



# Vladimir Espinosa Angarica

BIOCHEMIST · BIOINFORMATICIAN · PHD

Cancer Science Institute, National University of Singapore · 14 Medical Drive, 117599 Singapore

☎ (+65) 9379 3883 | ✉ vladimir@espinosa-angarica.com | 🌐 www.espinosa-angarica.com | 📄 Google Scholar

## Personal Information

**Date of Birth** November the 6<sup>th</sup>, 1978  
**Place of Birth** Havana, Cuba  
**Nationality** Cuban  
**Marital Status** Married, no kids

## Education

### Dept. of Biochemistry and Molecular and Cellular Biology, University of Zaragoza

Zaragoza, Spain

PH.D. IN BIOCHEMISTRY (*summa cum laude*)

2009 – 2014

- **Title:** “A Bioinformatics Study of Protein Conformational Flexibility and Misfolding: a Sequence, Structure and Dynamics Approach”
- **Ph.D. Supervisor:** Prof. Javier Sancho
- **Award:** Selected as one of the best Theses of the Department of Biochemistry and Molecular and Cellular Biology, and proposed for the Extraordinary Doctoral Prize of the University of Zaragoza (Class of 2014)
- [PDF](#) · [HTML](#)

### Dept. of Biochemistry and Molecular and Cellular Biology, University of Zaragoza

Zaragoza, Spain

MASTER IN ADVANCED STUDIES (M.A.S) IN MOLECULAR AND CELLULAR BIOLOGY (*cum laude*)

2007 – 2008

- **Title:** “Conformational changes of the LDL-r LA5 module upon mutation: a computational approach”
- **Master Supervisor:** Prof. Javier Sancho

### Center for Genetic Engineering and Biotechnology (CIGB)

Havana, Cuba

BIOINFORMATICS SPECIALIST TRAINING

2001 – 2002

### Biology Faculty, University of Havana

Havana, Cuba

B.SC. IN BIOCHEMISTRY (*summa cum laude*)

1997 – 2002

- **Title:** “Prediction of Transcription Factor binding sites in the Regulatory Regions of genes related to Human Glyoblastoma”
- **B.Sc. Supervisor:** Dr. Ricardo Bringas · **Center for Genetic Engineering and Biotechnology (CIGB)**
- **Award:** Best Academic Results Award of the Biology Faculty (Class of 2002)
- **GPA:** 5.64 out of 5.00

### Exact Sciences Vocational Institute “Vladimir Ilich Lenin”

Havana, Cuba

3-YEAR BACHELOR IN EXACT SCIENCES (*summa cum laude*)

1993 – 1996

- **Topic:** Specialisation in Chemistry, member of the Cuban Team to the International and Iberoamerican Chemistry Olympiads

## Experience

### Dept. of Hematology/Oncology, Beth Israel Deaconess Medical Center, Harvard Medical School, Harvard University

Boston, USA

VISITING RESEARCH FELLOW

March. 2019 – Jul. 2019

- **Supervisor:** Prof. Daniel G. Tenen
- Profiling of patient primary cells at the epigenetics and gene expression levels for the identification of the regulatory dysfunctions triggering leukemic transformation resulting in the development of Acute Myeloid Leukemia (AML)

### Cancer Science Institute, National University of Singapore

Singapore

RESEARCH FELLOW

March. 2017 – present

- **Supervisor:** Prof. Daniel G. Tenen
- Bioinformatics study of the regulation of DNA methylation and gene expression mediated by DNMT1-ncRNA interactions. Bioinformatics study of non-coding RNA interaction networks

## Luxembourg Centre for Systems Biomedicine, University of Luxembourg

Luxembourg

RESEARCH ASSOCIATE

May. 2014 – March. 2017

- **Supervisor:** Prof. Antonio del Sol
- Coordinating and researching in a CORE Project, funded by the Fonds National de la Recherche (FNR), Luxembourg, for the use of network models for the study of the underlying regulatory mechanisms, at the transcriptional and epigenomics levels, determining key processes such as cell differentiation and development
- Co-supervising the research project of 2 PhD students in Computational Biology
- Teaching in the Doctoral Course on “Computational Systems Biomedicine” of the Doctoral School, University of Luxembourg

## Journal Referee

ACTING AS HABITUAL REVIEWER FOR SEVERAL SCIENTIFIC JOURNALS

2006 – present

- Review Editor for [Frontiers in Cellular and Infection Microbiology](#) · Frontiers Media S.A., **CH**
- [Nucleic Acids Research](#) · Oxford University Press, **UK**
- [BMC Genomics](#) · BioMed Central, Springer, **UK**
- [BMC Bioinformatics](#) · BioMed Central, Springer, **UK**
- [Microbiology](#) · Microbiology Society, **UK**

