The Nogent Institute

Institut d'Embryologie Cellulaire et Moleculaire
Nogent-sur-Marne

Edited by

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THE INTERNATIONAL JOURNAL OF
DEVELOPMENTAL
BIOLOGY

Volume 49 Nos. 2/3 Special Issue 2005

Evolution

I sing the feats of the fabulous monsters which,
from Precambrian till the end of the tertiary era
have strewn their bones among the swelling
pleats, the fictitious layers of Secondary chains.

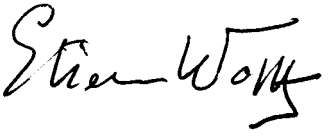
Following stegocephalians which, long before
Hitler, donned armours and got classified as
amphibians by an over-aged scientist, the
theromorph hesitated, it considered whether
to adapt.

However the reptilian tyrant ruled over the
Secondary era. It would be tamed only in the
Cretacean era.

An argument then raged between mammals
whether to adopt henceforth the monotremist
or the placental rule.

Etienne Wolff

Prof. Etienne Wolff spent five years of confinement in a German prisoner of war camp (1940-1945). He occupied his time there giving conferences to his fellow prisoners and writing two books entitled "Les Changements de Sexe" (1946) and "La Science des Monstres" (1948), both published by Gallimard Press, Paris. The former attracted much attention for many years from people searching for practical advice. All of these activities drew entirely from Wolff´s own learning, since no scientific library was available in the Stalag camp. Presumably, this was also the time when he composed this satirical poem about Evolution.



Prof. Etienne Wolff (1904-1996). *Founder of the Nogent Institute in 1955. The Nogent mansion donated to the Collège de France in the 1940s by Prof. d'Arsonval was completely transformed by Prof. Wolff into a modern laboratory. In the photo (11th February, 1963), Prof. Wolff is dressed in the* "Habit Vert" *academic attire of the French Academy of Sciences on the occasion of his election and is wearing the Medal of the* Légion d'Honneur, *the highest national honour reserved for persons of the most eminent standing. Photograph courtesy of Bernard Henri. For details about his scientific biography, see also the interview of Prof. Wolff by Françoise Dieterlen entitled "Sex, Differentiation and Cancer" published in this journal* [Int. J. Dev. Biol. *(1990) 34: 5-9*].

This Special Issue of The International Journal of Developmental Biology *is dedicated to honoring the brilliant scientific career of Prof. Nicole Le Douarin, successor of Prof. Etienne Wolff, as Director of the Nogent Institute. In the photo (15th February, 1982), Madame Le Douarin is dressed in the* "Habit Vert" *academic attire of the French Academy of Sciences, and wears the Medal of the* Légion d'Honneur. *She has since become* "Secrétaire Perpétuelle" *of the French Academy of Sciences, a function she holds until December 2005. Photograph courtesy of Bernard Henri and reproduced with permission from the Académie des Sciences de l'Institut de France.*

Foreword

I am most grateful to Professor Juan Aréchaga and the Editorial Board of *The International Journal of Developmental Biology* for allowing this Special Issue to be devoted to the Nogent Institute.

We very much appreciate the possibility of recording the scientific investigations that were carried out for many years at the Institute with the support of the CNRS, the Collège de France and, more recently, the Institut Curie. These investigations are still being actively pursued.

