



**PONTIFICIA
UNIVERSITÀ
GREGORIANA**

*Facoltà di Filosofia
Specializzazione
in Scienze e Filosofia*

*III STOQ International Conference
**Biological Evolution
Facts and Theories**
A Critical Appraisal 150 Years After
"The Origin of Species"*

**Pontifical Gregorian University
Rome, March 3rd-7th 2009**

with the collaboration of
University of Notre Dame (Indiana)



Under the High Patronage of the
Pontifical Council for Culture

COMMITTEES

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*Professor of Biological Sciences and Philosophy,
University of California, Irvine (USA)*

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*Professor of Ecology and Evolution,
State University of New York (USA)*

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*Emeritus Professor of Philosophy of Science,
University of Konstanz (Germany)*

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*Professor of Evolutionary Paleobiology,
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*Professor of History and Philosophy of Science,
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*Professor of Philosophy of Science,
University of Cassino (Italy).*

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Rector of the Pontifical Gregorian University

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*Templeton Prize Winner, Fellow of the Pontifical Academy
of Sciences, Professor of Philosophy,
Pontifical Academy of Theology, Cracow*

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Prof. Robert J. RUSSELL,
*Founder and Director of the Center for Theology
and the Natural Sciences, Berkeley.*

Organizing Committee

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*Director of the Conference, Professor of Philosophy of Nature,
Pontifical Gregorian University*

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*Vice-Director of the Conference, Assistant Professor in Philosophy
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*Professor of Philosophy of Science,
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*Professor of Christian Ethics,
University of Notre Dame (USA)*

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Pontifical Athenaeum "Regina Apostolorum"*

Prof. Pietro RAMELLINI,
*Professor of Biology,
Pontifical Athenaeum "Regina Apostolorum"*

Prof. Massimo STANZIONE,
Professor of Philosophy of Science, University of Cassino

Rev. Tomasz TRAFNY,
*Executive Coordinator of the STOQ Project,
Pontifical Council for Culture.*

“BIOLOGICAL EVOLUTION: FACTS AND THEORIES”

Outstanding scientific progress has been made since Charles Darwin's *The Origin of Species* appeared 150 years ago. Today, in light of recent developments and much ideological debate, issues surrounding evolutionary biology merit a careful and serious reconsideration by scientists, philosophers and theologians.

With the goal of promoting a fair and fruitful dialectical relationship between Science, Philosophy and Theology, a series of workshops and an International Conference are being organised by the **Pontifical Gregorian University**, in collaboration with the **University of Notre Dame** (Indiana, USA) under the high patronage of the **Pontifical Council for Culture** and in the framework of **STOQ Project** (Science, Theology, the Ontological Quest).

The main aim of the initiative is to contribute to the idea that Science and Theology represent different fields of knowing, analysis and interpretation. It has been the incorrect overlapping of these fields that has caused confusion and ideological controversies.

A serious philosophical reflection can be a benefit for both Science and Theology showing where points of convergence can be found and how these fields can be integrated.

In particular, within the complex and multifaceted issues of Science-Religion, this event focuses on reconciling “Creation” thinking with “Evolution” thinking, without turning the first into scientific theory or reducing the second to a dogma.

CONFERENCE PROGRAM

Tuesday 3 March 2009

First Session:

The Facts that we Know

- 09:00 Welcome from the Authorities
- 10:00 Simon CONWAY MORRIS: Why evolution is predictable: journeys of a palaeontologist
- 10:45 Coffee Break
- 11:15 Werner ARBER: Bio-Molecular Evidences
- 11:55 Douglas J. FUTUYMA: Taxonomic Issues: Evidence from Comparative Biology
- 12:45 Discussion
- 13:30 End of the Session

Second Session:

Evolutionary Mechanisms I

- 15:30 Jean GAYON: History of Evolution Theories
- 16:15 Francisco J. AYALA: Darwin's Revolution
- 17:00 Coffee Break
- 17:30 Lynn MARGULIS: Symbiosis
- 18:15 Jeffrey L. FEDER: The Mystery of Speciation
- 19:00 Discussion
- 19:30 End of the Session