## University of Zaragoza

Zaragoza, Spain

MASTER AND PHD RESEARCHER

2007 – 2014

- Development of computational models at the sequence, structure and dynamics levels for studying processes related to protein conformational instability and misfolding, and the effect of mutations in the development of pathologic phenotypes in conformational diseases

## National Bioinformatics Centre

Havana, Cuba

RESEARCH COLLABORATOR

2003 – 2006

- Collaborator in an international collaboration project involving the National Laboratory for Scientific Computing (LNCC) at Petrópolis, Brazil and the Center for Genomic Sciences (CCG) at the National Autonomous University of Mexico for the bioinformatics study of the mechanisms of transcription regulation in gamma-proteobacteria, which are important pathogens of human and other mammals

## National Bioinformatics Centre

Havana, Cuba

ASSOCIATE RESEARCHER

2002 – 2006

- Coordinating different national and international projects in the field of Functional Genomics and Bioinformatics, for the study of the mechanisms of transcriptional regulation in eukaryotes and prokaryotes, and genetic diseases

## University of Havana · University of Computer Sciences

Havana, Cuba

ASSOCIATE PROFESSOR

2002 – 2006

- Seminars and Lectures of Molecular Genetics, Biology Faculty
- Lectures of Relational Databases in the Graduate Course on Computational Biology and New Technologies, Biology Faculty
- Introduction to Parallel Computing, Biology Faculty
- Introduction to LINUX, University of Computer Sciences

## Peer-Reviewed Publications

---

### 1. Identifying potential novel drugs against *Helicobacter pylori* by targeting the essential response regulator HsrA

Sci. Rep.

GONZALEZ, A., SALILLAS, S., VELAZQUEZ-CAMPOY, A., **ANGARICA, V.E.**, FILLAT, M.F., SANCHO, J., LANAS, A. (2019).

2019

*Sci. Rep.*, **9**(1): 11294. [PDF](#) · [PUBMED](#)

### 2. The RNA Polymerase II factor RPAP1 is critical for Mediator-driven transcription and cell identity

Cell Rep.

LYNCH, C., BERNAD, R., CALVO, I., NOBREGA-PEREIRA, S., RUIZ, R., IBARZ, N., MARTINEZ DEL VAL, A., GRAÑA, O., GOMEZ, G., ANDRES-LEON, E., **ANGARICA, V.E.**, DEL SOL, A., ROJO, E., FERNANDEZ-CAPETILLO, O., MUÑOZ, J.,

2018

SERRANO, M. (2018). *Cell Rep.*, **22**(2): 396–410. [PDF](#) · [HTML](#)

