

**Eric Cornes, Ph.D.**  
Institut Pasteur  
Mechanisms of epigenetic inheritance group  
Department of Developmental and Stem Cell Biology  
25 Rue du Docteur Roux  
Bâtiment Monod - 4ème étage 75724 Paris  
[eric.cornes-maragliano@pasteur.fr](mailto:eric.cornes-maragliano@pasteur.fr)  
[eric.cornes87@gmail.com](mailto:eric.cornes87@gmail.com)

## **RESEARCH EXPERIENCE**

- 01/2016 to date      **Post-Doctoral research scientist**  
Institut Pasteur. Mechanisms of epigenetic inheritance.  
Department of Developmental and Stem Cell Biology.  
**Advisor:** Dr. Germano Cecere.
- 07/2015-12/2015      **Research Collaborator**  
Institut Hospital del Mar Investigacions Biomèdiques.  
Parc de Recerca Biomèdica de Barcelona. Stem Cells and Cancer group.  
**Research project:** I studied the alternative functions of I $\kappa$ B $\alpha$  homologs in *C. elegans* by applying CRISPR/Cas9 technology to generate mutants and tag specific genetic loci.  
**Advisors:** Dr. Lluís Espinosa and Dr. Julian Ceron.

## **EDUCATION**

- 10/2011 – 07/2015      **Ph.D. in Biomedicine, european mention.**  
Universitat Pompeu Fabra. Barcelona.  
**Research activity** at Genetics and Functional Genomics in *C. elegans* lab, Cancer and Human Molecular Genetics Department. Bellvitge Biomedical Research Institute. **Short term stay** at Institut Europeen de Chimie et Biologie. **Research project:** I performed a functional study of the conserved LSM proteins in *C. elegans* and described their involvement in the stress response of metazoans.  
**Advisors:** Dr. Julian Ceron and Dr. Denis Dupuy
- 09/2010 – 07/2011      **Master in Biomedical Research.**  
Universitat Pompeu Fabra. Barcelona.  
**Research activity** at Genetics and Functional Genomics in *C. elegans* lab, Cancer and Human Molecular Genetics Department. Bellvitge Biomedical Research Institute. **Research project:** I generated tools (RNAi clones and promoter::GFP transgenic strains) to start the functional study of the LSM family of proteins in the model organism *C. elegans* and characterized the resulting phenotypes and expression patterns for every gene of the family.  
**Advisor:** Dr. Julian Ceron

- 09/2005 – 07/2010 **B.Sc. in Biology.**  
Universitat Pompeu Fabra, Barcelona  
**Research activity** at the Cellular and Molecular Biology program.  
Faculty of Medicine, University of Chile.  
**Research Project:** I used a novel genetic marker (lysine-M7 gene) to perform a Phylogenetic study of Chilean mussels' species. In parallel I learned different isolation and characterization techniques (HPLC, mouse bioassay) of three different groups of toxins (Saxitoxin, Okadaic acid and Domoic acid) accumulating on mussels tissues during harmful algal blooms along the Chilean coasts.  
**Advisors:** Dr. Benjamin Suarez and Dr. Juan Venegas
- 06/2008 – 07/2008 **Summer practicum**  
Meakins-Christie Laboratories and Respiratory Division,  
McGill University Health Center and Research Institute.  
**Research project:** I studied the role of CCR1 (chemokine receptor 1) and CCR2 in a mouse model of muscular dystrophy. I performed DNA extraction from tissue samples, genotyping mice, and preparation of muscle tissue sections for histological analysis.  
**Advisors:** Basil Petrof and Susanna Yim
- Languages: Spanish (native)  
French (bilingual)  
English (fluent)

### **TEACHING EXPERIENCE**

- 11/2015 and 11/2014 **Instructor at the practical course “*Transgenesis and animal improvement*”.** Department of Genetics, Universitat de Barcelona.  
**Associate professor:** Cristian Cañestro García
- 09/2015 **Instructor at the “*Introduction to C. elegans*” course.**  
Center for Genomic Regulation (CRG). Barcelona.
- 10/2011 - 12/2015 **Instructor at ESCOLAB (<http://www.escolab.cat/>),** a science communication activity launched by the Ajuntament de Barcelona at the Instituto de Investigación Biomédica de Bellvitge (IDIBELL).

### **AWARDS AND FELLOWSHIPS**

- 2014 – TRANSBIO SUDOE collaborative Project grant. Transbio Sudoe European program.
- 2012 – AIRE-CTP short term mobility fellowship. Generalitat de Catalunya (AGAUR).

