

the latest research breakthroughs and recent market analysis. It will be enlightening its readers with the most up-to-date 'people' information, which will assist those who are interested in knowing the movements and latest achievements of the names in the industry as well as including interviews with those names.

Our Monitor section will be improved and expanded to acquire more extensive coverage of the exciting developments in the primary literature. We will also be including case studies of company collaborations and we will be implementing a new technology focus section. 'End user technology focus' will be for those in big pharma or biotech who wish to express

an objective and timely opinion on the latest equipment they have acquired as a major step to facilitate their research.

Finally, we would like to thank our Editorial Board, readers and referees for their hard work over the past four years since its inception. We will continue to bring the latest, reliable information from the industry to your company and will endeavour to take on board your valuable suggestions as the months and years progress.

Debbie Tranter
Editor

Poetry and verse: an ideal medium for scientific communication?



'Many professional scientists over the years have expressed their thoughts and ideas in poetry.'

In 1812, Samuel Taylor Coleridge, the poet, journalist and critic, when lecturing on Shakespeare at The Royal Institution, stated¹:

'Poetry is opposed to science... The proper and immediate object of science is the acquirement, or communication, of truth; the proper and immediate object of poetry is the communication of immediate pleasure.'

This assertion is based on that put forward by Aristotle in his treatise *Poetica* written in about 320 BC. In this he proposed that for verse to be poetry, it must give an imaginative picture of life at large rather than a string of facts and, hence, the theory of medicine or physical philosophy written in metric form, no matter how technically correct,

would not be poetry. Many purists would still agree but, in reality, it is a position that is difficult to defend except at the two extremes, and scientific thoughts and ideas generally lie somewhere in the middle. Indeed many professional scientists over the years have expressed their thoughts and ideas in verse in such a way that the result can be classed as poetry.

One of the most notable examples of a scientist who achieved the state of being referred to as a poet is Sir Ronald Ross, the bacteriologist and physician who received the Nobel Prize for Medicine in 1902 for his work on malaria. Ross actually published a book of poems in 1928 (Ref. 2). An example of his style is shown in a short piece written in 1917, in fact on the same day, 20 years after his discovery of the life-cycle of the malarial parasite³:

'Now twenty years ago
This day we found a thing;
With science and with skill
We found; then came the sting –
What we with endless labour won
The thick world scorned;
Not worth a word today –
Not worth remembering.'

The poignancy of these words will not be lost on many scientists today who have seen their discoveries become lost to

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the memory despite being hard won at the time. Written in stark scientific prose this would have appeared as sour grapes but expressed in poetry the underlying feeling of sorrow and disappointment is apparent.

Medicine and its allied subjects have spawned many scientists who have indulged in poetry. William Tod Helmuth, a surgeon, in the late nineteenth century published a book entitled *Scratches of a Surgeon*⁴ containing many short pieces of verse (some would disparagingly call them doggerels). However, they have withstood the test of time and are still quoted today in collections of scientific quotations. An example of his style is entitled *Medical Pomposity*:

'Term pain "neuralgia"; or if the man be stout,
Cry out, "Dear Sir, you have rheumatic gout"
Tap on the chest – some awful sounds they hear,
Then satisfied, declare, "The case is clear",
Draw forth a paper, seize a magic quill,
And write in mystic signs, "Cathartic pill!"

Pomposity of this dimension would have been difficult to express in anything other than verse. Whether or not it is good poetry is open to debate.

A similar example, this time a much longer poem, is that written by Gregory Gregoriadis, who was then working at the Clinical Research Centre in Harrow, London⁵. Entitled *How Liposomes Influenced My Life and Got Away With It*, the poem is a humorous account of how Gregoriadis first became involved in liposomes and the trials and tribulations over the years. Written in rhyming couplets the poem is scientifically sound in its description of its subject, for example:

'Lamellar vesicles unstable, short-lived
whether uncharged or meticulously sieved,
doomed to decay in looming Kupffer cells,
acidic enclaves, milieu that quells
hydrogen bonds, biopolymer tresses.
Ossified preys of Harpean caresses.'

It is only in the last line of this extract that Gregoriadis lets his imagination run wild (a Harpy is a mythical monster). I recommend that readers read this poem from this well-known modern scientist working in the field of drug delivery.

Poetry and song are intimately linked and hence it should not come as a surprise that some enlightened scientists have added a melody to their verse and created a song. The most notable example is Howard Shapiro, a histochemist who, in 1977, presented or, rather sang, his work at the *28th Annual Meeting of the Histochemical Society* in Chicago (IL, USA) accompanied by a guitar. The piece consists of 17 stanzas

each of two rhyming couplets and is entitled *Fluorescent Dyes for Differential Counts by Flow Cytometry: Does Histochemistry Tell Us More Than Cell Geometry?*⁶ It is a serious study with references to earlier work, methodology, results and discussion. An example of a stanza in the methodology section illustrates Shapiro's style:

'From digitized, scanned images of blood cells on a slide,
Key features are extracted; cells are then identified
From distributions of a few – say four or more – of these,
By multivariate statistical analyses.'

It is unfortunate that there is no record of how this was received.

Why choose verse in this way? Unfortunately no surveys on the subject exist. However, it is interesting to speculate and, to this end, it is worth referring to the reasons given by the poet Alexander Pope who, in the preface to *An Essay on Man* written in 1732, stated⁷:

'I chose verse, and even rhyme, for two reasons. The one will appear obvious: that principles, maxims or precepts, so written, both strike the reader more strongly at first and are more easily retained by him afterward. The other may seem odd, but it is true: I found I could express them more shortly this way.'

Surely this is the very essence of good scientific communication – concise presentation, easily understood and remembered. If this is what all scientists are trying to achieve, then why do they not try communicating in poetry more often? I suspect that most would regard it as frivolous and unscientific. What a pity!!!!

These are the personal views of the author and do not represent those of AstraZeneca.

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