



## I.O. Phd International Research Program

### *Founders*

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(Maastricht, The Netherlands)

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(Maastricht, The Netherlands)

### *Scientific Secretary*

F. Fenuccio  
(Rome, Italy)

### *Secretary*

Francesca Cini  
(Rome, Italy)

### *Supported by*

The Italian Society of Neonatology  
(Milan, Italy)

Neonatal Biochemical Research Group  
(Milan, Italy)

Let's Improve Perinatal Life Foundation  
(Genoa, Italy)

### TO WHOM IT MAY CONCERN

**Object. The I.O. PhD Program – Project, Submission Form**

**Dear Candidates,**

enclosed, please find Project Submission Form for 2010-2012 I.O. PhD Program. Please, be sure that all items are completed.

Submission form plus a copy of CV and of two letters of presentations by experts in the research field of PhD program application have to be sent by fax or e-mail to the following address:

**I.O. PhD Program  
c/o Stella Cometa O.N.L.U.S.  
Viale delle Milizie, 34 - 00192 Rome - Italy  
fax +39 (06) 3729067  
e-mail: iophd@hotmail.com**

**DEADLINE MAY 15, 2010**

Looking forward to receive your outstanding research application, we remain.

Sincerely,

**The I.O. PhD Scientific Commission**



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### Candidates Characteristics and Selection

Candidates suitable for PhD program will come from the following groups:

- Specialty trainers that, according to Italian University Statements, can perform clinical and experimental studies at the Italian and Dutch Institutions.
- Staff Members.
- Research Fellows.

The selection of candidates will be performed according to the following steps:

- promotion of the PhD selection on the official web-site of the Italian Society of Neonatology ([www.neonatologia.it](http://www.neonatologia.it)), on other neonatal scientific website ([www.neonatologia.org](http://www.neonatologia.org)) and on C. Arrigo Children's Hospital web-site ([www.ospedale.al.it](http://www.ospedale.al.it));
- at the indicated selection times, candidates (age < 35 years) will submit a project proposal related to one of the topics plus their curriculum vitae (CV) and two letters from international researchers or chairmen;
- International Commission will review candidates' proposals and CV and if necessary interview them.
- According to different PhD topics International Commission will award one or more candidates.

The research topics selected are the following:

- 1. PERINATAL ASPHYXIA,**
- 2. THE ORIGIN OF ADULT NEUROLOGICAL DISEASE,**
- 3. NEUROPROTECTIVE STRATEGIES,**
- 4. NEONATAL BIOCHEMICAL PULMONOLOGY,**
- 5. IUGR,**
- 6. PERINATAL TERATOLOGY.**

A detailed description of the research project application is reported in the research project description section.



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### RESEARCH PROJECT DESCRIPTION



**Universiteit Utrecht**

**Department of Perinatal Medicine.**

G.H.A. Visser, MD, PhD

F. van Bel, MD, PhD



Sistema Sanitario Regionale Piemonte  
Azienda Ospedaliera Nazionale  
**SS. ANTONIO e BIAGIO  
e CESARE ARRIGO**  
Alessandria

**Department of Maternal, Fetal and Neonatal Medicine.**

D. Gazzolo, MD, PhD

**Total PhD Candidates: 4**

**PhD Defence at the Utrecht University School of Medicine, Utrecht, The Netherlands**

#### Project List

#1. The Use of Antidepressant Drugs during Pregnancy: Risk for Mother and Child.

**PhD Candidate: 1**

Project requires an experimental and clinical proposal including potential:

- biochemical markers of brain development/damage assessment in different biological fluids, in maternal and neonatal districts;
- human milk investigation;
- non-invasive brain monitoring procedures;

aimed at investigating in the perinatal period the Central Nervous System development/damage in fetuses and newborns whose mother were antenatally treated by antidepressant drugs.



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### #2. New Strategies in Brain Development Monitoring in IUGR Fetuses and Newborns.

**PhD Candidate: 1**

Project requires an experimental and clinical proposal including potential:

- biochemical markers of brain development and damage;
- non-invasive brain monitoring procedures;

aimed at investigating in the perinatal period the Central Nervous System development/damage in fetuses and newborns complicated by intrauterine growth retardation.

### #3. Pregnancy Induced Hypertension, Antihypertensive Drugs and the Development of Fetal-Neonatal Central Nervous System

**PhD Candidate: 1**

The project requires an experimental and clinical proposal including potential:

- biochemical markers of brain development and damage;
- non-invasive brain monitoring procedures;

aimed at investigating in the perinatal period the Central Nervous System development/damage in fetuses and newborns whose mother where antenatally treated by antihypertensive drugs.

### #4. New therapeutic strategies for brain damage prevention In acute and chronic hypoxia newborns

**PhD Candidates: 1**

The project requires an experimental and clinical proposal including potential:

- Maternal and Neonatal therapeutic strategies for brain damage prevention in acute and chronic hypoxia newborns ;
- Brain development and damage monitoring strategies (biochemical and non-invasive)
- New laboratory and non-invasive technologies.



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### Department of Pediatrics, Neonatology and Child Neurology

L. Zimmermann, MD, PhD

H. Vles, MD, PhD

A.W.D. Gavilanes, MD, PhD



Sistema Sanitario Regionale Piemonte  
Azienda Ospedaliera Nazionale  
**SS. ANTONIO e BIAGIO  
e CESARE ARRIGO**  
Alessandria

### Department of Maternal, Fetal and Neonatal Medicine.

D. Gazzolo, MD, PhD

**Total PhD Candidates: 6**

**PhD Defence at the Maastricht University School of Medicine,  
Maastricht, The Netherlands**

### Project List

#### #1. Experimental and Clinical Hypoxic Ischemic Encephalopathy and Asphyxia: Systemic Aspects

**PhD Candidates: 2**

Project requires a proposal on clinical and experimental application on:

- biochemical monitoring on hypoxic ischemic insult requiring hypothermia and/or different therapeutic procedures in newborn infants complicated by asphyxia and/or by congenital heart diseases;
- acute and chronic cardiac remodelling/changes after hypoxic insult.

#### #2. Experimental and Clinical Hypoxic Ischemic Encephalopathy and Asphyxia: Brain Aspects

**PhD Candidates: 2**

Project requires a proposal on clinical and experimental application on:

- biochemical monitoring on hypoxic ischemic insult in non-invasive biological fluids
- acute and chronic brain remodelling/changes after hypoxic insult.
- Brain immunohistochemistry and molecular biology investigations.



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### #3. Experimental and Clinical Neonatal Pulmunology

#### **PhD Candidates: 2**

Project requires a proposal on clinical and experimental application on:

- Invasive and non-invasive new mechanical ventilation strategies in respiratory distress syndrome management;
- Non-invasive and biochemical lung monitoring in respiratory distress syndrome according to different ventilation strategies;
- Experimental invasive and non-invasive ventilation model.