

Procedura selettiva ad un posto da Ricercatore a Tempo Determinato- Tipologia B per il settore concorsuale 07/H3 e settore scientifico disciplinare VET/06 presso il Dipartimento di Sanità Pubblica e Malattie Infettive, Facoltà di Farmacia e Medicina (Codice bando: 2020RTDB019), bandito con Decreto Rettore Università di Roma “La Sapienza” n. 2326/2020 del 22.09.2020, cui bando è stato pubblicato per via telematica all'indirizzo (GU n.78 anno 161° del 6-10-2020).

Curriculum Vitae

Roma, 23-10-2020 (Italy)

Part I – General Information

Spoken Languages	Italian, English, French
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Part II – Education

IIA – University Degrees

Type	Year	Institution	Notes (Degree, Experience,...)
Medical Speciality (Scuola di Specializzazione)	2011	Faculty of Medicine and Surgery University of Rome “Sapienza”.	Medical Specialization degree course (Scuola di Specializzazione) in “Microbiology and Virology”
PhD	2008	University of Rome “Sapienza”.	Phd in Pasteurian Science (Scienze Pasteuriane). Thesis title: “Distribution and polytene chromosome analysis of <i>Anopheles gambiae</i> molecular forms in the extreme West of their geographical range” (Supervisor Prof. M Coluzzi).
Graduation	2004	University of Rome “Sapienza”.	Degree in Biology (Laurea in Scienze Biologiche, 110 e lode/110) Thesis title: "Qualitative and quantitative analysis of epicuticular lipids in <i>Anopheles gambiae</i> complex" (supervisor: Prof. Vincenzo Petrarca

IIB – Additional Training

Type	Year	Institution	Notes (Degree, Experience,...)
Training Course	2012	FP7-COORDINATION EDENext project and Euro-AE-GIS.	Spatial Data and GIS Training Program. Bruxell (Belgio)
Post-Doctoral	2007	Società Chimica Italiana, Divisione di	11° Corso di Spettrometria di

Training Course		Spettrometria di Massa	Massa presso la Certosa di Pontignan
Training Course	2006	WHO/TDR, African Center for Training in Functional Genomics of Insect Vectors of Human Diseases (AFRO VECTGEN), Malaria Research and Training Center (MRTC, Bamako, Mali)	III Training Course on Functional Genomics of Insect Vectors of Human diseases" (Bamako, Mali)

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
2020	2021	Department of Infectious Disease and Public Health (DSPMI). University of Rome "Sapienza"	1 year PostDoc position VET/06 (Assegno di Ricerca categoria B- Tipologia II) (Project PI Prof.ssa della Torre A.). Title: "Ecology and genomics in Culicidae, vectors of human borne diseases"
2019	2020	Department of Infectious Disease and Public Health. University of Rome "Sapienza"	Incarico di lavoro autonomo funded by Medical Entomology group of DSPMI (PI Prof.ssa Alessandra della Torre)
2019	2020	University of Notre Dame	1 year Research Consulting agreement at University of Notre Dame. Grant number ND Fund #203027 funded by National Institute of Health (PI Prof.ssa Nora Besansky). Title research: "Empowering Functional Genomics of An. gambiae through Inversion Genotyping"
2017	2018	Department of Infectious Disease and Public Health. University of Rome "Sapienza"	1 year PostDoc position VET/06 (Assegno di Ricerca Annuale) funded by "fondi di Ateneo 2016" Università di Roma "Sapienza"(Project PI Dott. Angelo Solimini). Title: "Studio dei parametri entomologici inerenti a modelli di rischio di trasmissione di arboviroli esotiche trasmesse da zanzare in regioni non endemiche".
2012	2017	Department of Infectious Disease and Public Health. University of Rome "Sapienza"	5 year-Assistant Professor VET/06 (Ricercatore a tempo determinato tipologia A-t.pieno , art. 24 c.3-a L. 240/10) funded by MIUR- FUTURO IN RICERCA 2010 (RBFR106NTE; Principal Investigator: B. Caputo) from 2012-2105 and by SAPIENZA University (2015-2017) Title: "Investigating the role of reproductive barriers in an emblematic case of incipient

