

# Edgar E. Gonzalez Kozlova, PhD

*Curriculum Vitae*

## PERSONAL DETAILS

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## EDUCATION

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### PhD in Bioinformatics

2012-2016

*Universidade Federal de Minas Gerais, Brazil.*

Thesis on B-cell epitope pattern identification and experimental validation.

### Bachelor's degree in Biological Sciences

2005-2012

*Universidad Nacional Mayor de San Marcos, Perú.*

Thesis on characterization of venom spreading factors from Bothrops snakes.

## SKILLS

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### DEVELOPMENT AND BIOINFORMATICS

<i>Analysis</i>	OMIC's data integration, pathways, scRNAseq, and mol. dynamics.
<i>DataMining</i>	Regressions, Bayes, RF, GLM, SVM, SVD, SDA and Networks/graphs.
<i>Programming</i>	Python, R, Shell/Bash and Perl.
<i>Phylogenetics</i>	Mr.Bayes and PVclust.
<i>Software</i>	R,Gromacs, PyMol, Modeller, JMol, blast, Knime, Matlab, L <sup>A</sup> T <sub>E</sub> X Emboss, Clustal, tcoffee, Star, FastaQC, Trinity, Spades,printseq-lite Bismark, FeaturesCount and Jalview.
<i>Servers</i>	Remote SSH, FTP, SunFire, Altix, PBS and LSF.

### WET-LAB

<i>Immunological</i>	ELISA, SPOT, Western Blot and bacterial cultures.
<i>Molecular Biology</i>	PCR, Plasmid purification, DNA-RNA extraction.
<i>Biochemical</i>	Electrophoresis, AKTA-FPLC, Chromatography.

#### ANIMAL HANDLING

<i>Bioterium</i>	Immunization, keeping, mice, rats, rabbits, snakes, arthropods and horses
<i>Field</i>	Reptiles, arthropods and amphibians
<i>Surgery</i>	Mice, Snakes and venom extraction

#### SOCIAL

<i>Languages</i>	Russian (native speaker)
	Spanish (native speaker)
	English (fluent)
	Portuguese (fluent)

## WORK EXPERIENCE

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### **Post-Doc.**

2018-present

*Mt. Sinai, USA.*

Department of Genetics and Genomics; Modeling sequencing data to profile molecular datasets. Assisting and leading statistical genomics projects leveraging RNA-sequencing and Omics data.

### **Grantee. Post-Doc.**

2016-2018

*CAPES, LIDI, UFSC, Brazil.*

Study of protein evolution, structure, and sequence of viral proteins (VLPs); Protein design and expression in bacterial systems; Proteomic, Genomic, Transcriptomic and Single cell data analysis.

### **Grantee - Researcher**

2012-2016

*CNPq - CAPES, Labimq, UFMG, Brazil.*

Exclusive dedication as researcher. Tasks and Projects: Computational identification of B-cell epitopes; Bioinformatic transcriptome analysis; SSH server support; and responsible for disposal of toxic residues, biosecurity, and keeper of project related animals.

### **Undergrad - Researcher**

2007-2012

*Molecular Biology Laboratory, UNMSM, Perú*

Exclusive dedication as a researcher. Main duties: Immunochemical and biochemical assays with enzymes from several venoms; Immunization on mice, rabbits and horses; and Isolation or purification of proteins from complex samples.

### **Undergrad - Researcher**

2007-2012

*UNMSM - Museum of Natural History. Perú*

Venomous animals keeper, Venom extraction, surgery, feeding and health keeper for the animals. Main duties: Preparing the cages environment for the animals; Feeding and nursing; Venom extraction and surgery; and Guide for visits.

### **Consultant**

2011-2011

*ERM - International, Herpetology. Perú*

On field sampling and identification of reptiles and amphibians. Main duties: Specialized sampling of animals; and Identification for the samples.

### **Researcher and Consultant**

2009-2011

*Department of Herpetology, Museum of Natural History. Perú*

Performed identification and keeping the collection for the department. Main duties: Identification of samples; Cleaning and keeping of the collection; Consultant for external organizations; and Museum guide.

