RUSSIAN ACADEMY OF SCIENCES
Institute of Ecology and Genetics of Microorganisms

IEGM
Regional Specialised Collection of Alkanotrophic Microorganisms
World Federation for Culture Collections # 768

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To study bacteria, the oldest forms of life on the Earth, and employ them in human activities would be unfeasible, if not microbial collections.

Without conservation of the identified strains, systematics of microorganisms would be like an attempt to create an atlas of the sky based on separate observations of individual distant stars twinkling far off.

If we compare a manual of bacteria with the map of a poorly explored continent, in the depth of which a researcher often encounters sand dunes instead of anticipated mountains, a collection of live cultures would be a developed shore, from where the voyages into a terra incognita start.

Before a long journey, drop in the house we equipped, and we will be glad to facilitate your laborious way!

The IEGM Collection focuses on study, maintenance and distribution of practically valuable non-pathogenic bacterial cultures capable of degrading oil hydrocarbons and xenobiotics. The collection comprises type and reference strains belonging to the genera Agromyces, Arthrobacter, Brachybacterium, Brevibacterium, Clavibacter, Corynebacterium, Curtobacterium, Dermacoccus, Dietzia, Gordonia, Hocuria, Microbacterium, Micrococcus, Mycobacterium, Nocardia, Nocardio idea, Rhodococcus, Terrabacter, and Williamsia. The basis of the collection is the genus Rhodococcus actinobacteria which are most common in natural populations of hydrocarbon-oxidising microorganisms and known for their exceptional perspectives for industrial applications.

The collection is a recognised Unique Academic Facility of the Russian Federation (www.ckp-rf.ru/usu/73559), a member of WFCC (www.wfcc.info) and ECCO (www.eccosite.org), and a MIRRI collaborating party (www.mirri.org).

Information on IEGM strains is included in the Consolidated Catalogue of Microbial Cultures Held in Russian Non-medical Collections (www.sevin.ru/collections) and WFCC Global Catalogue of Microorganisms (GCM, www.gcmwfcc.info).

The collection possesses over 2,000 biotechnologically valuable strains and is classified as “Healthy and safe”.

Apart from fundamental research (comprehensive study of the alkanotrophs’ biology, adaptation mechanisms for their survival in anthropogenically disturbed ecosystems, etc.) and proper collection work, the collection activities consist of applied researches employing the collection strains and contribute to their practical use in diverse biotechnology fields (production of novel preparations, development and improvement of advanced technologies, etc.).

The IEGM Collection: fields of application

- **Biosynthesis of protein, amino acids, immunomodulators, biosurfactants**
- **Biodegradation of organic pollutants: hydrocarbons, solvents, crude oil and oil products**
- **Oil and gas prospecting (bioindicators of oil and gas deposits)**
- **Bioremediation of oil-contaminated water and soil**
- **Biomonitoring of hydrocarbon-polluted environments**
- **Microbiologically enhanced oil recovery (MEOR)**