

CURRICULUM VITAE

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SORIN COMOROSAN

Personal

Born July 17, 1927, Teregova, Romania, Europe.

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Academic Degrees:

MD, Faculty of Medicine, Bucharest, Romania, 1952.

Ph. D. Biochemistry, University of Bucharest, Romania, 1956.

Ph. D. Chemical Physics, University of Cluj, Romania, 1964.

Positions:

1. *Research Associate*, Microbiology, Cantacuzino Institute, Bucharest, 1952 - 1954.
2. *Research Associate*, Center for Chemical Studies, Romanian Academy of Sciences, 1954 - 1956.
3. *Assistant Professor*, Biochemistry, School of Medicine, Bucharest, 1955 - 1960.
4. *Associate Professor*, Biochemistry, School of Medicine, Bucharest, 1960 - 1975.
5. *Head*, Department of Clinical Laboratories, Fundeni Clinical Hospital, Bucharest, 1960 - 1980.
6. *Professor* Biochemistry & Biophysics, School of Medicine, Bucharest, 1975 - to present.
7. *Visiting - lecturer*, University of Pennsylvania, Johnson Research Foundation, Philadelphia USA, 1970 - 1971. (Biophysics)
Center for Theoretical Biology, Buffalo, New York, USA, 1971.
8. *Visiting - Professor*, University of Tennessee, Memphis, USA, 1974 - 1978 (Biochemistry).
University of California, San Francisco, USA, 1976 - 1978 (Biophysics).
University of California, Berkeley, USA, 1979 - 1982 (Theoretical Physics).
University of Miami, Florida, USA, 1976 - to 1985 (Chemical Physics).
University of Buenos Aires, Argentina, 1982 - to 1994 (Biomathematics).
Universidad Mayor, Santiago, Chile, 1992 - to 1997 (Interdisciplinary Sciences).

I. RESEARCH TOPICS & EXPERTISE

Biochemistry, Physical Chemistry, Theoretical Physics, Technology.

Mathematics: applications to biological and human systems. Philosophy of science and technology. Literary and cultural interests.

II. MEMBERSHIP in PROFESSIONAL SOCIETIES

Founding Member: International Society of Quantum Biology (Florida, USA).

Founding Member: International Society of Mathematical Biology (San Francisco, USA).

Member of the Romanian Academy.

Member: New York Academy of Science

American Association for Advancement of Science

Biophysical Society (USA)

American Society for Photobiology

Society for Bioelectromagnetism (USA).

III. EDITORIAL MEMBER

Enzymology (International)
Bulletin of Mathematical Biology
Physiological Chemistry & Physics
Journal of Biological Physics
American Biographical Institute

IV. LISTINGS

Who's who in the World, Ed. 1980 - 1981.
Men of Achievement, IBC - Cambridge, England, Ed. 1982.
International Book of Honor, American Biographical Institute, Ed. 1984.
Who's who in the World, Ed. 1989 - 1990.

V. PROFESSIONAL ACTIVITY

A. Molecular Biology

In the sixties, a series of studies have been initiated in my lab. My contribution is in the area of the structure & function of nucleic acids extracted from malignant tissues. I have also isolated & characterized a new rapidly labeled RNA fraction, reviewed in *Ann. Rev. Biochemistry*. Scientific papers published in: *Enzymology*, *Biochim. & Biophys. Acta*, *Europ. J. Biochemistry*.

B. Theoretical Biology

My interests in theoretical biology center around the representation of biological systems by adequate mathematical formalisms, in order to derive through the respective homeomorphisms new insights in their structure & function.

Scientific papers published in *Bull. Mathematical Biophysics*, *J. Theoretical Biology*.

C. A new phenomenology in the interaction of light and matter

Over the past years I have reported a series of unusual results concerning a new type of interaction between visible light and various chemical structures. The results, only partially explainable through canonical knowledge, may have far-reaching technological implications, particularly for the new hot field of the molecular computers and "molecules with memory".

The phenomenology has been presented and discussed at numerous international meetings & seminars: Conferences on Quantum Biology, American meetings of Biophysical Society, Experimental Biology Society, Photobiology Society, Pure & Applied Chemistry Society among others.

Scientific papers published in: *Nature*, *Europ. J. of Cancer*, *Int. J. Radiation Biology*, *Biochem. Biophys. Acta*, *Int. J. Quantum Chemistry*, *Physiol. Chem. & Physics*, *J. Biological Physics*, among others.

For a review of my scientific work see: S. Comorosan, Biological Observables, in *Progress in Theoretical Biology*, R. Rosen Editor, Academic Press, 1976 (for the quantum theoretical aspects) and S. Comorosan, A novel interaction of light and matter, *Journal of Biological Physics*, 17, 151, 1990 (for the experimental models).

D. Technological Experience

During the nineties I worked as senior scientist with *Diapulse Corporation of America* a middle-size US Company, which developed the Diapulse Instrument, a pulsed electromagnetic device, with broad therapeutical use in medicine. I organized a research team, which investigated the basic effects of the therapy at subcellular level.

For the last five years I worked in the R&D department of the giant cosmetic group Estee Lauder Corporation in New York. A UV -protecting cream, based on the green light properties discovered by me was manufactured there.

Recently, the involvement of my results in the hot field of molecular computers has been published in a specialized journal: Quantum Molecular Computation: Centre for Discrete Mathematics and Theoretical Computation.

E. Philosophical Interests

I have developed an original view on human thoughts in a book *Prolegomena for a cosmology of human spirituality* (Bucharest, Romania).

I have developed a new type of literary discourse, termed *metamorph*, through which one may search for “invariants in metaphysics problems”. The concept has been presented at the Congress of Critics and Culture, 1992, Buenos Aires, Argentina.

I have developed a mathematical model for philosophy, presented at international meetings and included in my book of philosophy, “*The broken mirrors*”, published in Bucharest, Romania.

My interdisciplinary foray in the universe of fiction has produced three fiction volumes: Together with Borges, *Metamorphes* and the novel *Hearst II*, published by editors in Romania.