IBPPM Guide to Better Scientific English - Status and Outlook

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Abstract
Attempts to create an electronic reference resource to facilitate translation of Russian biochemical and microbiological literature into English are described. It is hoped that this resource, tentatively called the IBPPM Guide to Better Scientific English, will be of interest both to research workers and to professional translators from Russian into English.

1. Introduction
This work is part of a broad project entitled "Progress in the scientific and information system at IBPPM RAS: accumulation of an electronic library and supply of information to the telecommunication network server". The project is being carried out at the Institute of Biochemistry and Physiology of Plants and Microorganisms of the Russian Academy of Sciences (abbreviated to IBPPM RAS). Its main aim is to create at IBPPM an information space, which would allow research workers immediate access to the electronic information resources and services provided by scientific and technological information units.

Currently, efforts are under way to create an electronic information resource, based on IBPPM's research output over the past 18 years, i.e. since the year of foundation of the institute (1980). The resource will fall into 4 parts:
- Reviews in the biochemistry of plant-microbe interactions
- IBPPM Guide to Better Scientific English
- A textbook on "Essential Informatics and Computer Science"
- The complete list of publications of the institute's members

In this short paper, we concentrate on the IBPPM Guide to Better Scientific English, and show how this unconventional reference work can help in making a research paper a joy to read.

2. Why another dictionary?
The idea of such a resource is a timely one. By now, much due to the post-Gorbachev developments on the international scene, English has evolved to become the principal language of professional literature. Today, if you want to make your voice heard by the world scientific community, you must translate or have your papers translated into English. But if you want to make yourself understood, and your results to be estimated at their true worth - which is, after all, the object of any translation - a good knowledge of the ins and outs of scientific English in your field is a requirement.

Much of the biochemical and microbiological research output by Russian scientists is now published in English, both in international learned journals and as translations of papers originally published in Russian. However, even accepted papers sometimes appear to suffer from English linguistic deficiencies, with many uncorrected errors, to say nothing of those at the submission stage, where the rejection rate on language grounds is very high. A diligent language editor is a rarity; so, authors and their translators should always be aware of the degree of their responsibility for using the right word in the right place.

Obviously, the Russian scientist will have difficulty choosing the exact wording for his paper without a good dictionary or reference book on hand. Yet, few guides to writing science in English, whether in print format or as electronic versions, are now available in this country. So far, we at IBPPM have been well served by two books; one is the Russian-English Translator's Dictionary by M. Zimmerman and C. Vedeneeva [1], and the other is the Russian-English Dictionary of Scientific and Technical Usage by B.V. Kuznetsov [2]. However, while these books warrant an "excellent" rat-
ing, they are not entirely adequate for our needs, as they devote little attention to the biochemical and microbiological terminology.

There is also the excellent guide to biochemical usage compiled by N.V. Obrucheva and V.M. Karzinkin [3]. It contains a mass of useful information, with examples taken from original British and American sources, but is somewhat narrow in scope and does not always come to the rescue with the English for details of laboratory techniques, which are described in "Materials and methods" sections.

3. The IBPPM Guide

3.1 Aims and scope

The aim of our work is, therefore, not to imitate but to supplement and expand, by including the technical and grammatical subtleties that are relatively neglected in the existing reference literature. The specific goals are twofold: to provide professionals with the correct versions of word combinations and expressions common to microbiological and biochemical research papers, and to give the phonetic transcription of certain specialized terms (names of bacterial genera and species, plant cultivars, chemicals, enzymes, methods, etc.) as an aid to preparing oral presentations in English. The Guide will be orientated towards a wide audience, from students and research workers to professional translators from Russian into English.

Areas of current interest are general and applied microbiology, microbial biochemistry, immunology, plant physiology, and biotechnology. The specific subjects will include bacterial metabolism, plant-microbe interactions, biological fixation of nitrogen, synthesis of plant growth regulating substances, microbial degradation of toxic compounds, bioremediation, and environmental protection.

3.2 The structure

The plan of the Guide is as follows:

• Section 1 (phonetic) will provide the pronunciation of specialized terms. The main source of entries are audio tapes of the lectures given by British and American scientists during their stay in Saratov as participants in the International Workshop on Associative Interactions of Nitrogen-fixing Bacteria with Plants (June 5-8, 1995) and in the Glikman International Workshop on Structure Formation in Solutions and Gels of Food Polysaccharides (June 17-22, 1996). (Both meetings were organized by IBPPM.) We do not know of any dictionaries, either here or in the West, that carry the pronunciation of microbiological and biochemical terms.

• Section 2 will contain examples illustrating good scientific English usages. The entries will be arranged as a succession of Russian key words (e.g. Æòèäà íìîøü), accompanied by excerpts from the British and American research literature. The excerpts will serve to demonstrate the correct use of the key words (i.e. those that scientists have in the "active") as components of word combinations (e.g. Æäëæ ëèððíæå Æèðæäíîøü, Ïðîâæåøü Æèðæäíîøü, Ïâ Ïðåêàëàøø Æèðæäíîøü) within the context of a sentence and with the required article. Ten to 15 excerpts will be provided for each key word. This will allow the user to minimize the danger of slipping into bad English when writing a paper for a journal or preparing a report.

• Section 3 will be organized as a combinatory dictionary of grammatical and lexical word combinations typical for scientific research texts. It will list the many verbs, adjectives, and adverbs (including synonyms) that a given key word can go with in a piece of text. To illustrate, it is possible to produce, form, synthesize, export, or destroy a polysaccharide; the structure of a compound can be internal, compact, or loose; a process can be inhibited significantly or strongly. Such a dictionary will allow the user a freedom of choice to better express what he means.

By the end of 1998, the Guide will contain approximately 700 entries in Section 1, 1500 entries in Section 2, and 700 entries in Section 3. It is anticipated that, by the end of the year 2000, the number of entries will increase twofold.

The project has the support of scientists in Great Britain and in the United States. By now, we have identified 5 potential referees whom we contact by E-mail from time to time to check the meaning and use of this or other words and expressions.

4. Better English next time!

The benefits of having such a guide at one's disposal are clearly illustrated by the current translating practice at IBPPM, which has resulted in decreased rates of rejection of our manuscripts on language grounds over the past 2 years. Of the 8 papers translated during that period, 4 have already been published and 2 are in press. These are listed as references at the end of this paper [4-9]. In addition, advice is regularly given to the institute's research workers on how to better organize their papers, to improve the style and writing skills.

Work is planned to create additional files and modify those which already exist by their translation into hypertext language. Once completed, the IBPPM Guide will be made available to the wider public over the Internet.

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References


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