			speciation”
2011	2012	Department of Infectious Disease and Public Health. University of Rome “Sapienza”	1 year PostDoc position VET/06 (Assegno di Ricerca annuale) funded by European project FP7-HEALTH-2010-EDENext (Project N. 261504; Principal Investigator: Prof. R Lancelot, CIRAD, Montpellier, France;. coordinatore Unità di Ricerca “Sapienza”: ProfssA. A. della Torre). Title: “Approcci translazionali al monitoraggio ed al controllo di Culicidi vettori di patogeni umani e zoonotici”
2009	2010	Department of Infectious Disease and Public Health. University of Rome “Sapienza”	2 year PostDoc position VET/06 (Assegno di Ricerca Biennale) co-funded by I Faculty of Medicine & Surgery of “Sapienza” University and by European project FP7-HEALTH-2010-MALVECBLOK (Project N. 223601, PI: Dr. E Levashina, CNRS, Strasburg, France; coordinatore Unità di Ricerca “Sapienza”: Dr. A. della Torre) Title: “Population biology and molecular genetics of vectorial capacity in <i>Anopheles gambiae</i> : targeting reproductive behaviour and immunity for transmission-refractory interventions”
2007	2008	Department of Infectious Disease and Public Health. University of Rome “Sapienza”	1 year PostDoc position VET/06 (Assegno di Ricerca Annuale) funded by PRIN-2006 project (PIs: Prof. Stefano Turillazzi & Prof. Mario Coluzzi). Title: “Proteins involved in chemical communication in malaria vectors of the <i>Anopheles gambiae</i> complex, with particular reference to candidate proteins possibly involved in host-seeking and host-choice behaviors”.

Part IV – Teaching experience

Year	Institution	Lecture/Course
2019	Corso di formazione (Rafforzare la formazione in entomologia di sanità pubblica degli operatori del SSN: identificazione, metodiche di sorveglianza e di controllo) -Ministero della Salute – Direzione Generale della prevenzione.	“Valutazione delle resistenze agli insetticidi”. Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise “G. Caporale”. Teramo, 11-12-13/19 e 21-22/10/2019.
2019-	Corso di formazione base e avanzato per	Modulo corso: “Pianificare e gestire le attività di

2020	Tecnici della Disinfestazione e Derattizzazione- Associazione Nazionale delle Imprese di Disinfestazione (ANID)	monitoraggio e controllo dei Culicidi di interesse sanitario”.
2018	Corso di formazione ECM- Istituto Zooprofilattico Sperimentale del Lazio e Toscana	“Fattori chiave nella trasmissione di arbovirus e determinazione del rischio epidemico”. Roma ,18-19/6/2018.
2018-2019	Corso Formazione e informazioni per gli studenti degli Istituti Comprensivi del Municipio III- Comune di Roma- Anno scolastico 2018-2019. Servizio manutenzione Territorio ed Ambiente	13 courses entitled: “Il contrasto alla infestazione della zanzara tigre” in “scuola primaria” and “secondaria di I grado” of the following school: IC Uruguay, IC Carlo Levi, IC Montessori. Roma.
2012-2017	Corso di Laurea in Tecniche di Laboratorio Biomedico “C” sede di Latina, presso la Facoltà di Farmacia e Medicina, Università di Roma “Sapienza”.	Corso Integrato di “Metodologie Diagnostiche di Microbiologia”. Titolare del Modulo di “Parassitologia diagnostica e antropo-zoonosi” (2 CFU+1 CFU ADE)
2011-to date	Corso di Laurea specialistica/magistrale in Biologia Applicata alla ricerca Bio-medica Facoltà di Scienze Matematiche, Fisiche e Naturali dell’Università di Roma “Sapienza”.	Membro effettivo della Commissione di Esame del corso: “Ecologia delle Malattie Parassitarie dell’uomo” (6 CFU).
2010-to date	Facoltà di Scienze Matematiche, Fisiche e Naturali dell’Università di Roma “Sapienza”	Supervision and tutoring of undergraduate students: Laurea Triennale in Scienze Biologiche (AM Ienco, V Pichler, CM De Marco, matricole 696254-696975-1451846); Laurea Magistrale in Eco-biologia (AM Ienco, Chiara Malandrucolo, Noemi Sarleti, matr. 696254, 1616583, 1606633); Laurea Magistrale in Genetica e Biologia Molecolare (V Pichler-696975);
2014-to date	Dottorato di ricerca in "Malattie Infettive, Microbiologia e Sanità Pubblica", DSPMI, dell’Università di Roma “Sapienza”.	Supervision and tutoring of 4 PhD students Giordano Bottà (XXIX Ciclo), Verena Pichler e Mattia Manica (XXX ciclo), Chiara Virgillito (XXXIV ciclo).
2012-to date	Master II livello “Virologia Molecolare”, Università di Roma “Sapienza”. Direttore Prof. Guido Antonelli. Codice 16122	Insegnamento SSD-VET06 : “Arbovirus trasmessi da Culicidi”, “ Vettori di trasmissione dei virus”.
2010-2011	Università dell’età libera aperta a tutti e a tutte le età presso il Comune di Lucca (UNIDEL Lucca)	Invited lecture: “Culicidi d’Italia e il loro ruolo vettore di patogeni”.