- 3. Single cell gene expression analysis reveals regulators of subpopulation-specific trajectories among developing human neurons** *Genome Res.*  
 WANG, J., JENJAROENPUN, P., BHINGE, A., **ANGARICA, V.E.**, DEL SOL, A., KUZNETSOV, V. A., STANTON, L. W. (2017). *Genome Res.*, **27(11)**: 1783–1794. [PDF](#) · [HTML](#) 2017
- 4. Prediction of Chromatin Accessibility in Gene-Regulatory Regions from Transcriptomics Data** *Sci. Rep.*  
 JUNG, S., **ANGARICA, V.E.**, ANDRADE-NAVARRO, M.A., BUCKLEY, N., & DEL SOL, A. (2017). *Sci. Rep.*, **7(1)**: 4660. [PDF](#) · [HTML](#) 2017
- 5. Bioinformatics tools for Genome Wide Epigenetic Research** *Adv. Exp. Med. Biol. (Springer)*  
**ANGARICA, V.E.** & DEL SOL, A. (2017). IN DELGADO MORALES, R. (Ed.), NEUROEPIGENOMICS IN AGING AND DISEASE. *Adv. Exp. Med. Biol. (Springer)*, **978**: ISBN: 978-3-319-53888-4. [HTML](#) · [FULL BOOK](#) 2017
- 6. Modelling Heterogeneity in the Pluripotent State: a promising strategy for improving the efficiency and fidelity of stem cell differentiation** *BioEssays*  
**ANGARICA, V.E.** & DEL SOL, A. (2016). *BioEssays*, **38(8)**: 758–68. [PDF](#) · [HTML](#) 2016
- 7. Exploring the complete mutational space of the LDLr LA5 domain using molecular dynamics: linking SNPs with abnormal phenotypes in Familial hypercholesterolemia** *Hum. Mol. Genet.*  
**ANGARICA, V.E.**, OROZCO, M. & SANCHO, J. (2016). *Hum. Mol. Genet.*, **25(6)**: 1233–46. [PDF](#) · [HTML](#) · [COVER](#) 2016
- 8. Prediction of disease-gene-drug relationships following a differential network analysis** *Cell Death Dis*  
 ZICKENROTT, S., **ANGARICA, V.E.**, UPADHYAYHA, B.B., & DEL SOL, A. (2016). *Cell Death Dis.*, **7**: E2040. [PDF](#) · [HTML](#) 2016
- 9. A differential network analysis approach for lineage specifier prediction in stem cell subpopulations** *NPJ Syst. Biol. Appl.*  
 OKAWA, S., **ANGARICA, V.E.**, LEMISCHKA, I., MOORE, K., & DEL SOL, A. (2015). *NPJ Syst. Biol. Appl.*, **1**: 15012. [PDF](#) · [HTML](#) 2015
- 10. LDL receptor is a calcium/magnesium sensor: Role of LR4 and LR5 ion interaction kinetics in LDL release in the endosome** *FEBS Journal*  
 MARTINEZ-OLIVAN, J., ROZADO AGUIRRE, Z., ARIAS-MORENO, X., **ANGARICA, V.E.**, VELAZQUEZ-CAMPOY, A., & SANCHO, J. (2014). *FEBS J.*, **281(11)**: 2638–58. [PDF](#) · [HTML](#) 2014
- 11. PrionScan: an online database of predicted prion domains in complete proteomes** *BMC Genomics*  
**ANGARICA, V.E.**, ANGULO, A., GINER, A., LOSILLA, G., VENTURA, S., & SANCHO, J. (2014). *BMC Genomics*, **15**: 102. [PDF](#) · [HTML](#) 2014
- 12. The FurA regulon in Anabaena sp. PCC 7120: in silico prediction and experimental validation of novel target genes** *Nucleic Acids Res.*  
 GONZALEZ, A., **ANGARICA, V.E.**, SANCHO, J., & FILLAT, M.F. (2014). *Nucleic Acids Res.*, **42(8)**: 4833–46. [PDF](#) · [HTML](#) 2014
- 13. Discovering putative prion sequences in complete proteomes using probabilistic representations of Q/N-rich domains** *BMC Genomics*  
**ANGARICA, V.E.**, VENTURA, S. & SANCHO, J. (2013). *BMC Genomics*, **14**: 316. [PDF](#) · [HTML](#) 2013
- 14. Protein dynamics governed by interfaces of high polarity and low packing density** *PLoS One*  
**ANGARICA, V.E.**, SANCHO, J. (2012). *PLoS One*, **7(10)**: E48212. [PDF](#) · [HTML](#) 2012

