



The Genome: Plant, Animal, Human

Publication Year: 2000

ID: BK008



Institute for Theological Encounter with Science and Technology

**Cardinal Rigali Center • 20 Archbishop May Drive • Suite 3400-A • St. Louis, Missouri 63119 • USA
314.792.7220 • www.faithscience.org • E-mail: mariannepost@archstl.org**

The Genome: Plant, Animal, Human

Abstract:

The ITEST Board of Directors chose to explore this topic as a suitable one at a four day conference on the occasion of ITEST's 31st anniversary celebration. More than global warming, the environment, population, artificial intelligence, information technology and so on, it seems that work on the plant, animal and human genome will supersede all the others in the power and durability of the challenge. We have reached a point where we can deliberately assume control of the evolution of living systems predictably, reproducibly and systematically. The future is open to greater human mastery. This concerns the Faith of the Church and its theology profoundly. "The sky may be the limit eventually." Thus was born the plan for this convention.

Table of Contents:

Foreword	i
Ethical Aspects of the Human Genome Project	
Archbishop Giuseppe Pittau, SJ	1
Discussion	10
Cellular Pesticide Production in Genetically Modified Crop Plants: Biochemistry, Economics and Intellectual Property	
Dr. Brendan A. Niemira.....	19
Discussion	42
Transgenic Animal Production and Technological Revolution	
Dr. Randall S. Prather.....	49
Discussion	78
Biogenetics and Technology: How Will the Race Be Won?	
Dr. Kevin FitzGerald, SJ	87
Discussion	105
Biogenetics and Media	
Mister Richard Cusack	111
Discussion	129
The Physician and Biotechnology: A Brief History and Commentary	
William Sly, MD.....	133
Discussion	149
Education in Biotechnology and in Faith/Science	
Dr. Alice B. Hayes.....	157
Discussion	172
Biotechnology and Some Theological Thoughts on the Body	
Francis Cardinal George, OMI	179
Discussion	190
Summary	
Dr. Thomas Sheahen.....	201
Discussion	207
Appendix 1	219
Appendix 2	221
Index.....	225
Participants	231

Foreword:

In the beginning of August, 1999, the Institute for Theological Encounter with Science and Technology (ITEST) celebrated its 31st anniversary by holding a Conference on *The Genome: Plant, Animal, Human*. The excellent scientific, ethical, educational and theological papers, presented against the backdrop of Lake Michigan, are included in the present volume.

It is tempting to try to summarize the papers and the brief discussions in this Foreword, but ultimately that summary would fail to capture the experience. This was one of those occasions in which the papers, while very good, do not give the full flavor of the experience. One had to have been there to reap the full benefit of the spirit of the meeting. It was an exceptional meeting, one which indeed had to be experienced in person. This volume is merely an informative repetition of the matter under discussion. Rather than simply repeating the papers and the discussions, I would like, if I can, to present the religious presuppositions of most of the attendees.

First, that God created the universe was an unspoken, but deeply felt, assumption on the part of those present. That represented the atmosphere that prevailed. It was far more than a logical presupposition; it permeated all the Proceedings from the opening prayers, led by Peggy Keilholz, to the Eucharist and other celebrations. It is a shame that none of these “sessions” were recorded. They would have enhanced these Proceedings as they did the lives of those present at the anniversary celebration.

Another presupposition – really it is faith, unapologetically- was the physical reality of Christ and the necessity of the Cross in our lives. This is far more than a mystical (or foolish) effort on our part to cope with the biological future. As St. Paul says in the First Letter to the Corinthians:

For Christ did not send me to baptize, but to preach the Good News, and not to preach that in terms of philosophy in which the crucifixion of Christ cannot be expressed. The language of the cross may be illogical to those who are not on the way to salvation, but those of us who are on the way see it as God’s power to save. As scripture says: I shall destroy the wisdom of the wise and bring to nothing all the learning of the learned. Where are the philosophers now? Where are the scribes? Where are any of our thinkers today? Do you see now how God has shown up the foolishness of human wisdom? If it was God’s wisdom that human wisdom should not know God, it was because God wanted to save those who have faith through the foolishness of the message that we preach.

While some demand miracles and others wisdom, we are content to know that there is more to this world and to our bodies than can be measured scientifically. We put our faith and hope in Christ Jesus and in his cross. Some will consider this madness. But to us Christ is the power to “transfigure these wretched bodies of ours into copies of his glorified body (Philippians 3.21).”

We do not look at our bodies as something “wretched,” but we are aware of disease or our mortality. We shall not overcome death with the judicious use of science. We shall not totally eliminate all diseases, but we can make our bodies less “wretched.” In fact, it may be incumbent on us to develop stem cell research (with the exception of using the cells of aborted babies) and genetic modification in order to be more open to the final glorification of our bodies. It may even be that a judicious use of genetic enhancement technologies may some day be seen as a Christian- sanctioned modification. Although we cannot make such a judgment authoritatively, we may at least entertain the possibility. But for now, our bodies are “wretched” compared to what they will be.

The cross of Christ does not close us off from biological, genetic or neuroscientific progress. It does not foreclose on the use of any of the genetic work going on with respect to plants, animals or humans – provided adequate safeguards are in place to protect the innate dignity of the environment or of the human. Rather, it should open up for us the vision of the body and of the world around us. The cross of Christ is not merely a

vehicle for suffering and death, a vehicle for self-abnegation. Indeed, we are to abnegate ourselves, but not in a way that debases our own dignity. One of the lessons of the cross is the surrender of self to God. This is not an enslavement; it is a liberation from enslavement to ourselves and others. C.S. Lewis remarks in several places that a person's mastery of nature is a person's mastery over other persons using science as a vehicle. The cross frees us from that slavery.

It would be easy to write an advertisement for all scientific attempts to establish our hegemony over everything, doing what we want to them. That, by itself, should make us wonder about the *carte-blanche* defense that we're simply doing this "to push back the veil of ignorance." That was really the defense of our first parents and it is no more valid now than it was then. Some knowledge is not worth having – the verdict of the Nuremberg Trials.

This was roughly the spirit of this meeting. Some addressed the Christian approach more directly in the sessions, some less directly, some not at all. But Christianity provided the base for the papers and the discussion, both in session and in private. In sum, it was a good meeting of distinguished Christians in science, theology and other disciplines and vocations. It indirectly addressed the relationship between science and faith. More, it was a meeting of friends, old and new. I experienced a deep comradeship as well as a continuing education in things biological. I don't consider that a shabby effect for a physicist.

Robert Brungs, SJ
ITEST: Director
March 10, 2000