Society memberships

2008- to date	Member of the Italian Society of Parasitology (SOIPA)
2007- to date	Member of the Italian Malaria network IMN.
2012	Member of American Society of tropical Medicine & Hygiene

Awards and Honors

2012	Best Poster Award during the II Annual meeting EDENext EU FP7-HEALTH 2010 project, Itzmir, Turchia, 27-29 Marzo 2012. Poster title: "Auto-dissemination" approach: a novel concept to fight <i>Aedes albopictus</i> in urban areas in Italy".
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Reviewing activity

2009- to date	Reviewing activity: PLoS Neglected Tropical Diseases, Plos One, Malaria Journal, Parasites & Vectors, Journal of Vector Ecology, Medical & Veterinary Entomology, Medical Entomology, F1000Research, Annali dell'Istituto Superiore di Sanità, Insect biochemistry and insect molecular biology
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Member of scientific congress committee

2014	Member of Scientific committee of the XXVIII congress of Italian Society of Parasitology (SOIPA) (24-29 June, Roma)
2017	Member of Scientific committee of "Chikungunya 2017: Data, response, actions & critical aspects" meeting, Dip. Public Health and Infectious Diseases, University of Rome Sapienza (10-November) http://dspmi.uniroma1.it/notizie/eventi/conclusi/chikungunya-2017
2017	Member of scientific committee of: "Chikungunya 2017: dati, risposte, azioni e criticità". Venerdì 10 novembre 2017, 09:00. Aula Celli Edificio di Igiene "Giuseppe Sanarelli" - Piazzale Aldo Moro 5, Roma
2017	Member of scientific committee of: "Nuove sfide e prospettive nel controllo e nel monitoraggio delle zanzare in Italia" nell'ambito del progetto Filas del DSPMI, Regione Lazio. "Nuove metodologie nella diagnosi e prevenzione di infezioni batteriche, virali, fungine e parassitarie" sessione b - 13 aprile 2018. Edificio di Igiene "Giuseppe Sanarelli". Aula Celli - Aula B

Scientific working group in national/international projects

Year	Title
2020- to date	National expert of EU DIGITAL "Entolab": an online private platform to internally manage the flow of data from from the Mosquito Alert app server to its public webmaps and to enable experts to validate citizens' observations by analysing the attached photo.
2018- to date	Task leader working group 1 "Monitoring & Surveillance" of <i>Aedes</i> Invasive Mosquitoes (AIM) COST ACTION, a network of partners and institutions across Europe focused on surveillance and control of <i>Aedes</i> Invasive Mosquitoes in Europe (https://www.aedescost.eu/)

2020- to date	Coordinator of working group “Mosquito Alert” Italy a national “citizen science” mosquito project of Italy (www.allertanzarevirus.it).
2018- to date	Member of working group (Membro coadiutore) of “Tavolo tecnico intersettoriale sulla malattie trasmesse da vettori” Ministero della Salute, Direzione Generale della Prevenzione Sanitaria Ufficio, 5 Prevenzione delle malattie trasmissibili e profilassi internazionale.
2017- to date	Member of working group of “Global Mosquito Alert Consortium: A Roadmap Towards a Common Protocol and Platform for Citizen Science Vector monitoring”. https://www.wilsoncenter.org/global-mosquito-alert
2016- 2019	Member of working group of national mosquito project called “Zanzamapp”. http://www.zanzamapp.it/
2014- to date	Member of Partner Working group “international project”: “Anopheles gambiae 1.000 genomes project”. http://www.malariagen.net/projects/vector/ag1000g -Wellcome Trust Sanger Institute, Oxford

academic spin-off.

2017- 2020	Founding member, scientific member and business partner of START-UP “OSMES” applied research in olfaction. ACADEMIC SPIN-OFF of University of Florence in date 28/10/2016. Main goal: develop a new repellents against mosquitoes and other hematophagous insect.
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Part VI - Funding Information