Wednesday 4 March

Third Session: Evolutionary Mechanisms II

- 09:00 Scott GILBERT: Evolutionary Developmental Biology: Evolution by Epigenesis
- 09:45 Stuart KAUFFMAN: Evolution and complexity
- 10:30 Coffee Break
- 11:00 Robert E. ULANOWICZ: Process and Ontological Priorities in Evolution
- 11:45 Stuart A. NEWMAN: A “pattern language” for evolution and development of animal form
- 12:30 Discussion
- 13:00 End of the Session

Fourth Session: The Origin of Man

- 15:00 Giorgio MANZI: History of the Research
- 15:45 Olga RICKARDS - Gianfranco BIONDI: The origin of man: Molecular approach
- 16:30 Coffee Break
- 17:00 Yves COPPENS: The (H)Omo event
- 17:45 Fiorenzo FACCHINI: Paleocultural Approach in Hominization and Possible Philosophical Implications
- 18:30 Robin DUNBAR: The Evolution of Primate Sociality: Brains, Cognition and Behaviour
- 19:15 Discussion
- 19:30 End of the Session

Thursday 5 March

Fifth Session:

Some Anthropological Questions about Evolution

- 09:00 Anne DAMBRICOURT-MALASSÉ: The human lineage: a macro-evolutionary process acting during embryogeny with emergent macro-evolutionary implications
- 09:45 Colin RENFREW: The Concept of Evolution as Applied to the Development of Human Cultures
- 10:30 Coffee Break
- 11:00 Ludovico GALLEN: Moving Towards Humankind?
- 11:45 David S. WILSON: Some Philosophical Considerations on Human Emergence and En-Culturation
- 12:30 Discussion
- 13:30 End of the Session

Sixth Session:

Philosophical Aspects of Evolution I

- 15:00 Jürgen MITTELSTRASS: Evolution and the *conditio humana*: A Philosophical Introduction
- 15:45 Dominique LAMBERT: Between analogy and prediction. Some epistemological questions concerning the use of Mathematics in Evolution Theory
- 16:30 Coffee Break
- 17:00 Elliott SOBER: Evolution and Naturalism
- 17:45 Vittorio HÖSLE: Why teleological principles are inevitable for reason
- 18:30 Discussion
- 19:00 End of the Session

Friday 6 March

**Seventh Session:
Philosophical Aspects of Evolution II**

- 09:00 Card. Georges COTTIER: Metaphysical Sense of Creation and Evolution
- 09:45 David J. DEPEW: Accident, Adptation, and Teleology in Aristotle and Darwinism
- 10:30 Coffee Break
- 11:00 Massimo STANZIONE: The recurrent debate: Darwinism and Philosophy
- 11:45 Ronald NUMBERS: Antievolution in America: From Creation Science to Intelligent Design
- 12:30 Discussion
- 13:00 End of the Session

**Eighth Session:
Theological Aspects of Evolution I**

- 15:00 André WÉNIN: The Theme of Creation in the Old Testament
- 15:45 Jean-Michel MALDAMÉ: Les divers sens du mot évolution: science, philosophie et théologie
- 16:30 Coffee Break
- 17:00 Jacques ARNAULD: Creationism, “Intelligent Design” and Evolution
- 17:45 Georges CHANTRAINE: Theological Vision of Evolution by Teilhard de Chardin
- 18:30 Discussion
- 19:00 End of the Session



Saturday 7 March

Ninth Session:

Theological Aspects of Evolution II

- 15:00** William R. STOEGER: Emergence,
Directionality and Finality in an Evolutionary
Universe
- 15:45** Rafael MARTÍNEZ: The Reception of
Evolutionary Theories in the Church
- 16:30** Coffee Break
- 17:00** Robert J. RUSSELL: Assessing the Theological
Debates around
- 17:45** End of the Conference

