### conference report

with IL-18 and, potentially, IL-32 being probable future targets for this approach. Antisense strategies hold much promise and efforts to improve bioavailability, by enhanced stability or better delivery, will accelerate application of these compounds. Next year will be the tenth anniversary of this conference, and it promises to be just as exciting and informative as this year's event.

#### References

1 Kim, S.H. *et al.* (2005) Interleukin-32: a cytokine and inducer of TNF-α. *Immunity* 22, 131–142

- 2 Morton, A.C. et al. (2004) Response of very small (2 mm) porcine coronary arteries to balloon angioplasty and stent implantation. Heart 90, 324–327
- 3 Sims, G.P. et al. Identification and characterization of circulating human transitional B cells. Blood (in press)
- 4 Kuliopulos, A. et al. (2004) Effect of selective inhibition of the p38 MAP kinase pathway on platelet aggregation. Thromb. Haemost. 92, 1387–1393
- 5 Leftheris, K. et al. (2004) The discovery of orally active triaminotriazine aniline amides as inhibitors of p38 MAP kinase. J. Med. Chem. 47, 6283–6291
- 6 Duan, W. et al. (2005) Inhaled p38a mitogen-activated protein kinase antisense oligonucleotide attenuates asthma in mice. Am. J. Respir. Crit. Care Med. 171,571–578
- 7 Gao, D. et al. (2005) CD40 antisense oligonucleotide

- inhibition of trinitrobenzene sulphonic acid induced rat colitis. Gut 54, 70–77
- 8 Paul-Clark, M.J. et al. (2004) 15-Epi-lipoxin A4-mediated induction of nitric oxide explains how aspirin inhibits acute inflammation. J. Exp. Med. 200, 69–78

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# private prescription

### Jargon: the twittering of scientists and medics

Galen, the Greek physician who founded experimental physiology and is one of the most distinguished physicians of antiquity, commented in his work *On the Natural Facilities* (written in the second century AD) [1]: 'We, however, for our part, are convinced that the chief merit of language is clearness, and we know that nothing detracts so much from this as do unfamiliar terms.'

I wonder what he would have said about the proliferation and incessant use of jargon in science and medicine today.

### Etymology

The word jargon is descended from the old French word 'jargoun', denoting the meaningless chatter and twittering of birds. However, it was not until mediaeval times that it was applied to unintelligible or meaningless talk or writing, and it was not until the mid-1600s that it was applied contemptuously to

the language of scholars or the terminology of science [2]. Of course, the word meaningless has to be qualified – meaningless to whom? Jargon might be intelligible to a specific group of people but unintelligible to outsiders and, therefore, can be used to ensure secrecy and conceal the truth. Jargon can be applied across the whole spectrum of language, for example, using long complicated words where smaller simpler ones would suffice, acronyms, abbreviations and initialisms, and metaphors – indeed, anything that causes confusion either intentionally or unintentionally. A limerick that sums this up perfectly is [3]:

Ad-i-ad-o-cho-kin-e-sis Is a term that will bolster my thesis, That 'tis idle to seek Such precision in Greek, When confusion it only increases. A thought-provoking tonic on the lighter side



Column by Raymond C. Rowe, AstraZeneca, UK

Please note that these are the personal opinions of the author and do not necessarily represent those of AstraZeneca.

Incidentally, adiadochokinesis is the ability to perform rapid alternate movements such as winding up a watch.

### Medical jargon

Everyone is aware of medics' insistence on using long complicated words to describe, for example, diagnoses and surgical techniques. Indeed, even simple techniques can be jargonized, as so aptly stated by Oliver Wendell Holmes (1809–1894) [4]: 'I know there are professors in this country who 'ligate' arteries.

## private prescription

Other surgeons only 'tie' them, and it stops the bleeding just as well.'

Like all jargon, medical jargon is idiosyncratic. A good example of this is the use of the word 'fracture' to describe a broken bone, something that has probably occurred to many readers of this article. To me, as a scientist interested in material science, there is a distinct difference between a cracked, fractured or broken bone, and I would regard a fracture as being not as bad as a break. In engineering parlance, a crack is a line that has propagated someway into a structure, a fracture is a crack that extends across a structure but the pieces are still in the right place and a break implies that the structure is in pieces that are completely apart from each other. Admittedly, the medic does qualify the word fracture by using the adjectives greenstick, undisplaced and displaced to represent the gradation of the injury. Doctors should not get vexed when patients ask if their injury is a fracture or a break; their jargon, in this case, is removed from common sense.

Another good example, this time in biology, is the use of the expression 'growth rate', which is commonplace in the laboratory. Parents, for example, do not boast of the high growth rate of their children, gardeners do not refer to the low growth rate of their vegetables – they would say that their children are growing fast and that their vegetables are growing slowly, respectively.

### **Word simplification**

Although modern language favours simplicity, many new words are long and cumbersome.

Word simplification or abbreviation can take several forms: clipping (e.g. ad for advertisement); first letter initialism (e.g. FDA for Food and Drug Administration); opening letter initialism (e.g. Ca for calcium); syllabic initialism (e.g. modem for modulatordemodulator): combinational initialism (e.g. e-mail for electronic mailing); and, finally, acronyms (e.g. radar for radio detection and ranging). I have dealt with the proliferation of acronyms in an earlier article [5] but did not cover the fact that all these can be regarded as jargon because, if used in excess, language and prose become a string of hieroglyphs requiring the listener or reader to refer constantly to a list of terms to grasp the meaning, particularly if the perpetrator has used several forms of word simplification. I am sure that I am not alone in having sat through lectures where I have been bamboozled with such jargon. Unfortunately, the problem appears to be on the increase, so much so that nowadays, unless one is knowledgeable of the subject matter, attending such lectures has become extremely frustrating.

### 'There is nothing wrong with calling a spade a spade.'

### Why jargon?

Mark DePaolis in his book *Are You a Real Doctor?* [6] states: 'I am tired of people saying that doctors can't speak English. This is just not true. Many of them know how to speak English perfectly well, they simply choose not to.'

Why do they choose not to? Why do they cover up, as many scientists do, by resorting to jargon? I believe that there are two main

reasons. The first is related to the depth of their feeling of insecurity in their position. The more insecure they feel, the more they use jargon to cover their lack of knowledge. The second is that many do not want to risk using plain language for fear of upsetting the person with whom they are communicating, be it a patient in the case of a medic or a referee in the case of a scientist writing a paper. I suppose that in the case of a medic telling a frightened patient of their impending death the use of jargon is understandable, but this is an exception rather than the rule.

There is nothing wrong with calling a spade a spade. All specialists approaching a non-specialist audience should always select an everyday word rather than a piece of jargon, as long as the more common term does not lead to imprecision or ambiguity. A person with liver disease can be described as yellow, or even jaundiced, but never xanthochromatic!

### References

- 1 Galen, C. (1916) *On the Natural Faculties* (Translated by Brock, A.J.), Harvard University Press
- 2 Little, W. et al., eds (1973) The Shorter Oxford English Dictionary, Oxford University Press
- 3 English, H.B. and English, A.C. (1958) A Comprehensive Dictionary of Psychological and Psychoanalytical Terms – A Guide to Usage, Longman
- 4 Strauss, M.B., ed. (1968) Familiar Medical Quotations, Little, Brown & Co.
- 5 Rowe, R.C. (2003) Abbreviation mania and acronymical madness. *Drug Discov. Today* 8, 732–733
- 6 DePaolis, M. (1997) Are You a Real Doctor? Fairview Press

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