Andree Valle Campos

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Interests

Biomedical research, Data science and Education. Reproducible science. Open science. Causal inference. Systems developmental biology. Quantitative and Bioengineering approaches.

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. ["Quantitative 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. ["Recommendations 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 .

Non-peer-reviewed (n=2)

-[Opinion] Carrasco-Escobar G, Incio J, Valle A., Martínez JJ, Prochazka M, Ugarte C. ["Data and Transparency to fight the 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 (fluent), package developer: `serosurvey`, `covid19viz`, `epihelper`.
Programming Language: Bash (Unix shell, fluent), Python (basic), Stata (fluent).
OS, Text editor, & more: GNU/Linux (Ubuntu). LaTeX, R Markdown. SublimeText. Git.

Conference presentations

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

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

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

In vitro effect of ELF Magnetic Field on the sperm motility of Alpacas 2015
Poster, Annual Meeting of the Bioelectromagnetics Society, BioEM2015. Monterey, USA.

Workshop Instructor

Outbreak Analytics and Modelling for Public Health, Colombia-Peru *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.*

Lectures

[**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.*

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

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

Talks

[**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 for Epidemiology at CDC Peru?**] *25 participants.* 2019

Short Courses

[**Online teaching 101**] [**How to teach programming online**] 2021
Techniques to design programming courses and evaluate students. One day.

Outbreak Analytics and Modelling for Public Health, Colombia 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.

School on Physics Applications in Biology 2016
Game theory, non-linear dynamics and statistical physics. Three week.

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

Certifications

English: TOEFL score 88 (read:23, listen:21, speak:20, write: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