SPEAKERS

- Werner ARBER,
University of Basel, Switzerland
(Nobel Prize in Medicine 1978)
- Jacques ARNOULD,
Centre National d'Études Spatiales (CNES), France
- Francisco J. AYALA,
University of California, Irvine, USA
- Gianfranco BIONDI,
University of L'Aquila, Italy
- Georges CHANTRAINE,
Theological Faculty of Lugano, Switzerland
- Simon CONWAY MORRIS,
University of Cambridge, United Kingdom
- Yves COPPENS,
Collège de France, France
- Card. Georges COTTIER OP,
Pontifical Academy of Sciences, Vatican City
- Anne DAMBRICOURT-MALASSÉ,
Musée National d'Histoire Naturelle, France
- David J. DEPEW,
University of Iowa, USA
- Robin DUNBAR,
University of Oxford, United Kingdom
- Fiorenzo FACCHINI,
University of Bologna, Italy
- Jeffrey L. FEDER,
University of Notre Dame, Indiana, USA
- Douglas J. FUTUYMA,
State University of New York (Stony Brook), USA
- Ludovico GALLENi,
University of Pisa, Italy
- Jean GAYON,
Université Paris 1, France
- Scott GILBERT,
Swarthmore College, Pennsylvania, USA
- Vittorio HÖSLE,
University of Notre Dame, Indiana, USA
- Stuart KAUFFMAN,
University of Calgary, Canada

Dominique LAMBERT,
University Notre-Dame de la Paix, Namur, Belgium

Jean-Michel MALDAMÉ OP,
Institut Catholique de Toulouse, France

Giorgio MANZI,
University of Rome "La Sapienza", Italy

Lynn MARGULIS,
University of Massachusetts-Amherst, USA

Rafael MARTÍNEZ,
Pontifical University of the Holy Cross, Italy

Jürgen MITTELSTRASS,
University of Konstanz, Germany

Stuart A. NEWMAN,
New York Medical College in Valhalla, USA

Ronald NUMBERS,
University of Wisconsin-Madison, USA

Colin RENFREW,
University of Cambridge, United Kingdom

Olga RICKARDS,
University of Rome "Tor Vergata", Italy

Robert J. RUSSELL,
*Center for Theology and the Natural Sciences
(CTNS), Berkeley, USA*

Elliott SOBER,
University of Wisconsin-Madison, USA

Massimo STANZIONE,
University of Cassino, Italy

William R. STOEGER SJ,
University of Arizona, Tucson, USA

Robert E. ULANOWICZ,
University of Maryland, USA

André WÉNIN,
Catholic University of Louvain-la-Neuve, Belgium

David S. WILSON,
Binghamton University - State University of New York, NY, USA

GENERAL INFORMATION

Venue

The Conference will take place at the “Aula Magna” of the Pontifical Gregorian University, piazza della Pilotta 4, 00187 Rome.

How to reach the Conference Venue

The closest underground stops are “Colosseo” (Line B) and “Piazza di Spagna” or “Barberini” (Line A).

From Termini Station, you can reach the University with the buses line 64 or line 40, getting off at “Via del Corso”.

From Tiburtina Station, you can take the bus 492 and get off at the stop “Via del Corso”.

In order to personalize your itinerary, we suggest using the ATAC web site <http://www.atac.roma.it>



Language

The official languages will be English and Italian; simultaneous translation will be provided.

Attendance Certificates

Attendance certificates will be delivered on request to all registered participants at the end of the Conference.



Meals

Meals are not included in the registration fee, except coffee breaks. Dining facilities are available around the Conference area.

Web Site

For further information please visit the official web site: *www.evolution-rome2009.net*

Press Office

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REGISTRATION

Registrations must be submitted at the latest by January 31, 2009.

The first five scientific sessions will be in English. The last four sessions, philosophical and theological, will be both in Italian and in English.

Simultaneous translation is provided.

Online Registration is compulsory for every participant.

Full registration, to the whole conference (9 sessions);

Registration to 5 sessions, which you must indicate while registering.

Registration fees (including a folder with information materials) are:

	<i>Full Registration 5 Sessions</i>	
PUG/STOQ Students	€ 20,00	€ 20,00
Other Students	€ 50,00	€ 30,00
Professors and Professionals	€ 100,00	€ 60,00
PUG/STOQ Professors	€ 20,00	€ 20,00

A certificate of attendance, issued on unstamped paper, costs € 20,00 and may be used only for purposes allowed by law.

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