

# 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>	Transcriptomics and other OMIC's data modeling profiling and integration. RNAseq, scRNAseq, RRBS, Methyleseq, Microarrays, FACS and MS.
<i>DataMining</i>	Regression, Bayes, RF, GLM, SVM, SVD, SDA and Networks/graphs.
<i>Programming &amp; Software</i>	R, Python, Shell/Bash, Perl, Matlab, Mr.Bayes, PVclust and L <sup>A</sup> T <sub>E</sub> X, Gromacs, PyMol, Modeller, JMol, blast, clustal, Knime, Emboss, Star, Salmon, FastaQC, Trinity, Spades, Bismark, FeaturesCount and Jalview.
<i>Servers</i>	Remote SSH, FTP, SunFire, Altix, PBS and LSF.

### Wet-lab

<i>Immunology</i>	ELISA, SPOT, Western Blot and bacterial cultures.
<i>Molecular Biology</i>	PCR, Plasmid purification, DNA-RNA extraction.
<i>Biochemical</i>	Electrophoresis and other Chromatographies (AKTA-FPLC, HPLC)

### 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)
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## **WORK EXPERIENCE**

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### **Post-Doc.**

2018-present

*Icahn school of medicine - Mount Sinai, USA.*

Department of Genetics and Genomics; Modeling sequencing data to profile molecular datasets. Leading and assisting epigenetic, transcriptomic and genomics projects by leveraging sequencing and clinical 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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Elife, PMID:31637998

2019

Delgobo M, Mendes DA, **KOZLOVA, E. E. G.**, Rocha EL, Rodrigues-Luiz GF, ... , Mansur DS, Van Weyenbergh J, Báfica A. *An evolutionary recent IFN/IL-6/CEBP axis is linked to monocyte expansion and tuberculosis severity in humans.*

Pre Print bioRxiv, doi: <https://doi.org/10.1101/679886>

2019

Adrian Bubie, **KOZLOVA, E. E. G.**, Nicholas Akers, Augusto Villanueva, Bojan Losic. *Tumor fitness, immune exhaustion and clinical outcomes: impact of immune checkpoint inhibitors*

Biochimie, PMID:30946947

2019

Vivas-Ruiz DE, **KOZLOVA, E. E. G.**, Delgadillo J, Palermo PM, Sandoval GA, Lazo F, Rodríguez E, Chávez-Olórtegui C5, Yarlequé A, Sanchez EF. *Biochemical and molecular characterization of the hyaluronidase from Bothrops atrox Peruvian snake venom.*

Biochimie, PMID:31476328

2019

Medina-Santos R, Guerra-Duarte C, ... , **KOZLOVA, E. E. G.**, Kalapothakis E, Chávez-Olórtegui C. *Diversity of astacin-like metalloproteases identified by transcriptomic analysis in Peruvian Loxosceles laeta spider venom and in vitro activity characterization.*

Pre Print bioRxiv, <https://doi.org/10.1101/784678>

2019

Constanza Eleonora Espada, Lummertz da Rocha, Adara Aurea dos Santos, Zamira Guerra Soares, Greicy Malaquias, Daniel Oliveira Patrício, **KOZLOVA, E. E. G.**, Paula Fernandes dos Santos, Juliano Bordignon, Thomas J. Sanford, Teodoro Fajardo, Trevor R. Sweeney, André Báfica, Daniel Santos Mansur *Flaviviruses exploit fine-tuning of the interferon response to promote replication*

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 Atroxlysin-I.*

Toxicon, PMID:29024770

2017

Dan Vivas-Ruiz; Fanny E Lazo, Ph. D; Gustavo A Sandoval , ... , Msc; **KOZLOVA, E. E. G.** ; Eladio F Sánchez, Ph.D; Carlos Chávez-Olórtegui , 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 ; RODRIGUEZ, 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. ; RODRIGUEZ, 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

**Workshop** 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

**Workshop** 2015  
 La Jolla Institute for Allergy and Immunology, California-USA.  
 Workshop on Epitope Prediction and Databases - IEDB

**Short course** 2014  
 Universidade Estadual Paulista Júlio da Mesquita Filho, Brazil.  
 2nd School of Molecular Biophysics

**Short course** 2013  
 IRV, Brazil.  
 Environmental education with focus on venomous animals handling

**Short course** 2011  
 Universidad Peruana Cayetano Heredia, Perú.  
 Introduction to Neurosciences

**Short course** 2006  
 In Vitro Perú, Perú.  
 Instrumental implementation for a biotechnology laboratory

**Course** 2003  
 IBERFOP, Perú.  
 Training on informatics and computer assembly

## REFERENCES

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