## PUBLICATIONS

1. **Cornes, E.** Quéré, CAL. Giordano-Santini, R. Dupuy, D. Applying antibiotic selection markers for nematode genetics. *Methods*, 2014, (68):403-408.
2. **Cornes, E.** Porta-de-la-Riva, M. Aristizábal-Corrales, D. BrokateLlanos, AM. García-Rodríguez, FJ. Ertl, I. Díaz, M. Fontrodona, L. Reis, K. Johnsen, R. Baillie, D. Muñoz, MJ. Sarov, M. Dupuy, D. Cerón, J. Cytoplasmic LSM-1 protein regulates stress responses through the insulin/IGF-1 signaling pathway in *C. elegans*. *RNA*, 2015, 21(9):1544-53.
3. Rubio, K. Fontrodona, L. Aristizábal-Corrales, D. Torres, S. **Cornes, E.** García-Rodríguez, FJ. Serrat, X. Modeling of autosomal dominant Retinitis Pigmentosa in *Caenorhabditis elegans* uncovers a nexus between global impaired functioning of certain splicing factors and cell-type specific apoptosis. *RNA*, 2015, 21(12):2119-31..
4. Ertl, I. Porta-de-la-Riva, M. Gómez-Orte, E. Aristizábal-Corrales, D. **Cornes, E.** Fontrodona, L. Askjaer, P. Cabello, J. Cerón, J. Functional interplay of two paralogs encoding SWI/SNF chromatin-remodeling accessory subunits during *C. elegans* development. *Genetics*, 2016, [Epub ahead of print].

## SCIENTIFIC COMMUNICATIONS

### Oral communications:

1. **Vth Spanish Worm Meeting** 2015. Salamanca, Spain. Title: "Functional interactions between cytoplasmic LSM proteins and the Insulin/IGF-1 signaling pathway in stress response".
2. **IVth Spanish Worm Meeting** 2013. Sevilla, Spain. Title: "Functional diversity in the splicing-related Sm-like family of proteins".

### Abstracts:

1. **European Worm Meeting (EWM)** 2014. Berlin, Germany. "Members of the evolutionary conserved Sm-like (*lsm*) family of proteins regulate cellular stress response pathways in *C. elegans*".
2. **EMBO conference Eukaryotic RNA Turnover: From Structural Insights to Diseases** 2013. Strasbourg, France. "Functional diversity of *lsm* genes in *C. elegans*".
3. **RECOMB-DREAM 2011: 8th Annual RECOMB Satellite on Regulatory Genomics. 2011. Barcelona, Spain.** "Toward a functional map of splicing-related genes in *Caenorhabditis elegans*: from functional genomics of the SM-like family to genetic analysis of *lsm-1*".

## **OTHER INFORMATION OF INTEREST**

### **Scientific skills:**

- Basic molecular biology techniques: DNA and RNA isolation and purification, genotyping, Western Blot, Real Time PCR, Immunohistochemistry, in vitro dsRNA synthesis, Gateway cloning etc.
- Maintenance and advanced experimentation with the model organism *C. elegans*: RNAi assays (feeding protocol and microinjection), genetic manipulation, transgenic generation by bombardment and microinjection. Genome editing by CRISPR/Cas9 technology, etc.
- Analysis of high throughput data (i.e: RNA-seq) using Seqsolve software.

## **REFEREES**

### **Julián Cerón, PhD**

Genetics and Functional Genomics in *C. elegans*  
Cancer and Human Molecular Genetics.  
Bellvitge Institute for Biomedical Research (IDIBELL)  
Adress: Hospital Duran i Reynals, Planta 3.  
Gran via 199, Hospitalet de Llobregat 08907, Barcelona, Spain.  
tel: +34 93 260 7251  
fax: +34 93 260 7414  
email: [jceron@idibell.org](mailto:jceron@idibell.org) , [jceronmadrigal@gmail.com](mailto:jceronmadrigal@gmail.com)

### **Denis Dupuy, PhD**

Institut Europeen de Chimie et Biologie (Bordeaux)  
Inserm U869 - Natural and Artificial Regulation of RNA  
Adress:2, rue Robert Escarpit, 33607 Pessac, France.  
Tel +33(0)5 4000 8404  
Fax +33(0)5 4000 8390  
email: [denis.dupuy@gmail.com](mailto:denis.dupuy@gmail.com), [d.dupuy@iecb.u-bordeaux.fr](mailto:d.dupuy@iecb.u-bordeaux.fr)