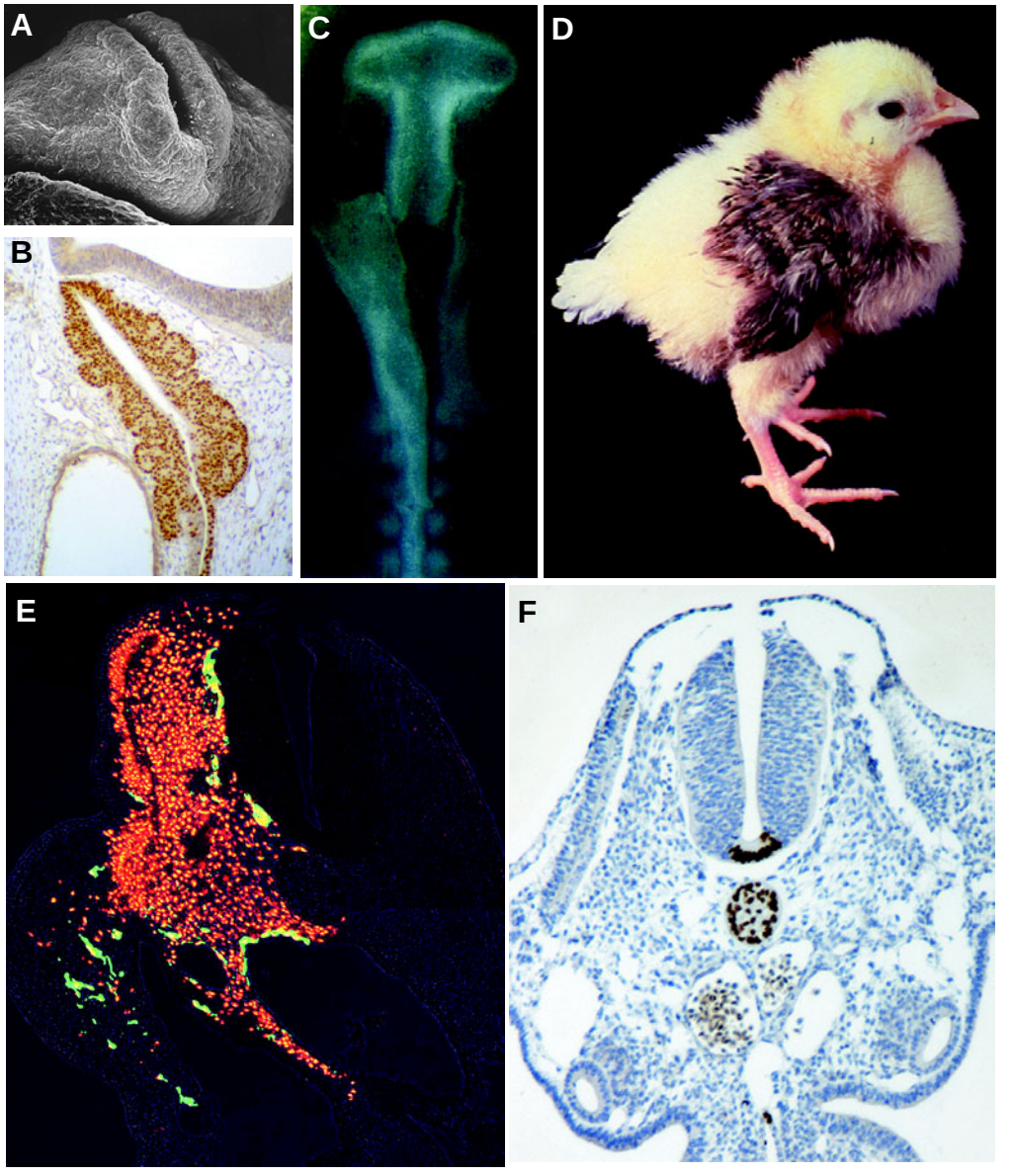
The *Institut d'Embryologie Cellulaire et Moleculaire* is, however, to close down in the near future. It has been decided that those magnificent facilities which were associated with a strong tradition of developmental biology are no longer to be used for research. Nobody knows what will happen to the building. It is hoped that in the future, this important field of modern biology will be housed in a new building in the centre of Paris, to be linked with the Curie Institute.

A group of people will be staying on in Nogent until it closes down and will subsequently carry on their research elsewhere. They, together with all those who were trained here and have since scattered all over the world, will perpetuate and hand down the skills developed here from the time of Etienne Wolff up to the present day.

I wish to take this opportunity of expressing my appreciation to Dr. Françoise Dieterlen with whom I have enjoyed a warm friendship over many years, as well as a fruitful exchange of ideas. She has done a considerable amount of work in collecting together the manuscripts for this Special Issue and carefully editing them. Our grateful thanks also go to the authors who have contributed to this issue of *The International Journal of Developmental Biology*.

Nicole M. Le Douarin

Nogent sur Marne, France, 2005



Images representative of some of the most important works which originated in the Nogent Institute.

