

Oxford Dictionary of Biochemistry and Molecular Biology. Revised Edition. – Oxford University Press, Oxford 2000. ISBN 0-19-850673-2. 740 pp., GBP 34.95.

This is a revised edition of an explanation dictionary prepared during the last quarter of the 20th century by many compilers and 12 editors from Great Britain, Australia, and the U.S.A. The very carefully prepared dictionary was first published in 1997. Its system is explained in detail in an introductory Guide. By using sans serif and serif normal, bold, and italic typefaces, easy orientation is facilitated. Alternative terms and spellings, synonyms, trivial names, multiple definitions, hidden entries, derived terms, abbreviations, symbols, etymological explanations, notes on usage, cross-references, drug names, structure diagrams, amino-acid sequences, gene names, *etc.*—all these possibilities can be found in this large dictionary. The explanations of individual terms are brief and understandable. Only rarely the text is not very accurate and up-to-date. Thus carbonate dehydratase (= carbonic anhydrase) is explained as an enzyme in human and animal cells, but *Chlamydomonas reinhardtii* is also mentioned. Are the editors sure that every reader knows this green alga and realises that carbonic anhydrase does function also in plants? The old term “carbohydrate” is present as the main item, even if the term saccharide is more exact (why not use it also for polysaccharides and derivatives?). Carotenoids function in plants also through the xanthophyll cycle that is not mentioned at all. The term “chloroplastid” is not used at present. The item “photosynthetic reaction centre” deals for unknown reasons only with bacterial reaction centres. The same error is implanted into the item “photosynthesis”. C₃ and C₄ plants have their items, but CAM plants do not; under “CAM” the user finds abbreviations for “1 calmodulin, 2 crassulacean acid metabolism”, but this metabolic type is not explained. Rubisco is (according to my opinion not a proper) abbreviation not for

ribulose-1,5-bisphosphate carboxylase, but for ribulose-1,5-bisphosphate carboxylase/oxygenase. The term “photoautotroph” is presented together with the obsolete term “photolithotroph”. On the other hand, the editors tried to modernise British English (*cf.* “glycollate an obsolete variant spelling of glycolate”), but on the other hand they use obsolete terms such as “light intensity”. In the item “melatonin” the presence of these substances in plants is not mentioned. Transformant is not only a bacterial cell. The mechanisms of gene transfer are not necessarily obscure as stated in the item “transgenesis”. In some cases there are some inconsistencies in including terms: lutein and neoxanthin are individual items of the dictionary, but violaxanthin and zeaxanthin are not. To make it short, inaccuracies or old-fashioned explanations in some items call for further revision and modernisation by specialists in photosynthesis and other fields of plant biochemistry and genetics.

Eight useful appendices are supplemented: on Greek characters used as symbols, on publications on nomenclature, on international and national organisations of biochemists and molecular biologists, on internet search engines and sites, on exploring the language of bioinformatics, on restriction enzymes and methylases, on sequence-rule priorities of ligands and molecular entities, and on species names. The end-papers contain a selection of useful tables: periodical table of the elements, SI base and derived units and prefixes, symbols for amino acids, and basic information on the genetic code.

In summary, this is a very useful explanatory dictionary for students, scientists, and university and laboratory libraries, nevertheless, using it please take into account that not everything written must also be true.

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