



Marcel Van de Voorde, Gunjan Jeswani (Eds.)
ETHICS IN NANO-TECHNOLOGY
Social Sciences And Philosophical Aspects
Volume 2
2021, XLII, 363 pp., 80 fig.
HC RRP € 149.95 [D] / RRP US \$ 172.99 /
RRP £ 136.50
ISBN 978-3-11-071984-0
Available as a Set

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Chapter 9 of the book **ETHICS IN NANO – TECHNOLOGY**, Social Sciences and Philosophical Aspects with the title “*Debate: Nanoparticles a Blessing or a Curse?*” is authored by Hans Leuenberger (see abstract below):

Hans Leuenberger

9 Debate: Nanoparticles – a blessing or a curse?

Prerequisites for securing public acceptance of nanotechnology and beyond

Abstract: This chapter was inspired by Ilya Prigogine (Nobel laureate 1977) and by six axioms derived¹ earlier, such as A1, *Far from equilibrium conditions*, favoring transformations from *disorder into order* leading to the *creation of life*, and A5 and 6, *The evolutionary process uses all existing physical laws* of the present standard cosmological model and beyond *to find a niche for a successful survival* of the biological system being complemented by A7, *Nature's principle of self-similarity*, A8, *Bionic inspired philosophical solutions*, and most important by A9, *The human society is a living biological system*. Thus, life of a society is governed by the same laws as for a human being. From a global point of view, society's life depends on *system relevant organs* such as *brain* (pool of scientists), *heart* (system of banks) pumping blood (money) to the *muscles* (industry), to the *lungs* (combustion engines), and to the *digestive system* (recycling industry). As in case of a human being, the society's health, life, and death depend on framework conditions such as technologies improving quality of life. For this reason, an *innovative spray-freeze drying process* is presented, allowing manufacturing nanocomposite pellets for nanomedicine. The chapter shows that this technological solution based on scientific integrity is not sufficient for securing the public acceptance. It is necessary to respect religion and ethics, business ethics, legal framework, and to complement the nine axioms by A10, *Common denominator of all Religions – Ethical Codex*, by A11, *Common denominator of Marketing and Politics – Trustworthy Communication* and by A12, *Common denominator of all Trustworthy Sciences – Scientific Integrity*. In conclusion, the chapter *defines rigorous prerequisites for public acceptance of nanotechnology and beyond*, such as science diplomacy for the survival of mankind.

Keywords: nature's evolutionary principle securing survival, nanomedicine, scientific integrity, religion and ethics, business ethics, legal framework, science diplomacy.

¹ What is Life? [Internet] available at www.iftip.ch/downloads SWISS PHARMA.

I would like to thank Klaus Eichler and Dr. Bernhard Luy for their courtesy and support.

Hans Leuenberger, Department of Pharmaceutics, Lake Nona Campus, University of Florida, College of Pharmacy, Orlando, USA; Prof. emeritus Pharm. Tech. University of Basel, Switzerland.

<https://doi.org/10.1515/9783110719932-009>

The **conclusions** of this **chapter 9**, as well as of the contribution “**Business Ethics in the Pharmaceutical Industry and Beyond**” published in SWISS PHARMA 4/21 and of the **invited lecture** “Are Nanoparticles a Blessing or a Curse?” presented at the 8th COSIMP Mercosur Congress of Pharmaceutical Sciences (<https://www.even3.com.br/8cosimpcisdem>) at the XII CISDEM Forum, UNIOESTE, Brazil on November 9, 2020 are based on the following 12 axioms being the result of the study of the work “Order out of Chaos” of Ilya Prigogine and Isabelle Stengers and of Hans Leuenberger’s publication “What is Life?” in SWISS PHARMA 41 (2019) Nr. 1 (see downloads “What is Life?” and download “The 12 Axioms”):