, results of laboratory tests including X-rays were digitalized as part of the journal
- The last 20 years, the internet has revolutionized both the work with patients journals and the scientific writing
- Still a system for continuous registration of hemodynamic monitoring data is lacking in many hospitals. Particularly in the operating theater and in Intensive Care Units such a system would unload the burden on ICU nurses.
- In Russian and Latvian university hospitals, the patient journals are still written by hand

Anesthesia and Critical Care Research Group

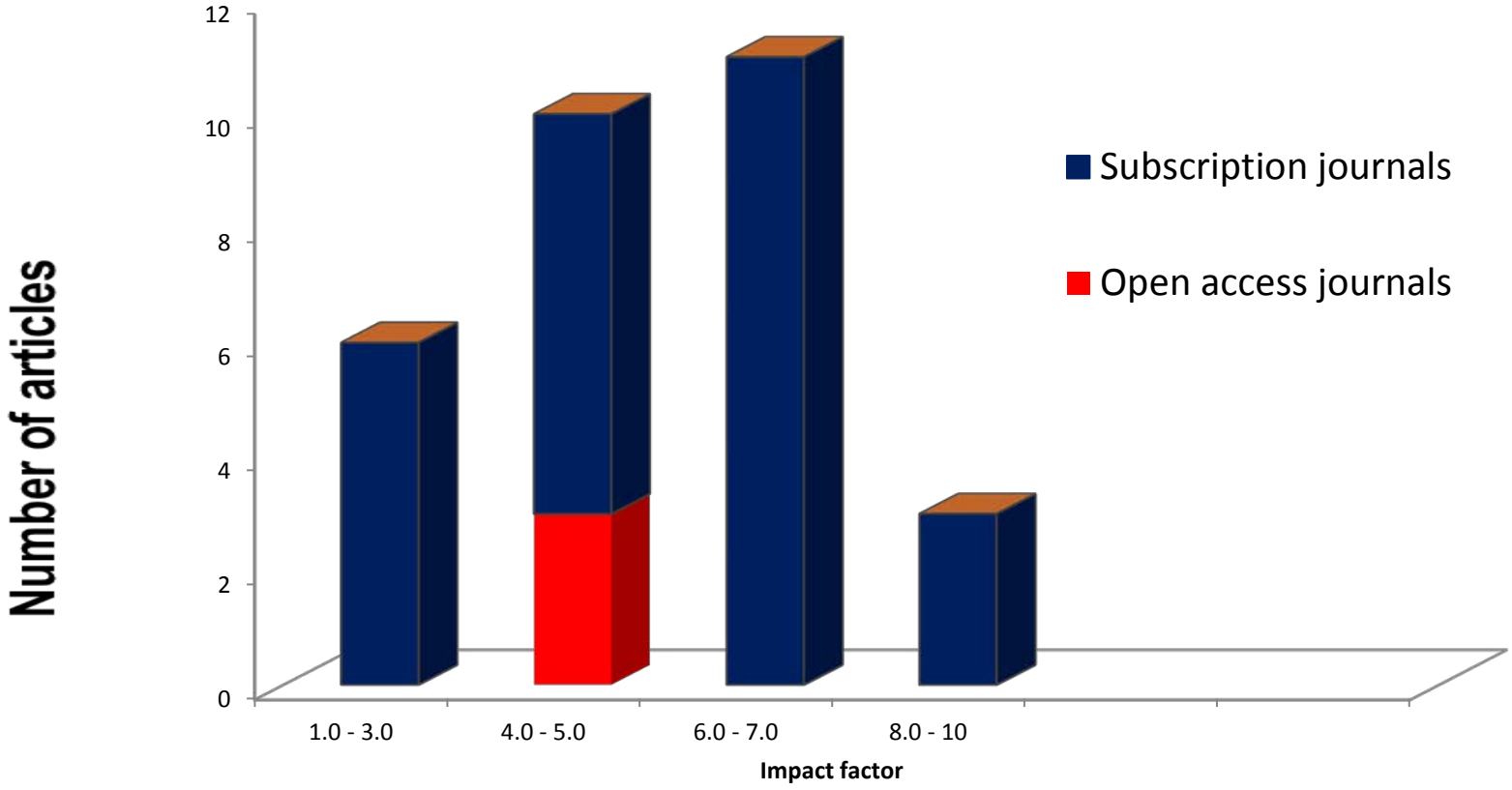
Norwegian Dr. Med and PhD degrees by colleagues from Arkhangelsk, Russia

1. **Oleg Evgenov 2001**
2. **Mikhail Y. Kirov 2003**
3. **Vladimir Kuklin 2005**
4. **Timofei Kondratiev 2006**
5. **Vsevolod Kuzkov 2006**
6. **Evgeny Suborov 2012**

Open access (OA)