## PUBLICATIONS

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Article Title :

**Scientific Reports, PMID:30297733**

2018

**KOZLOVA, E. E. G.**; Loïc Cerf; Francisco Santos Schneider; Benjamin Thomas Viart ; ...  
;Ricardo Andrez Machado-de-Ávila; Computational B-cell epitope identification and production of neutralizing murine antibodies against Atroxtysin-I.

**Toxicon, PMID:29024770**

2017

Dan Vivas-Ruiz; Fanny E Lazo, Ph. D; Gustavo A Sandoval , Msc; Ruperto Severino; Edith F Rodriguez, Msc; **KOZLOVA, E. E. G.** ; Eladio F Sánchez, Ph.D; Carlos Chávez-Olortegui , Ph.D; Armando Yarlequé, Ph.D ; Biochemical, biological and molecular characterization of a new L-Amino acid oxidase purified from Bothrops pictus Peruvian snake venom.

**Oxford Bioinformatics, PMID:26787662**

2016

VIART, B. ; **KOZLOVA, E. E. G.** ; Neshich G ; Chávez -Olortegui C ; MOLINA, F. ; FELICORI, L; EPI-Peptide Designer: a tool for designing specific peptide ligand libraries based on Epitope - Paratope Interactions. Bioinformatics (Oxford. Online)

**BMC Bioinformatics, PMID:26696329**

2015

**KOZLOVA, E. E. G.** ; VIART, B. T. ; AVILA, R. A. M. ; FELICORI, L. ; Chávez -Olortegui C. Classification epitopes in groups based on their protein family. BMC Bioinformatics, 2015.

**Revista de la Sociedad Química del Perú, ISSN:1810-634X**

2014

Delgadillo J. ; MERCEDES, P. ; F. Lazo ; RODRIGUE Z, E. ; **KOZLOVA, E. E. G.** ; SEVERINO, R. ; A. Yarleque . Purificación y algunas propiedades de una hialuronidasa del veneno de la serpiente Bothrops brazili 'Jergon Shushupe'. Revista de la Sociedad Química del Perú, v. 79, p. 348-458,2014.

**Revista de la Sociedad Química del Perú, ISSN:1810-634X**

2013

**KOZLOVA, E. E. G.** ; Ortiz Cesar ; SANDOVAL, G. ; F. Lazo ; Delgadillo J. ; RODRIGUE Z, E. ; SEVERINO, R. ; A. Yarleque . PURIFICACIÓN Y CARACTERIZACIÓN BIOQUÍMICA DE UN FACTOR DE DIFUSIÓN PRESENTE EN EL VENENO DE LA SERPIENTE Bothrops atrox 'JERGON'. Revista de la Sociedad Química del Perú, v. 79, p. 3 -12, 2013.

**Rev. Peruana de Med. Exp. y Salud Pública, PMID:22858765**

2012

Ortiz Cesar ; Lazo Fanny ; Bellido Candy ; **KOZLOVA, E. E. G.** ; Yarleque Armando. Variation of the enzymatic activity of Bothrops atrox. Revista Peruana de Medicina Experimental y Salud Pública (Impresa), v. 29, p. 198-205, 2012.

## TEACHING

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**Assistant Professor**

2014

UFMG, Brazil.

Introduction to data mining techniques - Grad. School

**Professor assistant**

2007-2012

UNMSM, Perú.

Theoretical and experimental class presentations for Undergrad.

## COURSES & WORKSHOPS

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<b>Workshop</b> <i>La Jolla Institute for Allergy and Immunology, California-USA.</i> Workshop on Epitope Prediction and Databases - IEDB	2015
<b>Short course</b> <i>Universidade Estadual Paulista Júlio da Mesquita Filho, Brazil.</i> 2nd School of Molecular Biophysics	2014
<b>Short course</b> <i>IRV, Brazil.</i> Environmental education with focus on venomous animals handling	2013
<b>Short course</b> <i>Universidad Peruana Cayetano Heredia, Perú.</i> Introduction to Neurosciences	2011
<b>Short course</b> <i>In Vitro Perú, Perú.</i> Instrumental implementation for a biotechnology laboratory	2006
<b>Course</b> <i>IBERFOP, Perú.</i> Training on informatics and computer assembly	2003

## REFERENCES

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<i>Name</i>	Prof. Bojan Losic
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