Andree Valle Campos, MSc(c)

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Interests

Quantitative and systems developmental biology. Causal questions for hypothetical interventions. Reproducible and open science. Biostatistics. Bioengineering approaches. Best-practices of teaching.

Education

2018-2018 **Master of Science in Epidemiological Research**
Universidad Peruana Cayetano Heredia (UPCH), Lima-Peru
Rank: Top fifth among 28 students.

2011-2015 **Bachelor of Science in Genetics and Biotechnology**
Universidad Nacional Mayor de San Marcos (UNMSM), Lima-Peru
Rank: Top third at the 4th term among 30 students.

Affiliations

2019-2020. **National Center for Epidemiology (CDC Peru)** — **Researcher**
Epidemiological Research and Surveillance Group, Ministry of Health.

2017-2019 **Universidad Peruana Cayetano Heredia (UPCH)**, Peru. — **Intern**
Emerge, Emergent Diseases and Climate Change Research Unit.

2016-2017 **Universidad Nacional de la Amazonía Peruana (UNAP)**, Peru. — **Consultant**
Fundación para el Desarrollo Sostenible de la Amazonía Baja.

2015-2016 **U.S. Naval Medical Research Unit Six (NAMRU-6)**, Peru. — **Intern**
Dept. of Parasitology, Div. of Immunology and Vaccine Development.

Publications (n=8)

Peer-reviewed (n=6)

-Reyes-Vega MF, Soto-Cabezas MG, Cárdenas F, Martel KS, Valle A, et al. "SARS-CoV-2 prevalence associated to low socioeconomic status and overcrowding in an LMIC megacity: A population-based seroepidemiological survey in Lima, Peru". *EClinicalMedicine.* doi: 10.1016/j.eclinm.2021.100801 .

-Gunderson AK, Kumar RE, Recalde-Coronel C, Vasco LE, Valle-Campos A, et al. "Malaria Transmission and Spillover across the Peru–Ecuador Border: A Spatiotemporal Analysis". *Int. J. Environ. Res. Public Health 2020, 17, 7434.* doi: 10.3390/ijerph17207434 .

-Quispe AM, Pinto DF, Huamán MR, Bueno GM, & Valle-Campos A. ["Quantiative Methodologies: Sample size calculation with STATA and R."] *Revista del Cuerpo Médico del HNAAA, 2020, 13(1), 78-83.* doi: 10.35434/rcmhnaaa.2020.131.627 .

-Munayco CV, Tariq A, Rothenberg R, Soto-Cabezas MG, Reyes MF, Valle A., et al. "Early transmission dynamics of COVID-19 in a southern hemisphere setting: Lima-Peru: February 29th–March 30th, 2020.". *Infectious Disease Modelling, 2020, 5, 338 - 345.* doi: 10.1016/j.idm.2020.05.001 .

-Loyola S., Valle A., Montero S. and Carrasco-Escobar G. ["Recomendations to properly describe a COVID-19 epidemic curve."] *Revista Peruana de Medicina Experimental y Salud Pública, 2020, 37(2).* doi: 10.17843/rpmesp.2020.372.5461 .

-Saavedra-Langer R., Marapara J., Valle-Campos A., et al. "IgG subclass responses to excreted-secreted antigens of *Plasmodium falciparum* in a low transmission malaria community of the Peruvian Amazon". *Malaria journal, 2018, 17(1), 328.* doi: 10.1186/s12936-018-2471-6 .

At Newsletters (n=2)

-[Opinion] Carrasco-Escobar G, Incio J, Valle A., Martínez JJ, Prochazka M, Ugarte C. ["Data and Transparency to fight against to coronavirus."] *Ojo Público, 2020.* url: ojo-publico.com .

-[Editorial] Valle-Campos A. ["Health Data Science: Applications at the Peruvian Center for Epidemiology, Prevention and Disease Control, CDC-Peru."] *Boletín Epidemiológico del Perú, 2019, 18(49), 1245.* doi: 10.5281/zenodo.4014211 .