- Open Access articles have increased possibilities of being seen since they are freely available online, both to the research community and to the public, via the publisher's website, PubMed Central and many other international archives of full text articles
- OA journals are fast tracking and the work might be published within a few weeks instead of going through a tedious process with a recognized subscription journal, but often this happens at the expense of a low - or lacking impact factor!!
- In contrast to Subscription journals, where submissions are free of charge, OA journals charge a fee from the authors, frequently amounting to 1000 to 1500 Euros, which is challenging for colleagues from poor income countries

Anesthesia and Critical Care Research Group - publications in international journals 1998 -2005



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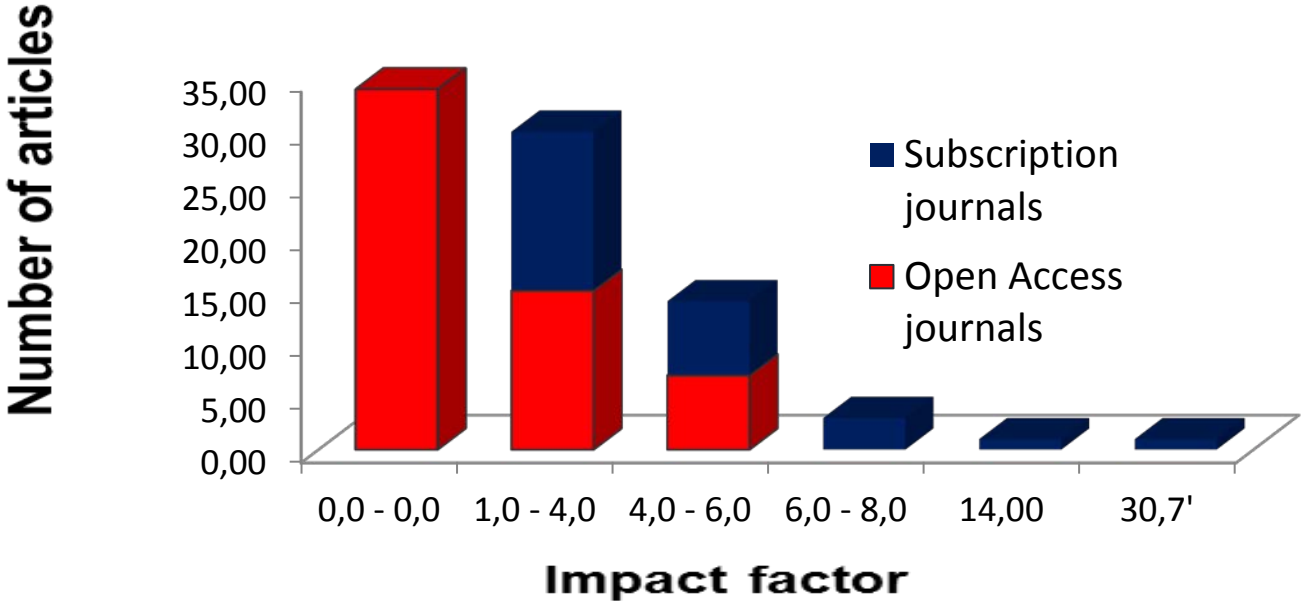

Impact factor of publication channels used by our group

Lancet	**30.7**
British Medical Journal	**14.0**
American Journal of Respiratory and Critical Care Medicine	**11.0**
Critical Care Medicine	**6.373**
Critical Care	**4.931**
Am J Physiol	**3.712**
J Am Coll Surg	**3.651**
CURR OPIN CRIT CARE	**2.66**
J TRAUMA-INJURY INFECTION AND CRITICAL CARE	**2.626**
Acta Anaesth Scand	**2.26**
Cryobiology	**1.718**
BMC Anesthesiology	**NA**
Critical Care Research and Practice	**NA**
J Scientific Research and Reports	**NA**

Research

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Recombinant human activated protein C attenuates endotoxin-induced lung injury in awake sheep

Kristine Waerhaug, **Vladimir N Kuklin**, **Mikhail Y Kirov**, **Mikhail A Sovershaev**, **Bodil Langbakk**, **Ole C Ingebretsen**, **Kirsti Ytrehus** and **Lars J Bjertnaes***

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See related commentary by Rehberg et al., http://ccforum.com/content/12/5/179

Critical Care
Volume 12
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Epidural anesthesia and postoperative analgesia with ropivacaine and fentanyl in off-pump coronary artery bypass grafting: a randomized, controlled study

Mikhail Y Kirov*, Alexey V Eremeev, Alexey A Smetkin and **Lars J Bjertnaes**

* Corresponding author: Mikhail Y Kirov mikhail_kirov@hotmail.com

BMC Anesthesiology 2011, **11**:17 doi:10.1186/1471-2253-11-17

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BMC Anesthesiology
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Case report

Open Access

Hypothermic cardiac arrest far away from the center providing rewarming with extracorporeal circulation

Eckhard Mark, Olaf Jacobsen, Astrid Kjerstad, Torvind Naesheim, Rolf Busund, Ramez Bahar, Jon K Jensen, Per Kristian Skorpen and **Lars J Bjertnaes***

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Does Open Access increase the possibilities to be seen?