- 15. Structure of RdxA: an oxygen insensitive nitroreductase essential for metronidazole activation in *Helicobacter pylori*** *FEBS Journal*  
 MARTINEZ-JULVEZ, M., ROJAS, A., OLEKHNOVICH, I., **ANGARICA, V.E.**, HOFFMAN, P.S. & SANCHO, J. (2012). *FEBS J*, **279**(23): 4306–17. [PDF](#) · [HTML](#) 2012
- 16. Design and structure of a protein folding intermediate. A hint into dynamical regions of proteins** *J. Mol. Biol.*  
 AYUSO-TEJEDOR, S., **ANGARICA, V.E.**, BUENO, M., CAMPOS, L.A., ABIAN, O., BERNADO, P., SANCHO, J., JIMENEZ, M.A. (2010). *J. Mol. Biol.*, **400**(4): 922–34. [PDF](#) · [HTML](#) 2010
- 17. Comparison of DNA-binding across protein superfamilies** *Proteins*  
 CONTRERAS-MOREIRA, B., SANCHO, J. & **ANGARICA, V.E.** (2009). *Proteins*, **78**(1): 52–62. [PDF](#) · [HTML](#) 2009
- 18. From sequence to dynamics: The effects of transcription factor and polymerase concentration changes on activated and repressed promoters** *BMC Mol. Biol.*  
 PEREZ, A.G., **ANGARICA, V.E.**, COLLADO-VIDES, J., VASCONCELOS, A.T. (2009). *BMC Mol. Biol.*, **10**: 92. [PDF](#) · [HTML](#) 2009
- 19. Prediction of TF target sites based on atomistic models of protein-DNA complexes** *BMC Bioinformatics*  
**ANGARICA, V.E.**, PEREZ, A.G., VASCONCELOS, A.T., COLLADO-VIDES, J., CONTRERAS-MOREIRA, B. (2008). *BMC Bioinformatics*, **9**: 436. [PDF](#) · [HTML](#) 2008
- 20. The role of DNA-binding specificity in the evolution of bacterial regulatory networks** *J. Mol. Biol.*  
 LOZADA-CHAVEZ, I., **ANGARICA, V.E.**, COLLADO-VIDES, J., CONTRERAS-MOREIRA, B. (2008). *J. Mol. Biol.*, **379**(3): 627–43. [PDF](#) · [HTML](#) 2008
- 21. Impact of Transcription Units rearrangement on the evolution of the regulatory network of gamma-proteobacteria** *BMC Genomics*  
 GONZALEZ PEREZ, A.D., GONZALEZ GONZALEZ, E., **ESPINOSA ANGARICA, V.**, VASCONCELOS, A.T., COLLADO-VIDES, J. (2008). *BMC Genomics*, **9**: 128. [PDF](#) · [HTML](#) 2008
- 22. Cross-talk between iron and nitrogen regulatory networks in *Anabaena (Nostoc) sp. PCC 7120*: Identification of overlapping genes from/in *FurA* and *Ntca* regulons** *J. Mol. Biol.*  
 LOPEZ-GOMOLLON, S., HERNANDEZ, J.A., PELLICER, S., **ANGARICA, V.E.**, PELEATO, M.L. & FILLAT, M.F. (2007). *J. Mol. Biol.*, **374**(1): 267–81. [PDF](#) · [HTML](#) 2007
- 23. Tractor\_DB (version 2.0): a database of regulatory interactions in gamma-proteobacterial genomes** *Nucleic Acids Res.*  
 PEREZ, A.G., **ANGARICA, V.E.**, VASCONCELOS, A.T., COLLADO-VIDES, J. (2007). *Nucleic Acids Res.*, **35**: D132–6. [PDF](#) · [HTML](#) 2007
- 24. Comparative studies of transcriptional regulation mechanisms in a group of eight gamma-proteobacterial genomes** *J. Mol. Biol.*  
**ESPINOSA, V.**, GONZALEZ, A.D., VASCONCELOS, A.T., HUERTA, A.M & COLLADO-VIDES, J. (2005). *J. Mol. Biol.*, **354**(1): 184–99. [PDF](#) · [HTML](#) 2005
- 25. Complementing computationally predicted regulatory sites in Tractor\_DB using a pattern matching approach** *In Silico Biol.*  
 GUIA, M.H., PEREZ, A.G., **ANGARICA, V.E.**, VASCONCELOS, A.T., COLLADO-VIDES, J. (2005). *In Silico Biol.*, **5**(2): 209–19. [PDF](#) · [HTML](#) 2005

## 26. TRACTOR\_DB: a database of regulatory networks in gamma-proteobacterial genomes

*Nucleic Acids Res.*

GONZALEZ, A.D., **ESPINOSA, V.**, VASCONCELOS, A.T., PEREZ-RUEDA, E., COLLADO-VIDES, J. (2005). *Nucleic Acids Res.*, **33**: D98–102. [PDF](#) · [HTML](#)

2005

## Post-graduate Courses & Trainings

---

### Postgraduate Course “Translational and Integrative Bioinformatics”

*Barcelona, Spain*

INBIOMEDVISION IN COLLABORATION WITH POMPEU FABRA UNIVERSITY (UPF) · BIOINFORMATICS BARCELONA (BIB) · BARCELONA SUPERCOMPUTING CENTER (BSC) · SPANISH TECHNOLOGICAL PLATFORM FOR INNOVATIVE MEDICINES (PTEMI) · THE SPANISH INSTITUTE OF BIOINFORMATICS (INB)

2013

### Workshop “Getting the most from biomolecular simulations”

*Barcelona, Spain*

UNIVERSITY OF BARCELONA · INSTITUTE FOR RESEARCH IN BIOMEDICINE · BARCELONA SUPERCOMPUTER CENTER

2008

### Trends in Transient Interactions between Biological Molecules

*Sevilla, Spain*

INSTITUTE OF PLANT BIOCHEMISTRY AND PHOTOSYNTHESIS, UNIVERSITY OF SEVILLA

2007

### *II<sup>nd</sup>* Meeting of the Spanish Group of Protein Structure and Folding

*Alicante, Spain*

UNIVERSITY MIGUEL HERNÁNDEZ, SAN JUAN DE ALICANTE

2007

### International course “New Frontiers of Bioinformatics in Latin America”

*Mérida, Venezuela*

NATIONAL CENTER OF SCIENTIFIC COMPUTING, UNIVERSITY OF “LOS ANDES”

