

CURRENT RESEARCH AND DEVELOPMENT IN BIOTECHNOLOGY ENGINEERING AT IIUM

VOLUME II

Editors:

Ibrahim Ali Noorbatcha
Hamzah Mohd. Salleh
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Raha Ahmad Raus



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**Department of Biotechnology Engineering
Faculty of Engineering
International Islamic University Malaysia**



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CHAPTER 23

FROM RECREATION MATHEMATICS TO PSEUDO-GENES

Ibrahim Ali Noorbacha¹ and Ahmad Faizul Shamsudin²

¹Department of Biotechnology Engineering, Faculty of Engineering,

²Department of Computer Science, Faculty of Information and Communication Technology,
International Islamic University Malaysia, P.O. Box 10, 50728 Kuala Lumpur, Malaysia

ABSTRACT

An inspiration for life-like recreation could have come from a meta-magical theme proposed by Hofstadter (1986) that reproduces patterns of genies from “Lucas Tower”, “Towers of Hanoi” and “Towers of Brahma”. Perhaps the phenomenon of meta-magics may unveil the mysteries of genes through new designs of gene structures unknown to nature. One day, it may help to solve the puzzles of human’s mysterious diseases such as memory dysfunctions, cancer, AIDS, influenza viruses etc. This chapter is on the computer recreation of pseudo-genes using the modified mathematics of Towers of Hanoi. Pseudo-genes are not genes but are non-functional versions of genes. They may resemble other gene sequences and contain significant nucleotide substitutions, deletions and duplications. In combination with bio-molecular approach, this chapter will show how the computer generated pseudo-genes would have certain naturalness of brain disease related natural genes.

Keywords: meta-magical themes, natural genes, pseudo-genes, memory dysfunctions

INTRODUCTION

Human’s quest for recreation of life-like artificial organism has met many disillusioned paths. It is the Quranic truth. This is reflected by verse 34 in the chapter Jonah translated as “God produceth creation, then reproduceth it. How then are ye misled” (Ali, 1975). The mathematics of Turin Machine for the so-called strong Artificial Intelligence (AI) has led to the disappointing truth that no machines can reach to the level of human intelligence. So, the mathematics of Church Machine for mild AI emerged with similar disappointing results. In the end, the idea of weak AI seemed to be implementable but only to a limited extend. It can reach to as far as expert systems, robotics, computer visions and smart agents that can assist humans to overcome their physical weaknesses.

In the recreation of life-like micro-organisms the use of meta-magical thema or themes of mathematical commentaries are found to explore certain patterns for the benefit of life-protection. Meta-magics in artifacts for life protection are rooted from ancient beliefs such as the use of