

A CALL TO ARMS FOR DRUG DISCOVERERS

At a recent meeting in London, Paul Janssen, founder of Janssen Pharmaceutica and one of the world's most successful drug discoverers, offered a rallying cry to the audience of drug researchers — one that had a shockingly familiar ring to it.

“Let us declare World War III against the many serious diseases afflicting mankind.” Now there's a mission statement, as proclaimed by Dr Paul Janssen and heard by the audience at a one-day meeting in London in March. The topic of the conference was the question that exercises us all: “Is there a best strategy for drug discovery?”. The day was topped and tailed by presentations from Jim Black and Janssen, two proven champions of European drug discovery. The theme that emerged from their talks was commitment.

Another quotation from Janssen's talk underlines the fundamental problem facing us, and one that we are all too aware of: “...the birth rate of new superior and badly needed drugs is, in my view at least, incredibly low and still declining”. In saying this, he might simply be adding his voice to the great chorus of those highlighting the current drug shortfall. But the statement takes on greater meaning in the particular context of Janssen's talk. He told us that when he was invited to speak on the topic of the meeting, his secretary recalled that he had given a similar talk before. On digging it out, he found that it was still entirely applicable. So that was the talk we were treated to, repeated verbatim. It was written in 1979.

Luckily for those not present on either occasion, the talk was published in 1980 under the simple title ‘Drug research’ in the *Revue Médicale de Bruxelles*¹, and, although it is depressing to be reminded that so little has changed since then, it still makes an inspiring read. As the article might be hard to find, we are hosting a PDF of it associated with the online version of this editorial (http://www.nature.com/nrdlink/v2/n5/full/nrd1097_fs.html), with kind permission from the original journal. In an environment in which the immense number of new publications detailing the minutiae of every facet of the science of drug discovery often prevents us from seeing

the wood for the trees, taking this dip 23 years back into the literature reminds us, if we need reminding, what the business of drug discovery is all about.

Janssen argues that the creation of better drugs depends on fostering motivation and “the capacity to dream”, the latter perhaps being viewed as something of a luxury in what many perceive as the harsh economic realities of the present. Again anticipating current lines of debate, he goes on to comment on the ways that an overly risk-averse culture can stand in the way of getting badly needed drugs to patients. Another quotation shows just how contemporary this paper seems: “A better drug is obviously not a new molecule which injected into mice produces a paper.” That sounds like a suitable mantra for drug discovery today.

One of the topics that came up in other talks during the day was attrition rates, and alarming statistics were presented to emphasize just how unlikely any given discovery project is to make it through to the holy grail of a marketed drug. Such figures are carefully calculated by groups such as the UK-based **Centre for Medicines Research** and the US-based **Tufts Center for the Study of Drug Development**, and rightly form an important part of modern pharmaceutical industry strategy. However, when Black and Janssen were asked in a panel discussion what sorts of project attrition rates they had been used to in their laboratories, they both immediately answered that they were not in the habit of killing projects. Their answer implies an attitude to drug discovery based on very different precepts from those governing research today. In particular, they argue that successful drug discovery requires persistence. If a project is started in order to address a serious unmet medical need, then surely that project should continue until the need is met.

Janssen, P. A. J. Drug research. *Rev. Méd. Brux.* 1, 643–645 (1980).

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