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Associations between TNF-α, IL-6 and IL-10 Promoter Polymorphisms and Mortality in Severe Sepsis

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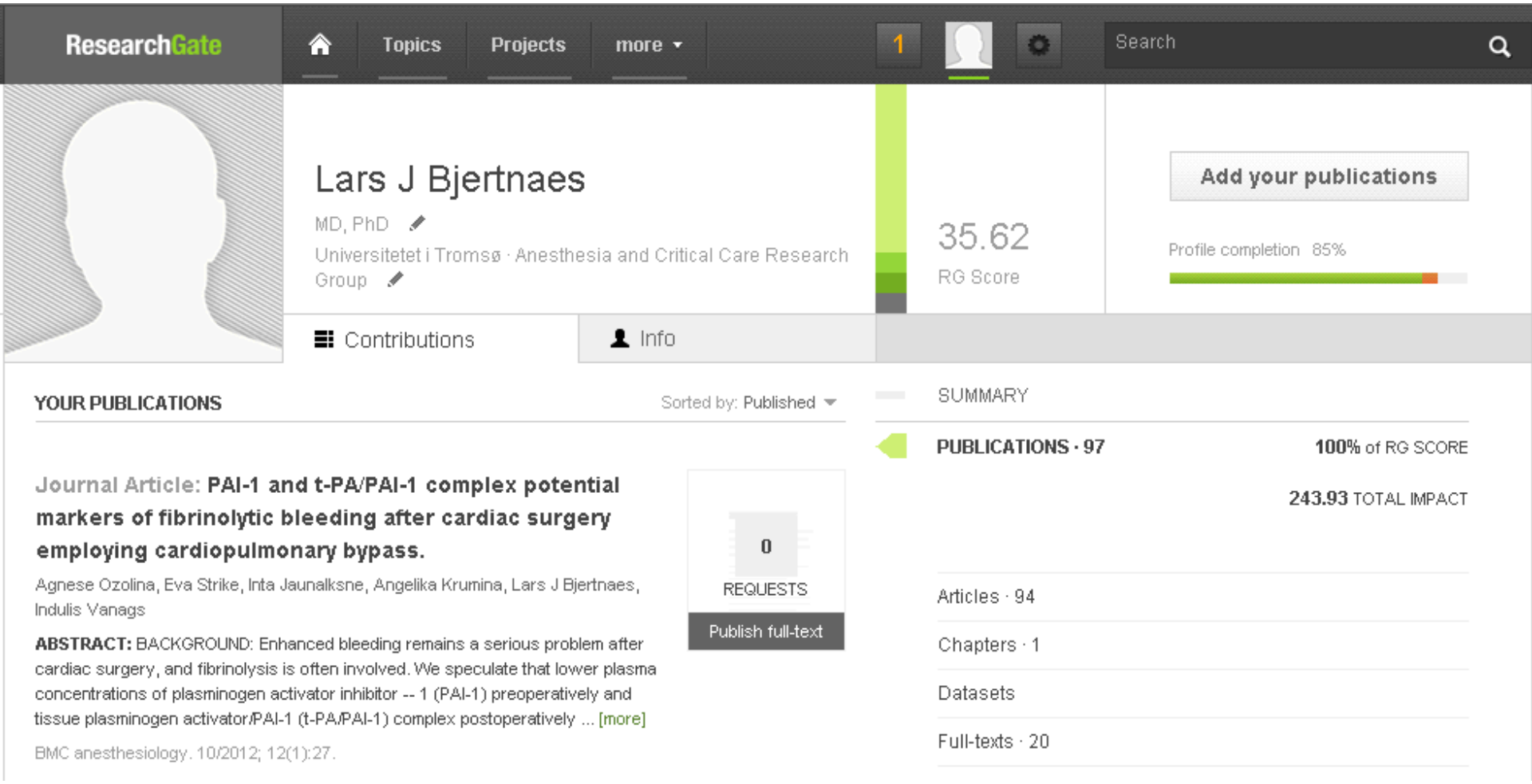

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Conclusions

- Open Access increases the possibility to be seen, but often at the expense of a lower impact factor
- Open Access articles can be downloaded free of charge of both professionals and lay people
- In Norway, most research projects have included Open Access publishing in their budgets
- Open Access publishing is a problem for the authors of papers with poor funding of research
- In countries, like Russia and Latvia, few grants are accessible and clinical projects are performed without funding
- In underprivileged countries, access to medical subscription journals is also sparse
- The University of Tromsø has been of great help by offering funding of Open Access articles from our collaboration with Russia