

EDUCATION

- 2017- Present **PhD in Infectious Diseases, Microbiology and Public Health.** Sapienza Università di Roma, Italy.
- 2014-2015 **Msc in Tropical Parasitic Diseases.** Universidad de Valencia, Spain.
- 2011-2012 **Erasmus Exchange Program Senior Year.** Università degli Studi di Milano, Italy.
- 2009-2014 **Bsc in Biochemistry and Biomedical Science.** Universidad de Valencia, Spain.

RESEARCH EXPERIENCE

- 2017- Present **PhD Researcher, SAPIENZA UNIVERSITÀ DI ROMA.**
Primary projects include 1) identifying *Aedes albopictus* salivary proteins to be used as epidemiological markers of human exposure to bites of the tiger mosquito, 2) validation in a murine model the promising markers by ELISA assay, 3) human validation of potential antigens as markers of exposure identified in a murine model, 4) identification the species-specificity and the suitability of salivary protein candidates in epidemiological settings where arboviral transmission is endemic. Supervisor: Prof. Bruno Arcà.
- 2019- 2019 **PhD Research Visitor, MIVEGEC UNIT, INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT (IRD), MONTPELLIER, FRANCE.**
Validation of *Aedes* salivary proteins as markers of human exposure to *Aedes* mosquito bites in La Reunion Island and Bolivia by ELISA assay. Supervisor: Dr. Franck Remoue.
- 2017-2017 **Fellowship for Research Activities, SAPIENZA UNIVERSITÀ DI ROMA.**
Continuation of research project: Screening for identification of salivary proteins/peptides of *Aedes* mosquitoes such as serological markers of exposure to arboviral vectors. Supervisor: Prof. Bruno Arcà.
- 2016-2017 **Fellowship for Research Activities (FILAS- REGIONE LAZIO FUNDING), SAPIENZA UNIVERSITÀ DI ROMA.**
Screening for identification of salivary proteins/peptides of *Aedes* mosquitoes such as serological markers of exposure to arboviral vectors. 1) Comparative analysis of salivary transcriptomes from culicids and other blood feeding arthropods, 2) Selection of a subgroup of *Aedes albopictus* salivary proteins using a selection criterion, 3) Using specific software for the prediction of immunogenicity (BcePred, ABCpred, BepiPred, Epiptopia). Supervisor: Prof. Bruno Arcà.
- 2015-2015 **Msc Thesis, UNIVERSIDAD DE VALENCIA.**
Molecular characterization of *Fasciola hepatica* and *Fasciola gigantica* from Bangladesh. DNA extraction, primer design, PCR amplification and sequencing of *cox1*, *nad1* and ITS sequences of species of *Fasciola spp.* from Bangladesh in order to determine the species and the possibility of occurrence of hybrids. Supervisor: Prof. M. Dolores Bargues.
- 2014-2014 **Undergraduate Researcher. Erasmus Placement Program, UNIVERSITÀ DEGLI STUDI DI MILANO**
Isolation of specific antibody for the NF- κ B transcriptional factor. Manipulation of DNA plasmid; construction of expression vectors for the production of recombinant proteins in prokaryotic and mammalian cells. Expression and purification of transcription factors such as recombinant proteins in *E. coli*.
Supervisor: Prof. Roberto Mantovani.
- 2013-2014 **Bsc Thesis, UNIVERSIDAD DE VALENCIA.**

Study of the structure and biological effectiveness of Gramicidin S analogs with changes in the β -turn region. Gramicidin S antimicrobial activity and cytotoxic effect research. Supervisor: Prof. Carmen Ramirez de Arellano.

PUBLICATIONS

- 2020 **Buezo Montero S.**, Gabrielli P., Montarsi F., Borean A., Capelli S., De Silvestro G., Forneris F., Pombi M., Breda A., Capelli G and Arcà B. IgG antibody responses to the *Aedes albopictus* 34k2 salivary protein as novel candidate marker of human exposure to the tiger mosquito. *Front Cell Infect Microbiol* 2020; 10:377. Impact factor 4.12
<https://www.frontiersin.org/articles/10.3389/fcimb.2020.00377/full>
- 2019 **Buezo Montero S.**, Gabrielli P., Severini F., Picci L., Di Luca M., Forneris F., Facchinelli L., Ponzi M., Lombardo F., Arcà B. Analysis in a murine model points to IgG responses against the 34k2 salivary proteins from *Aedes albopictus* and *Aedes aegypti* as novel promising candidate markers of host exposure to *Aedes* mosquitoes. *PLoS Negl Trop Dis* 2019; 13 (10): e0007806. Impact factor 3.885
<https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0007806>
- 2019 Bruno Arcà, **Sara Buezo Montero**, Fabrizio Lombardo. Antigeni salivari quali strumenti epidemiologici per la valutazione dell'esposizione umana ad *Aedes albopictus*. *Atti Accademia Nazionale Italiana di Entomologia Anno LXVI*, 2018: 123-128.

AWARDS, FELLOWSHIPS AND FUNDINGS

- 2020 **Avvio alla ricerca- Tipo 1, Anno 2020.** SAPIENZA UNIVERSITÀ DI ROMA.
Validation of human antibody response to the *Aedes albopictus* 34k2 salivary protein as a novel biomarker of exposure to the tiger mosquito bites- N. protocol: AR120172B74216A9.
- 2018 **Award for young members.** SOCIETÀ ITALIANA DI PARASSITOLOGIA. To participate in the XXX congress of Società Italiana di Parassitologia (SOIPA) "Environmental changes and parasites", Milan, Italy 26-29 June 2018.
- 2017-2020 **PhD scholarship.** SAPIENZA UNIVERSITÀ DI ROMA.
- 2017 **Fellowship for research activities.** SAPIENZA UNIVERSITÀ DI ROMA.
- 2016-2017 **Fellowship for research activities (FILAS-REGIONE LAZIO FUNDING).** SAPIENZA UNIVERSITÀ DI ROMA.
- 2014 **Erasmus Placement Scholarship.** UNIVERSITÀ DEGLI STUDI DI MILANO
- 2011-2012 **Erasmus Student Scholarship.** UNIVERSITÀ DEGLI STUDI DI MILANO.

