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PERSPECTIVES

The Wholeness in Suffix *-omics*, *-omes*, and the Word *Om*

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These days *omics* is an *au courant* buzz word in life sciences, and my recent visit on Google.com listed 829 words with *omics*. The suffix *-omics* is used frequently to describe something big, and refers to a field of study in life sciences that focuses on large-scale data/information to understand life summed up in "omes" and "omics" such as proteomics, genomics, metabolomics, etc. It is indeed interesting to discern that there is little history of how *genomics* and *proteomics* came into being, which started the era of omics.

The word *genomics* was first coined by Dr. Thomas H. Roderick, a geneticist at the Jackson Laboratory, Bar Harbor, ME, in 1986. During an international meeting in Bethesda on the feasibility of mapping the entire human genome, Frank Ruddle (Yale University), Victor McKusick (The Johns Hopkins University), and Tom Roderick (with some other colleagues) convened a short sub-meeting. They went to McDonald's Raw Bar (which has now been torn down) to discuss starting a new journal. After a bit of beer that evening, the discussion led to a name for the yet-to-be-published journal, and Tom Roderick proposed the word *genomics*.[1] The journal is now known as *Genomics*.

The word *genome* is believed to have a different origin. In an earlier commentary, Lederberg and McCray reported that *Oxford English Dictionary* attributes *genome* to Hans Winkler.[2] In the book *Verbreitung und Ursache Der Parthenogenesis im Pflanzen- und Tierreiche,* Winkler in 1920 used the word *Genom* in the context of haploid chromosome set. Anyway, the origin of chromosome is from the Greek stem. As we now know, genome refers to the *complete* genetic makeup of an organism; hence some scholars have made the inference that there exists some root, *ome*, of Greek origin, referring to wholeness or to completion, but no such root is known to exist in the literature. Lastly, many scholars in science believe that the suffix *-ome* has been derived from *genome*, a word which formed in parallel with *chromosome*.

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Downstream of genomics, the word *proteomics* was first proposed much later by Marc Wilkins in 1995, to describe an entire organism's protein complement. Marc at that time was a Ph.D. student in Keith Williams's laboratory at Macquarie University in Sydney, Australia. The word proteomics arose out of Williams's idea to screen and determine all the proteins produced by the DNA of an organism, rather than using the more conventional approach of sequencing DNA in order to determine the genes that produce proteins.[2] Marc Wilkins first used the word *proteomics* as an alternative to the phrase "the protein complement of the genome."

The other twist to "omics" may be associated with the "Om" (pronounced "Aum"), an ancient Sanskrit intonation, which, like music, transcends the barriers of age, race, culture, and even species. It is made up of three Sanskrit letters, *aa*, *au*, and *ma*, which, when combined together, make the sound "Aum" or "Om," which signifies fullness, as in a divinity that encompasses the entire universe in its unlimitedness. It is believed to be the basic sound of the world and to contain all other sounds, and is a mantra in itself. If repeated with the correct intonation, it can resonate throughout the body, so that the sound penetrates to the center of one's being, the *atman* or soul. There is harmony, peace, and bliss in this simple but deeply philosophical sound.

Finally, there is now a word *omicist*—a scientist who studies omeomics, cataloging all the "omics" subfields, such as genomics, proteomics, and interactomics.

So we keep repeating "omics" mantras like metabolomics, metabonomics, metallomics, lipidomics, interactomics, transcriptomics, spliceomics, neuromics, physiomics, predictomics, and so on …

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