

CURRICULUM VITAE

Prof. George Detchev Ph.D., D.S.

ADDRESS:

1170 Huntington Dr., B 5
South Pasadena, CA 91030
U.S.A.
Tel. (213)258-5557; Fax (213)221-2640

EDUCATION:

- 1945-49 Study of Natural Sciences: B.S. in Natural Sciences; M.S. in Biology; finished cum laudae, Sofia State University.
1951 Post-graduate studies in polarography with Prof. J. Heyrovsky -- Nobel laureate.
1952-54 Post-graduate studies in general physiology and biochemistry in the Institute of Experimental Medicine at the Bulgarian Academy of Sciences (BAS).
1956-57 Post-graduate studies in molecular biology and protein biochemistry at Humboldt University -- Berlin.
1961-62 Post-graduate studies in systems' theory in the Institute of Biochemistry, and in electron spin resonance in the Institute of Biophysics at the USSR Academy of Sciences.

DEGREES:

- 1949 B.S., Natural Sciences, and M.S., Biology from Sofia State University.
1960 Ph.D. in Biology (Biochemistry) from the Bulgarian Academy of Sciences.
1970 Doctor of Sciences in Biology (Biophysics) from the USSR Academy of Sciences.
1971 Full Professor of Biophysics at the Bulgarian Academy of Sciences.

POSITIONS:

- 1954-60 Junior scientist, Head of Department General Physiology of the Institute of Biology at the Bulgarian Academy of Sciences --BAS.
1960-66 Senior scientist, Head of Department Biophysics at the Institute of Plant Physiology - BAS.
1966-72 Director of the Central Laboratory of Biophysics --BAS (established by me and internationally recognized as scientific co-ordinator of 23 institutes from different countries).
1972-78 Head of the Department of Biophysics at the Nuclear Institute--BAS.
1978-82 Head of the Group of Ecology at the Center of Biology --BAS.

- 1978-92 Head of the Laboratory of Marine Ecology and Protection of the Sea
--BAS (established by me and recognized only two years after its
formation as the leader of international coastal investigations
and basis of the International Experiment for Coastal Ecology.)
- 1982-92 Head of the Department of Functional Ecology at the Institute of
Ecology --BAS.

PROFESSIONAL EXPERIENCE:

- 1951-54 Elaboration of an innovative polarographic method for measuring of
adsorption kinetics on proteins.
- 1955-56 Development of an innovative oscilloscopic polarograph.
- 1958 Beginning of experimental studies on transitory processes in
biological systems with newly-invented electrodes, making possible
the non-invasive simultaneous measurement of the rates of the main
metabolic reactions in the normal functioning unicellular and
macro-algae as well as in terrestrial plants.
- 1961 Development of an innovative instrument for electron spin
resonance at a 10-cm. wavelength, making it possible to experiment
with undried biological material.
- 1962 Beginning with the development of a thermodynamics of regulated
irreversible processes to achieve a hard-scientific description
of the optimal self-regulation of metabolism.
- 1965 Invention and patenting of the electronic scanning of UV-VIS
spectra, the precursor of today's spectroscopy, including for
remote sensing purposes. Production of the first instrument
demonstrated in a number of European capitals during the "Days of
the Bulgarian Science and Technology."
- 1966 Foundation of the Central Laboratory of Biophysics at BAS.
- 1967-74 Member of the advisory board of the international journal "Studia
Biophysica."
- 1969-72 Head of the first topic in the International Collaboration in
Biophysics: "Selfregulation of Metabolism", in which 23 institutes
from Bulgaria, Germany, Hungary, former Yugoslavia, Poland, former
Czechoslovakia, Romania, and the former USSR participated.
- 1972 Beginning of the development of functional-ecosystematic ecology.
- 1978-92 Developing and heading of the Bulgarian National Program for Sea
Protection in which 19 institutes participated.
- 1979-83 Establishing and heading the Group of Ecology at the Center of
Biology, the first ecological research organization of BAS.
- 1979-85 Head of joint projects of Stockholm University (the Institute of Marine
Ecology, the Department of Geology and the Department of Zoology) and the
National Swedish Board for Technical Development with BAS on the topic
"Functional-biophysical Investigation and Modeling of Marine Ecosystems."

- 1980-88 Head of the International Experiment on Coastal Ecology in which oceanographic institutes from Bulgaria, Germany, Poland, Romania, and the former USSR, participated.
- 1984-85 Development of innovative electrodes offering a unique possibility for the in situ measurement of the stratification of the oxygen concentration, as well as the oxygen consumption rates, down to 40 cm. deep in sediments, sand beaches and soil.
- 1986 Accomplished the transition from system theory's formal kinetic to real kinetic studies.
- 1987-90 Member of the advisory board of the international journal "Internationale Revue der gesamten Hydrobiologie."
- 1988-91 Bulgarian expert on the Intergovernmental Convention for the Protection of the Black Sea.
- 1989-90 Initiating and heading the International Task Force for the Development of the International Program for the Investigation and Monitoring of the Black Sea, according to the Convention.
- 1989-93 Director of UN/UNDP Black Sea Project.
- 1991 Received offer for collaboration from the Water Research Center of England.
- 1992 Employment in the TUBITAK Center in Istanbul on the order of the Vice-Prime Minister of Turkey Prof. Inonu for the development of, and heading up the Program for the Protection of the Marmara Sea.
- 1992 Study of Coastal Zone Management Laws of USA, France, Spain, Turkey
- 1992 Official delegate of Bulgaria in the International Study of the US Experience in Coastal Zone Management on behalf of the UN and the World Bank.
- 1992-93 Visiting US universities and environmental facilities on the East and West Coasts; the headquarters of EPA and NOAA in Washington D.C., and EPA's R & D Center in Cincinnati.
- 1993 Beginning experiments with terrestrial ecosystems in the Los Angeles Arboretum.
- 1994 Beginning experiments with marine ecosystems in conjunction with the Southern California Marine Institute.
- 1994 Research Affiliate at the Jet Propulsion Laboratory.
- 1995 Development of methods for the measurement of the set of photosynthetic processes on the upper and lower sides of the leaf of terrestrial plants, separately.
- 1995 Study of the coherence of the photosynthetic processes on unicellular, macro-algae, and terrestrial plants.

INVITED LECTURES:

- 1971 Plenary lecture, "Biophysical Basis of the Metabolic Self-regulation in the Cell" at the Symposium on Contemporary Problems of Biophysics --Moscow.
- 1987 Plenary lecture, "The Coastal Zones --Cradle or Tomb of Humanity", at the European Center for Social Sciences'/Vienna/ Symposium in Milan, Italy.
- 1991 Plenary Lecture, "The functional-ecosystematic Approach in Ecology," in Karlskrona, Sweden.
- 1991 Lecture, "The Insufficiency Syndrome in Ecology - Data Rich but Information Poor," at the European Community's Congress for Water Quality Assessment and Monitoring in Brussels, Belgium.
- 1991 Lecture "The functional-ecosystematic Approach in Ecology," at the English Water Research Center in Swindon, England.
- 1992 Lectures "The Ecological State of the Black Sea and its Interaction with the Marmara Sea" at Turkish universities and symposia.
- 1992 Lecture "The Functional-ecosystematic Approach in Ecology" at: The Massachusetts Institute of Technology; The Massachusetts Maritime Academy; The University Triangle in North Carolina; The Scripps Institution of Oceanography in San Diego; and the Jet Propulsion Laboratory at the California Institute of Technology.

Languages: English, German, Russian and Bulgarian fluently.
French not fluently.