2003

### Postgraduate course “Introduction to Logics”

*Havana, Cuba*

MATHEMATICS FACULTY, UNIVERSITY OF HAVANA

2002

### Postgraduate course as part of the “French-Cuban Doctoral School (on the subject of Data Mining)”

*Havana, Cuba*

MATHEMATICS FACULTY, UNIVERSITY OF HAVANA

2002

### Postgraduate course on “Bioinformatics”

*Havana, Cuba*

MATHEMATICS FACULTY, UNIVERSITY OF HAVANA

2002

### Postgraduate course on “Introduction to Protein Computational Modeling”

*Havana, Cuba*

PHYSICS FACULTY, UNIVERSITY OF HAVANA

2001

### *III<sup>rd</sup>* International Workshop on Nucleic Acids and Proteins Sequence Analysis

*Havana, Cuba*

CENTER FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (CIGB)

2001

### *I<sup>st</sup>* International Symposium on Biochemistry and Molecular Biology

*Havana, Cuba*

CENTER FOR GENETIC ENGINEERING AND BIOTECHNOLOGY (CIGB) · UNIVERSITY OF HAVANA

2001

## Research Meetings Talks & Poster Presentations

---

### Prediction of disease–gene–drug relationships following a differential network analysis

*Hannover, Germany*

**ANGARICA, V.E.**, SASCHA ZICKENROTT, MUHAMMAD ALI, JENS SCHWAMBORN & ANTONIO DEL SOL

2016

*IV<sup>th</sup>* Annual Conference of the German Stem Cell Network (Poster Presentation)

### Bioinformatic prediction and experimental validation of novel FurA-regulated genes in *Anabaena* sp. PCC 7120

*Zaragoza, Spain*

GONZALEZ, A., **ANGARICA, V.E.**, SANCHO, J., & FILLAT, M.F.

2014

*VI<sup>th</sup>* International Conference BIFI 2014 (Poster Presentation)

- Prediction of prion proteins in complete proteomes using probabilistic representations of prionogenic domains** *Barcelona, Spain*  
**ANGARICA, V.E.**, VENTURA, S. & SANCHO, J. 2011  
 XXIV<sup>th</sup> Congress of the Spanish Society for Biochemistry and Molecular Biology (**Poster Presentation**)
- Protein buried interfaces in protein stability and dynamics** *Murcia, Spain*  
**ANGARICA, V.E.** & SANCHO, J. 2011  
 XI<sup>th</sup> Congress of the Spanish Biophysics Society (**Oral Presentation**)
- A computational study of protein intrafaces: prediction of unstructured regions in protein folding intermediates** *Córdoba, Spain*  
**ANGARICA, V.E.** & SANCHO, J. 2010  
 XXXIII<sup>rd</sup> Congress of the Spanish Society for Biochemistry and Molecular Biology (**Oral Presentation**)
- A computational study of protein intrafaces and their implication in protein folding** *Zaragoza, Spain*  
**ANGARICA, V.E.** & SANCHO, J. 2010  
 IV<sup>th</sup> Spanish-Portuguese Biophysical Congress (**Poster Presentation**)
- Intrafaces and cavities in protein structures: implications in protein folding and dynamics** *Madrid, Spain*  
**ANGARICA, V.E.** & SANCHO, J. 2010  
 VI<sup>th</sup> Meeting of the Spanish Protein Structure and Function Network (**Oral Presentation**)
- Exploring the mutational space of the LDL-r module using molecular dynamics: connecting SNPs to abnormal phenotypes in a conformational disease** *Oviedo, Spain*  
**ANGARICA, V.E.**, CUESTA-LOPEZ, S. & SANCHO, J. 2009  
 XXXII<sup>th</sup> Congress of the Spanish Society for Biochemistry and Molecular Biology (**Poster Presentation**)
- Comparison of DNA-binding across protein superfamilies** *Zaragoza, Spain*  
 CONTRERAS-MOREIRA, B. & **ANGARICA, V.E.** 2009  
 Congress BIFI 2009 (**Oral Presentation**)
- Using Molecular Dynamics to study the conformational changes of the LDL-r LA5 module upon mutation** *Zaragoza, Spain*  
**ANGARICA, V.E.**, CUESTA-LOPEZ, S., ESTRADA, J. & SANCHO, J. 2009  
 Congress BIFI 2009 (**Oral Presentation**)
- 3D-footprint: structural analysis of protein-DNA complexes** *Madrid, Spain*  
 CONTRERAS-MOREIRA, B. & **ANGARICA, V.E.** 2009  
 International Workshop Angel Ramirez Ortiz in memoriam (**Oral Presentation**)
- A computational study of the mutational space of the LDL-r LA5 module: in silico prediction of disease-like phenotypes in a conformational disease** *Madrid, Spain*  
**ANGARICA, V.E.**, CUESTA-LOPEZ, S., ESTRADA, J. & SANCHO, J. 2009  
 International Workshop Angel Ramirez Ortiz in memoriam (**Poster Presentation**)
- Conformational Changes of the LDL-r LA5 Module Upon Mutation: a Computational Approach** *Bilbao, Spain*  
**ANGARICA, V.E.**, CUESTA-LOPEZ, S., ESTRADA, J. & SANCHO, J. 2008  
 XXXI<sup>th</sup> Congress of the Spanish Society for Biochemistry and Molecular Biology (**Poster Presentation**)
- Structural (and sequence-based) analysis of transcriptional regulation** *Valencia, Spain*  
 CONTRERAS-MOREIRA, B., LOZADA-CHAVEZ, I. & **ANGARICA, V.E.** 2008  
 VIII<sup>th</sup> Spanish Symposium on Bioinformatics and Computational Biology (**Oral Presentation**)