Grants, Awards and Recognitions

Scholarship. Emerge Training Grant NIH/FIC TG D43 TW007393	2018	USD 10,644
Grant. Undergraduate research: Camelid Reproduction Group - UNMSM	2014	USD 500
Ranked 1st. UPCH X Summer Course on Molecular Biology (40 students)	2013	
Ranked 1st. UNMSM Admission Test to Basic Sciences (1000 applicants)	2011	

Computational Skills

Statistical programming: R (developer of work-in-progress packages: `serosurvey`, and `more`).
Programming Language: Bash (Unix shell, fluent), Python (basic), Stata (fluent).
OS, Text editor, & more: GNU/Linux (Ubuntu). LaTeX, R Markdown. SublimeText. Git.

Conference participant

serosurvey: Serological Surveys and Prevalence Estimation Under Misclassification. 2021
Elevator pitch at the useR! Conference.

[**Epidemiological analysis of the epidemic of Guillain Barré Syndrome in Peru.**] 2019
Poster presentation at the INS International Scientific Congress.

Human mobility and malaria history in a periurban community in Iquitos, Peru. 2019
Poster presentation at the ASTMH Annual Meeting.

Workshop instructor

Outbreak Analytics and Modelling for Public Health *9 hours* 2021
Part of organizing committee. Workshop coordinator. Tutorial contributor. *100 students.*

[**Basic R applied to disease surveillance and outbreak analysis**] *6 hours* 2021
Introduction to R projects and ggplot2 graphics for Ministry of Health personel. *30 students.*

[**Epidemiological analysis using R**] *4 hours* 2019
Applications to case-control, cohort and time to event study designs. *30 students.*

[**Introduction to Inferential Statistics for biologist**] *6 hours* 2019
Introduction to R, Linear models and Multiple comparison. *40 students.*

[**Reproducible science and Microarray analysis**] *8 hours* 2017/19
Designs, statistics and visualizations with `Bioconductor` and `Tidyverse`. *50/20 students.*

Teacher and Lecturer

[**Data analysis in epidemiological surveillance II: spatial analysis**] *2 hours* 2021
Generate maps with risk estimates using R. *35 grad students.*

[**Data analysis in epidemiological surveillance I: time, space, person**] *2 hours* 2021
Descriptive and statistical analysis of outbreaks. *35 grad students.*

[**Visualizing public health and field epidemiology data**] *2 hours* 2021
Dashboards as tools for decision making in public health. *30 grad students.*

Teacher Assistant. At the Master's of Science in Epidemiological Research. *1 year* 2019
In charge of practical sessions, monthly reviews, and test correction. *48 grad students.*

[**Gene Regulatory Networks: Topology and Dynamics**] *3 hours* 2015-18
Applications from Graph Theory and Finite Automata. *10 undergrad students.*

[**On #tardigate and Horizontal Gene Transfer bioinformatics**] *2 hours* 2016
Review of the controversy around the first tardigrade genome. *5 undergrad students.*

Talks

[**Introduction to spatial analysis.**] *30 participants.* 2021

[**Analysis of #multiple epidemics and prevalences with R and purrr.**] *50 part.* 2020

[**Hypothesis testing with nonparametric statistical methods.**] *30 participants.* 2020

[**How to use R in Epidemiology?**] *25 participants.* 2019

Trainings with scholarship

[**How to teach programming online**] 2021
Techniques to design programming courses and evaluate students. One day.

Outbreak Analytics and Modelling for Public Health 2019
Dynamic modeling in response to outbreaks and interventions. One week.

CODATA-RDA Research Data Science School 2017 and 2020 2017/20
Data management, open science, machine learning and infrastructure. Two weeks.

[**Minicourse on Spatio-Temporal Models in Epidemiology**] 2017
Theory and practice of areal data, point pattern analysis and geostatistics. Two days.

Working with Parasite Database Resources 2016
Genomic, proteomic, metabolomic applications of `eupathdb.org`. One week.

V Southern-Summer School on Mathematical Biology 2016
Population dynamics modeling in ecology and epidemiology. One week.

Certifications

English: TOEFL score 88 (21/23/20/24). Test date: 14 Dic 2020
Biomedical Research - Basic/Refresher: CITI program. Expiration date: 04 May 2021
Responsible Conduct in Research: QUIPU program - Peru. Completition date: 05 May 2018