

## BIOGRAPHICAL SKETCH

Provide the following information for all key personnel.  
Follow the sample format for each person found in **Biosketch Sample**. **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Cecconi, Francesco		Ph.D. Full Professor of Developmental Biology Associate Telethon Scientist	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Tor Vergata, Rome (I)	Laurea Ph.D.	1992 1996	Biological Sciences Molecular Cell Biology
Max-Planck-Institut für Biophysikalische Chemie, Göttingen (D)	Post Doc	1996-2000	Developmental Biology Apoptosis

### A. Positions and Honors.

#### **Positions and Employment**

- 2000-2005 Assistant Telethon Scientist, Dulbecco Telethon Institute at the Department of Biology, University of Tor Vergata, Rome (I)
- Since 2005 Associate Telethon Scientist, Dulbecco Telethon Institute at the Department of Biology, University of Tor Vergata, Rome (I)
- Since 2005 Head of the Molecular Neuroembryology Unit, Dept. of Experimental Neuroscience, IRCCS Fondazione Santa Lucia, Rome (I)
- Since 2006 Full Professor, Faculty of Science, University of Tor Vergata, Rome (I)

#### **Other Experience and Professional Memberships**

- 1995-1997 Member of the Italian Society of Biochemistry (SIB)
- Since 1997 Member of the Italian Society of Biophysics and Molecular Biology (SIBBM)
- Since 1998 Member of the Italian Society of Cellular and Developmental Biology (ABCD)
- Since 2000 Teacher of the Ph.D. School in Molecular Cell Biology, Dept. of Biology, University of Tor Vergata, Rome (I)
- 2002-2006 Lecturer in Developmental Biology at the Faculty of Science, University of Tor Vergata, Rome (I)
- 2002-2006 Lecturer in Molecular Biology at the Faculty of Science, University of Roma Tre, Rome (I)
- Since 2002 Member of the European Cell Death Organization (ECDO)
- Since 2003 Member of the Cell Death Society

#### **Reviewer for the following international Journals and Institutions**

Cell  
Nature  
Development  
EMBO Journal  
Cell Death and Differentiation  
Mechanisms of Development  
FEBS Letters  
Genomics  
Investigative Ophthalmology & Visual Science  
The Journal of Cell Biology  
Autophagy  
Brain  
Neurobiology of Diseases

European Research Council  
The Wellcome Trust, UK

Fonds zur Foerderung der wissenschaftlichen Forschung, Austria  
Netherlands Organisation for Scientific Research, The Netherlands  
Institut National du Cancer, France

### Honors

1996	ESF (European Science Foundation) and EMBO (European Molecular Biology Organization) long term postdoctoral fellowships
1997	HFSP (Human Frontier Science Program Org.) long term postdoctoral fellowship
1998	MARIE CURIE/TMR from EU (European Union) long term postdoctoral fellowship
2001	HFSP (Human Frontier Science Program Org.) short term postdoctoral fellowship

### **B. Selected peer-reviewed publications (in chronological order).**

(15 Publications selected from 51 peer-reviewed publications)