- Prediction of Transcription Factor Binding Sites using Structural Information** *Málaga, Spain*  
**ANGARICA, V.E.**, PEREZ, A.G., VASCONCELOS, A.T.R., COLLADO-VIDES, J., CONTRERAS-MOREIRA, B. 2007  
 XXX<sup>th</sup> Congress of the Spanish Society for Biochemistry and Molecular Biology (**Poster Presentation**)
- TRACTOR\_DB as a source for comparative studies of transcriptional regulation mechanisms in gamma-proteobacterial genomes** *Caxambú, Brazil*  
**ANGARICA, V.E.**, PEREZ, A.G., VASCONCELOS, A.T.R., HUERTA, A.M & COLLADO-VIDES, J. 2005  
 I<sup>st</sup> International Conference of the Brazilian Association for Bioinformatics and Computational Biology (**Honorary Mention Poster Presentation**)
- Predicting New Members of Regulons in Gamma-proteobacterial genomes: a Step Towards the Construction of a Multi-Genomic Database on Prokaryotic Transcriptional Regulation, Tractor\_DB** *Angra dos Reis, Brazil*  
 GONZALEZ A., **ANGARICA, V.E.**, VASCONCELOS A.T., PEREZ-RUEDA E., COLLADO-VIDES J. 2004  
 International Conference on Bioinformatics and Computational Biology-ICOBICOB (b) (**Poster Presentation**)
- Site position study in a group of gamma-proteobacterial genomes. Co-occurrence of binding sites for pairs of TFs and its implication in regulation of transcription** *Havana, Cuba*  
**ANGARICA, V.E.**, GONZALEZ, A.D., VASCONCELOS, A.T., COLLADO-VIDES, J. 2004  
 I<sup>nd</sup> International Symposium on Biochemistry and Molecular Biology (**Poster Presentation**)
- A novel database of computationally predicted new gamma-proteobacterial regulon members** *Havana, Cuba*  
 GONZALEZ, A., DOS SANTOS, M.T., **ANGARICA, V.E.**, VASCONCELOS, A.T., COLLADO-VIDES, J. 2004  
 I<sup>st</sup> Bioinformatics Congress (**Oral Presentation**)
- New Members of over Seventy Regulons in Eight Gamma-Proteobacterial Genomes** *Havana, Cuba*  
 GONZALEZ, A., DOS SANTOS, M.T., **ANGARICA, V.E.**, VASCONCELOS, A.T., COLLADO-VIDES, J. 2003  
 Biotecnología Havana International Congress (**Poster Presentation**)
- Prediction of Transcription Factors probably involved in the differential expression of genes in human Glioblastomes** *Havana, Cuba*  
**ANGARICA, V.E.**, BRINGAS, R., MIRANDA, J.M. 2003  
 Informatics Havana National Congress (**Poster Presentation**)
- Predicting New Members of Regulons in eight Gamma-Proteobacterial Genomes** *Havana, Cuba*  
 GONZALEZ, A., DOS SANTOS, M.T., **ANGARICA, V.E.**, VASCONCELOS, A.T., COLLADO-VIDES, J. 2003  
 National Congress of Medical Informatics (**Oral Presentation**)
- Use of bioinformatics strategies for the prediction of Transcription Factors probably involved in the differential expression of groups of genes in human Glioblastomes** *Havana, Cuba*  
**ANGARICA, V.E.**, BRINGAS, R., MIRANDA, J. 2003  
 French-Cuban Bioinformatics Workshop (**Poster Presentation**)