(A) *Frontal view of the neural folds in an E1.5 chick embryo. Two faint grooves mark the presence of grafted quail tissues. Scanning electron micrograph. (Courtesy of Gérard Couly).* (B) *Quail Rathke's pouch (dark brown with QCPN antibody). The presumptive territory has perfectly incorporated in the chick host head mesenchyme one day after grafting. (Courtesy of Gérard Couly).* (C) *Encephalic region of an E2 chick embryo during a grafting manipulation. The rhombencephalon is half severed in preparation for replacement by quail rhombencephalon. (Courtesy of Marie-Aimée Teillet). (See the articles by Balaban 2005 and by Teillet* et al., *2005 in this issue).* (D) *Newly hatched chick carrying a quail wing grafted at E4. (Courtesy of Claude Martin and Hiroki Ohki). (E) Cross section of an E3 chick embryo engrafted orthotopically with quail segmental plate one day earlier. The left hemi embryo is mainly composed of quail cells (QCPN in red). Somite-derived quail vascular endothelium (QH1 in green) makes up the perineural plexus, the cardinal vein and the roof and left side of the aorta. The floor of the aorta is from the chicken host, i.e., derived from splanchnopleural mesoderm. (Courtesy of Claire Pouget, Marie-Aimée Teillet, Rodolphe Gautier and Thierry Jaffredo; see also article by Dieterlen-Lièvre, 2005 in this issue). (F) Cross section of an E3 chick embryo engrafted at E1.5 with quail Hensen's node, which has given rise to the neural tube floor plate, the notocord and a medio-dorsal strip in the endoderm. (Courtesy of Marie-Aimée Teillet and Martin Catala) (see the paper by Charrier* et al., *2005 in this issue). Design: Sophie Gournet.*

Preface

Since 1989, *The International Journal of Developmental Biology* has been publishing Special Issues which include unique historical perspectives about the development of a multitude of fields of Developmental Biology. Several of these have reported advances brought about by the main international 'Schools' in the field first known as Embryology. Others dealt with significant chapters of the discipline, and the scientists who developed them; a recent example of this is the particularly memorable *Special Issue* on The Spemann-Mangold Organizer*. Others were devoted to Laboratories considered to have made important contributions to advances in the discipline.

It is a special honor for a Laboratory to be selected for such an opportunity, and a great pleasure for somebody who has taken part in the adventure to be invited as a Guest Editor. Many of the contributors to this Special Issue have worked in the Nogent Institute as long-time members, post-doctoral scientists or PhD students; others have been associates in scientific endeavors. The majority of the colleagues I invited to contribute to this Special Issue responded with enthusiasm. I thank them for showing their attachment to Nogent in this way and for acknowledging the role the Institute played in their scientific life.

Each contributor was allowed to choose the format (s) he wished, namely, either a review of their topic, or a ground-breaking original contribution. To my mind, two aspects are covered as a result; firstly the various questions which have been explored over the 50 years of the Institute's existence are analyzed; secondly the outstanding participation of former Nogent associates in novel conceptual and technological trends is highlighted. This is a tribute to the charismatic figures who inspired the research and provided the means to work; Etienne Wolff who gave the chick embryo its claim to fame, and Nicole Le Douarin who, by 'inventing' the quail-chick model, permitted the exploration of new chapters in Developmental Biology, as testified by the present Special Issue and by the model's adoption in laboratories the world over.

I know that the scientists and the technical staff who have patiently participated in this venture, consider this Special Issue to be a gratifying reward for their dedication. We are all indebted to Francis Beaujean, Michel Fromaget and Sophie Gournet for photographic work and computer treatment and to Michèle Scaglia for expert assistance in preparing the Nogent manuscripts and correcting the final proofs. Last but not least, we would like to express our thankful appreciation to Prof. Juan Aréchaga for having given us this wonderful opportunity and to the *Int. J. Dev. Biol.* Editorial Team for having carefully integrated our contributions into this most memorable Special Issue.

Françoise Dieterlen

Nogent sur Marne, April 2005

* *Int. J. Dev. Biol.* Vol. 45, No. 1 (2001). http://www.intjdevbiol.com/0101contents.htm