1. Zermati Y, Mohuammad S, Stergiou L, Besse B, Galluzzi L, Bohrer S, Pauleau A-L, Rosselli F, D'Amelio M, Amendola R, Castedo M, Hengartner M, Soria J-C, Cecconi F, and Kroemer G (2007). Non-apoptotic role for Apaf-1 in the DNA damage checkpoint. **Mol Cell**. 28:624-637.
2. Cecconi F, Di Bartolomeo S, Nardacci R, Fuoco C, Corazzari M, Giunta L, Romagnoli A, Stoykova A, Chowdhury K, Fimia GM and Piacentini M (2007). A novel role for autophagy in neurodevelopment. **Autophagy** 3:506-508.
3. Fimia GM, Stoykova A, Romagnoli A, Giunta L, Di Bartolomeo S, Nardacci R, Corazzari M, Fuoco C, Ucar A, Schwartz P, Gruss P, Piacentini M, and Cecconi F (2007). Ambra1 regulates autophagy and development of the nervous system. **Nature**. 447:1121-1125.
4. Cozzolino M, Ferri A, Ferraro E, Rotilio G, Cecconi F, Carri MT (2006). Apaf1 mediates apoptosis and mitochondrial damage induced by mutant human SOD1s typical of familial amyotrophic lateral sclerosis. **Neurobiol Dis**. 21:69-79.
5. Di Sano F, Ferraro E, Tufi R, Achsel T, Piacentini M, and Cecconi F (2006). Endoplasmic reticulum stress induces apoptosis by an apoptosome-dependent but caspase 12-independent mechanism. **J Biol Chem**. 281:2693-2700.
6. De Zio D, Giunta L, Corvaro M, Ferraro E, Cecconi F (2005). Expanding roles of programmed cell death in mammalian neurodevelopment. **Semin Cell Dev Biol**. 16:281-294.
7. Cozzolino M, Ferraro E, Ferri A, Rigamonti D, Quondamatteo F, Ding H, Xu ZS, Ferrari F, Angelini DF, Rotilio G, Cattaneo E, Carri MT, Cecconi F (2004). Apoptosome inactivation rescues proneural and neural cells from neurodegeneration. **Cell Death Differ**. 11:1179-1191.
8. Cecconi F, Roth KA, Dolgov O, Munarriz E, Anokhin K, Gruss P, and Salminen M (2004). Apaf1-dependent programmed cell death is required for inner ear morphogenesis and growth. **Development**. 131:2125-2135.
9. Arnoult D, Gaume B, Karbowski M, Sharpe JC, Cecconi F, Youle RJ (2003). Mitochondrial release of AIF and EndoG requires caspase activation downstream of Bax/Bak-mediated permeabilization. **EMBO J**. 22:4385-4399.
10. Marsden VS, O'Connor L, O'Reilly LA, Silke J, Metcalf D, Ekert PG, Huang DC, Cecconi F, Kuida K, Tomaselli KJ, Roy S, Nicholson DW, Vaux DL, Bouillet P, Adams JM, and Strasser A (2002). Apoptosis initiated by Bcl-2-regulated caspase activation independently of the cytochrome c/Apaf-1/caspase-9 apoptosome. **Nature**. 419: 634-637.
11. Heins N, Malatesta P, Cecconi F, Nakafuku M, Tucker KL, Hack MA, Chapouton P, Barde YA, Götz M (2002). Glial cells generate neurons: the role of the transcription factor Pax6. **Nature Neurosci**. 5:308-315.
12. Cecconi F, Gruss P (2002). From ES cells to mice: the gene trap approach. **Methods Mol Biol**. 185:335-346.
13. Moroni MC, Hickman ES, Lazzerini Denchi E, Caprara G, Colli E, Cecconi F, Müller H, Helin K (2001). Apaf-1 is a transcriptional target for E2F and p53. **Nature Cell Biol**. 3:552-558.
14. Cecconi F (1999). Apaf1 and the apoptotic machinery. **Cell Death Differ**. 6:1087-1098.
15. Cecconi F, Alvarez-Bolado G, Meyer BI, Roth KA, and Gruss P (1998). Apaf1 (CED-4 homolog) regulates programmed cell death in mammalian development. **Cell**. 94:727-737.

### **C. Research Support**

### **Ongoing Research Support**

S99038TELU, 07/01/05-07/01/10 (€ 419,000)

Fondazione Telethon

Modulating cell death and proliferation during development and disease of the nervous system.

This study is directed at the generation of apoptosis and autophagy down- and up-regulating mouse lines.

Role: PI

S99038CSP, 07/01/06-06/30/08 (€ 100,000)

Compagnia di San Paolo

Analysis of alterations and dysfunctions of molecular mechanisms at the basis of inherited human diseases.

Modulation of cell death and survival in the Alzheimer's Disease.

This study focusses on the role of the apoptosome in the ultimate death of degenerating neurons in AD.

Role: National Co-ordinator and Co-investigator

AIRC2008, 11/01/07-10/31/10 (€ 150,000)

Analysis of the role of Ambra-1, a novel autophagy-regulator, in the control of cell death and proliferation.

This study is aimed at unravelling the roles of the novel pro-autophagic protein Ambra1 in oncogenesis and tumor progression.

Role: PI

Others:

Ministry of Health (Finalized project 2006) (€ 62.000)

Ministry of Health (ExArt.56, L289/2002, 2007) (€ 42.000)

### **Completed Research Support**

S99038TELA, 07/01/00-07/01/05 (€ 838,000)

Fondazione Telethon

Analysis of apoptosis in neurodegenerative diseases by Apaf1 conditional mutagenesis.

This study was directed at the generation of apoptosome down- and up-regulating mouse lines.

Role: PI

S99038CSP, 03/01/03-06/01/05 (€ 275,000)

Compagnia di San Paolo

Identification and study of molecular interactions involved in the ontogenesis of inherited diseases.

Our part of this study was focussed on the identification of molecular complexes and networks at the basis of

neurodegeneration.

Role: National Co-ordinator and Co-investigator

MIUR/FIRB RBAU01FZMZ, 11/06/02-11/06/05 (€ 100,000)

Italian Ministry of University and Research

Roles of Apaf1 and the apoptosome in Alzheimer's disease.

The aim of this study was to understand the importance of the mitochondrial pathway of death in neuronal loss in AD by cellular and animal models.

Role: PI

### **Completed Research Support (contin.)**

MIUR/FIRB RBNE015242, 11/22/03-05/31/07 (€ 150,600)

Italian Ministry of University and Research

A forward genetics approach for mutagenesis in mouse based on genetic selection of insertional events.

Our part of this work was aimed at setting up innovative strategies for the identification of novel pro- or antiapoptotic genes.

Role: National Co-ordinator and Co-investigator

AIRC01-03, 07/16/01-07/16/04 (€ 156,000)

AIRC

Modulation of apoptosis in a murine tumor progression model of pancreatic cancer.

This study was aimed at the identification of the roles of apoptosome molecules in the progression of pancreatic cancer. In this context, mouse models useful for novel approaches in the study of neurodegenerative diseases have also been generated.

Role: PI