## Honors & Awards

---

### ACADEMIC AWARDS

(\*) **ACADEMIC AWARDS** ARE GRANTED BY THE CORRESPONDING DEPARTMENTS TO SELECTED STUDENTS WHICH ARE GIVEN THE OPPORTUNITY TO PARTICIPATE IN A SPECIAL ADVANCED COMPETITION EXAM. THREE PLACES ARE AWARDED: **FIRST PLACE** (0.06 PTS); **SECOND PLACE** (0.04 PTS) AND **THIRD PLACE** (0.02 PTS). THE TOTAL POINTS OBTAINED IN ADVANCED COMPETITION EXAMS ARE ADDED TO THE ACADEMIC GRADE AVERAGE TO TOTALIZE THE FINAL **GPA (GPA: 5.64 OUT OF 5.00 · BEST ACADEMIC RESULTS AWARD OF THE BIOLOGY FACULTY (CLASS OF 2002))**

### **Competition Exam on Physics (Electromagnetism)**

1ST PLACE

- Awarded by the Department of Applied Physics, Physics Faculty, University of Havana

*Havana, Cuba*

*Course 1998–1999*

### **Competition Exam on Physics (Optics and Nuclear Physics)**

1ST PLACE

- Awarded by the Department of Applied Physics, Physics Faculty, University of Havana

*Havana, Cuba*

*Course 1998–1999*

### **Competition Exam on Philosophy II**

1ST PLACE

- Awarded by the Department of Philosophy, Philosophy & History Faculty, University of Havana

*Havana, Cuba*

*Course 1998–1999*

### **Competition Exam on Organic Chemistry II**

1ST PLACE

- Awarded by the Department of Organic Chemistry, Chemistry Faculty, University of Havana

*Havana, Cuba*

*Course 1998–1999*

### **Competition Exam on Enzymology**

1ST PLACE

- Awarded by the Department of Biochemistry, Biology Faculty, University of Havana

*Havana, Cuba*

*Course 1999–2000*

### **Competition Exam on Plant Morphology**

1ST PLACE

- Awarded by the Department of Plant Biology, Biology Faculty, University of Havana

*Havana, Cuba*

*Course 1999–2000*

### **Competition Exam on Microbiology**

1ST PLACE

- Awarded by the Department of Microbiology, Biology Faculty, University of Havana

*Havana, Cuba*

*Course 1999–2000*

### **Competition Exam on French V**

1ST PLACE

- Awarded by the Department of French, Foreign Languages Faculty, University of Havana

*Havana, Cuba*

*Course 1999–2000*

### **Competition Exam on French IV**

1ST PLACE

- Awarded by the Department of French, Foreign Languages Faculty, University of Havana

*Havana, Cuba*

*1999–2000*

### **Competition Exam on Biometrics and Experimental Design**

3RD PLACE

- Awarded by the Department of Plant Biology, Biology Faculty, University of Havana

*Havana, Cuba*

*1999–2000*

### **Competition Exam on Plant Physiology**

3RD PLACE

- Awarded by the Department of Plant Physiology, Biology Faculty, University of Havana

*Havana, Cuba*

*Course 2000–2001*

### **Competition Exam on Animal Morphology**

3RD PLACE

- Awarded by the Department of Human and Animal Biology, Biology Faculty, University of Havana

*Havana, Cuba*

*1999–2000*

### **Competition Exam on Molecular Genetics**

3RD PLACE

- Awarded by the Department of Biochemistry, Biology Faculty, University of Havana

*Havana, Cuba*

*Course 2000–2001*

## **HIGH SCHOOL OLYMPIADS**

### **High School National Chemistry Competition**

SILVER PRIZE

- Exact Sciences Vocational Institute “Vladimir Ilich Lenin”

*Havana, Cuba*

*1996*

### **High School National Chemistry Competition**

GOLD PRIZE

- Exact Sciences Vocational Institute “Vladimir Ilich Lenin”

*Havana, Cuba*

*1995*

### **High School National Chemistry Competition**

BRONZE PRIZE

- Exact Sciences Vocational Institute “Vladimir Ilich Lenin”

*Havana, Cuba*

*1994*



## Grants

---

### 3-year FNR CORE Project

Luxembourg

POSTDOCTORAL GRANT

2014–2017

- Awarded by the Fonds National de la Recherche (FNR), Luxembourg

### 3-month research stay at the Molecular Recognition & Bioinformatics Group, Institute for Research in Biomedicine (IRB)

Barcelona, Spain

TRAVEL GRANT

2011

- Awarded by the Spanish National Research Council (CSIC)

### PhD in Biochemistry

Zaragoza, Spain

DOCTORAL GRANT

2009–2013

- Awarded by the Spanish National Research Council (CSIC), JAE Program

### Master of Advances Studies in Molecular and Cellular Biology

Zaragoza, Spain

MASTER GRANT

2007–2009

- Awarded by the Banco Santander Central Hispano, Fundación Carolina and Universidad de Zaragoza