ORAL PRESENTATIONS

- 2020 **Sara Buezo Montero.** Validation of human IgG response to *Aedes* salivary proteins as a novel marker of human exposure to *Aedes albopictus*. Webinar Spring parasitology "Young researchers talking about human and animal health". SOCIETÀ ITALIANA DI PARASSITOLOGIA (SOIPA) 15 Sept.- 6 Oct 2020.
- 2020 **S. Buezo Montero**, P. Gabrielli, F. Montarsi, A. Borean, S. Capelli, G. de Silvestro, F. Forneris, M. La Raja, M. Pombi, A. Breda, G. Capelli, B. Arcà. Validation of human IgG response to the 34k2 salivary protein of *Aedes albopictus* as marker to evaluate human exposure to the tiger mosquito. XI Seminar-Covid-19: Facing a multi(fase)Phase pandemic. PhD day Infectious Diseases, Microbiology and Public Health. ISTITUTO SUPERIORE DI SANITÀ AND SAPIENZA UNIVERSITÀ DI ROMA (VIRTUAL MEETING) 17 Sept.- 8 Oct. 2020
- 2018 **S. Buezo Montero**, P. Gabrielli, F. Severini, L. Picci, M. Di Luca, F. Forneris, L. Facchinelli, M. Ponzi, F. Lombardo, B. Arcà. Toward the development of serological markers of human exposure to *Aedes* mosquitoes: analysis of *Aedes albopictus* salivary antigens in a murine model. XXX CONGRESS OF SOCIETÀ ITALIANA DI PARASSITOLOGIA (SOIPA) "ENVIRONMENTAL CHANGES AND PARASITES", 26-29 JUNE 2018, MILAN, ITALY. Abstract book p.127

ABSTRACT IN CONFERENCES

- 2019 **S. Buezo Montero**, P. Gabrielli, F. Severini, L. Picci, M. Di Luca, F. Forneris, L. Facchinelli, M. Ponzi, F. Lombrado, B. Arcà. Mosquito salivary proteins as markers of human exposure to *Aedes* vectors. STAPA INTERNATIONAL RETREAT. ISTITUTO PASTEUR ITALIA-FONDAZIONE CENCI BOLOGNETTI. 12-15 JUNE 2019, ROME, ITALY.
- 2019 **S. Buezo Montero**, P. Gabrielli, F. Severini, L. Picci, M. Di Luca, F. Forneris, L. Facchinelli, M. Ponzi, F. Lombrado, B. Arcà. Evaluation of IgG antibody response to *Aedes* salivary proteins: First attempt to validate serological markers of exposure in a murine model. X Seminar- PhD day Science for democracy- democracy for science. PhD day Infectious Diseases, Microbiology and Public Health. ISTITUTO SUPERIORE DI SANITÀ. 17 MAY 2019, ROME, ITALY.
- 2018 **S. Buezo Montero** and B. Arcà. Salivary antigens as biomarkers of humans exposure to *Aedes* mosquito bites. IX Seminar- PhD day. Filling the science communication gap. PhD day Infectious Diseases, Microbiology and Public Health. ISTITUTO SUPERIORE DI SANITÀ. 17 MAY 2019, ROME, ITALY. Abstract book p.67.
- 2017 **S. Buezo Montero**, F. Severini, L. Picci, M. Di Luca, M. Ponzi, F. Lombardo and Bruno Arcà. Toward the development of serological markers of human exposure to *Aedes* mosquitoes using *Aedes albopictus* salivary antigens: a work in progress. THIRD INTERNATIONAL WORKSHOP ON *Aedes albopictus*. 10-12 APRIL 2017, PAVIA, ITALY. Abstract book p.34.

CONFERENCE CO-ORGANIZATION

- 2020 **XI Seminar Covid-19: Facing a multi(fase)Phase pandemic. PhD day Infectious Diseases, Microbiology and Public Health.** ISTITUTO SUPERIORE DI SANITÀ AND SAPIENZA UNIVERSITÀ DI ROMA (VIRTUAL MEETING).
- 2019 **X Seminar- PhD day. Science for democracy- democracy for science. PhD day Infectious Diseases, Microbiology and Public Health.** ISTITUTO SUPERIORE DI SANITÀ. ISSN: 0393-5620.
- 2018 **IX Seminar-PhD day. Filling the science communication gap. PhD day Infectious Diseases, Microbiology and Public Health.** ISTITUTO SUPERIORE DI SANITÀ. ISSN: 0393-5620

MEMBERSHIPS AND COMMITTEES

- 2020 **Session chair- XI Seminar-Covid-19: Facing a multi(fase)Phase pandemic. PhD day Infectious Diseases, Microbiology and Public Health.** ISTITUTO SUPERIORE DI SANITÀ AND SAPIENZA UNIVERSITÀ DI ROMA (VIRTUAL MEETING).
- 2020 **Session chair- Webinar Spring parasitology “Young researchers talking about human and animal health”.** SOCIETÀ ITALIANA DI PARASSITOLOGIA (SOIPA).
- Since 2020 **Member of American Society of Tropical Medicine and Hygiene (ASTMH).**
- Since 2018 **Young Member of Società Italiana di Parassitologia (SOIPA).**