### 6-month research stay at the Center for Genomic Sciences (CCG)

Cuernavaca, Mexico

TRAVEL GRANT

2006

- Awarded by the Iberoamerican Bioinformatics Network (Red Iberoamericana de Bioinformática, RIBIO VII.L CYTED)

### 3-month research stay at the National Laboratory for Scientific Computing (LNCC)

Petrópolis, Brazil

TRAVEL GRANT

2005

- Awarded by the Iberoamerican Bioinformatics Network (Red Iberoamericana de Bioinformática, RIBIO VII.L CYTED)

## Skills

---

<b>Operating Systems</b>	All Microsoft™ operating systems, MacOS™, Unix, Linux (Advanced User and Administration Skills)
<b>Programming</b>	C, Perl, C++, Python, Parallel Computing (Advanced user of HPC Clusters, Parallel Programming skills)
<b>Web</b>	HTML, CSS
<b>Database</b>	MySQL, CGI
<b>Statistics</b>	R
<b>Languages</b>	<b>Spanish:</b> mother tongue; <b>English:</b> full professional proficiency; <b>French &amp; Portuguese:</b> basic proficiency

## References

---

THESE PERSONS ARE FAMILIAR WITH MY PROFESSIONAL SKILLS AND MY WAY OF WORKING:

**Prof. Daniel G. Tenen**, DIRECTOR OF CSI/NUS & PROFESSOR OF MEDICINE/HARVARD MEDICAL SCHOOL

Singapore & USA

CANCER SCIENCE INSTITUTE (CSI), NATIONAL UNIVERSITY OF SINGAPORE · 14 MEDICAL DRIVE, #12-01, SINGAPORE 117599, SINGAPORE · email: [csidgt@nus.edu.sg](mailto:csidgt@nus.edu.sg), telephone: +65 6516 8239 | DEPT. OF HEMATOLOGY/ONCOLOGY, BETH ISRAEL DEACONESS MEDICAL CENTER, HARVARD MEDICAL SCHOOL, HARVARD UNIVERSITY · 330 BROOKLINE AVENUE, BOSTON, MA 02215, USA

Postdoc Supervisor: 2017–present

**Prof. Antonio del Sol**, HEAD OF THE COMPUTATIONAL BIOLOGY UNIT/LCSB

Belvaux, Luxembourg

LUXEMBOURG CENTRE FOR SYSTEMS BIOMEDICINE (LCSB), UNIVERSITY OF LUXEMBOURG · 6, AVENUE DU SWING, L-4367 BELVAUX, LUXEMBOURG · email: [antonio.delsol@uni.lu](mailto:antonio.delsol@uni.lu), telephone: +352 466644 6982

Postdoc Supervisor: 2014–2017

**Prof. Javier Sancho**, HEAD OF THE PROTEIN FOLDING & MOLECULAR DESIGN GROUP/BIFI

Zaragoza, Spain

DEPT. OF BIOCHEMISTRY AND MOLECULAR AND CELLULAR BIOLOGY & INSTITUTE FOR BIOCOMPUTATION AND PHYSICS OF COMPLEX SYSTEMS (BIFI), UNIVERSITY OF ZARAGOZA · C/ PEDRO CERBUNA 12, ZARAGOZA 50009, SPAIN · email: [jsancho@unizar.es](mailto:jsancho@unizar.es), telephone: +34 976 761 286

MSc & PhD Supervisor: 2007–2014

**Dr. Ana Tereza Ribeiro de Vasconcelos**, HEAD OF LABINFO/LNCC

Petrópolis, Brazil

BIOINFORMATICS LAB (LABINFO), NATIONAL LABORATORY FOR SCIENTIFIC COMPUTING (LNCC) · AV. GETULIO VARGAS 333, QUITANDINHA 25651-075, BRAZIL · email: [atrv@lncc.br](mailto:atrv@lncc.br), telephone: +55 24 2233 6065

Collaborator: 2002–2009

**Prof. Salvador Ventura**, DIRECTOR OF IBB/UNIVERSITAT AUTÒNOMA DE BARCELONA  
DEPARTAMENT DE BIOQUÍMICA I BIOLOGIA MOLECULAR & INSTITUT DE BIOTECNOLOGIA I DE BIOMEDICINA (IBB),  
UNIVERSITAT AUTÒNOMA DE BARCELONA · PLAZA CÍVICA, S/N, 08193 BELLATERRA, SPAIN · email:  
[salvador.ventura@uab.cat](mailto:salvador.ventura@uab.cat), telephone: +34 935 868 956

*Barcelona, Spain*

*Collaborator: 2010–2014*