Part VIA – Grants as PI-Principal Investigator

Year	Title	Program	Grant value
2018	Attività di studio ricerca e divulgazione inerenti la zanzara “ <i>Aedes albopictus</i> ” tra DSPMI/Sapiena e la riserva naturale statale “Isole di Ventotene e Santo Stefano”	Conto Terzi to DSPMI “Sapienza” (Funded by Comune di Ventotene, Ente Gestore Area marina Protetta-Riserva Naturale statale “Isole di Ventotene e Santo Stefano”)	3.500 €
2017- 2019	EXploring the hidden GENomic diversity of Anopheles gambiae and A. coluzzii species pair to account for spatial differences in MALaria transmission (ExGenMal)	Research Project Actions Concertees Interpasteuriennes ACIP, funded by Institut Pasteur, Paris (France)	50.000
2016- 2019	“Develop new Repellents for <i>hematophagous</i> insect”	Project funded by VEBI Istituto Biochimico to academic Spin-off of University of Florence	100.000€
2012	“Ruolo delle barriere riproduttive in un caso emblematico di speciazione incipiente”	“Contributo integrativo dall’Ateneo” al progetto FIRB 2010 (CA, 12 Ottobre 2010) -Università di Roma	28.000€

		"Sapienza"	
2017-2012	"Investigating the role of reproductive barriers in an emblematic case of incipient speciation".	Research Project "FUTURO IN RICERCA" 2010 (Linea di intervento 1; Codice RBFR106NTE). Funded by MIUR	340.000€
2015	"Sperimentazione del prodotto vernice e/o insetticida con carbonide contro le zanzare".	Conto Terzi to DSPMI "Sapienza" (Funded by Isolpaint International srl)	100.000 €
2015	"Investigation of chromosome and nuclear lamina contacts in malaria mosquitoes <i>Anopheles labranchiae</i> "	Research collaborative agreement with National Research Tomsk State University (Russia)	1.830 €

Part VIB – Grants as co-PI or Coordinator of Research Unit

Year	Title	Program	Grant value to DSPMI (SAPIENZA University)
2017-2018	Estimating the outbreak risk of Dengue, Chikungunya and Zika virus: epidemiological, immunological and environmental factors	Progetti di ricerca medi - "Sapienza" University. (PI: Dr. A. Solimini)	31700 €
2013-2015	"Mosquito borne USUTU virus infection: dissecting virus molecular epidemiology and in vitro and ex-vivo characterization of innate immune responses".	Research Project Actions Concertees Interpasteuriennes ACIP, funded by Institut Pasteur, Paris (France) (PI: Dr C Scagnolari)	7.632 € (total amount 64.000 €)
2011-2012	"Environmental, immunological and socio-economic factors associated to the risk of Chikungunya outbreaks transmitted by the Tiger Mosquito in urban areas: an analysis at different levels of biological organization."	Progetti di ricerca under 45 - "Sapienza" University. (PI: Dr. A. Solimini)	32.000 €
2012	"La malaria, ieri e oggi, nell'Agro Romano"	Progetti per iniziative culturali e tecnico-scientifiche per la salvaguardia del patrimonio ambientale ed ecologico nella riserva del litorale romano – Comune di Fiumicino (PI: Alessandra della Torre)	16000€
2011	"Attività di networking a livello Europeo per lo sviluppo di modelli di previsione del rischio di epidemia da virus emergenti basati su tecnologie diagnostiche	"Sapienza" University FARI 2011 project (PI: Dr. A. Solimini)	6.500 €

innovative.”

Part VIC – Grants as I-investigator

Year	Title	Program	Grant value to DSPMI (SAPIENZA University)
2018-2022	Aedes Invasive Mosquitoes (AIM) COST ACTION	European Commission H2020 ; COST Association grant CA17108 (PI Prof.ssa A. della Torre, DSPMI)	XXXXXXXX
2018-2020	Exploitation of novel genomic resources to develop molecular tools for genotyping afro-tropical malaria vectors and study ecological speciation	Istituto Pasteur Italia – Finanziamento dei programmi di ricerca 2018-2020 "Anna Tramontano" Call 2018 Fondazione Cenci Bolognetti” (PI Prof.ssa A. della Torre, DSPMI)	60.000 €
2017-2022	Empowering functional genomics of An. gambiae through inversion genotyping	National Institute of Health (NIH) National Institute of Allergy and Infectious Diseases (NIAID) University of Notre Dame (PI Prof.ssa Nora Besansky) Project N°1R01AI125360-01A1 (Italia Co-PI Prof.ssa A. della Torre, DSPMI)	Support 1 year US \$322.020
2014-2016	“Population genomics of the malaria mosquito <i>Anopheles gambiae</i> ”	Istituto Pasteur–Fondazione Cenci Bolognetti ” (PI: Prof.ssa A. della Torre)	60.000 €
2011-2016	EDENext —Biology and Control of Vector-Borne Infections in Europe.	EC-FP7-HEALTH-2010-COORDINATION (Project N°261504, coordinator Dr. R Lancelot, CIRAD, France; Coordinator of Sapienza Research Unit, Dr. A della Torre)	250.800 €
2013-2014	“Population genomics of the malaria mosquito <i>Anopheles gambiae</i> ”.	Sapienza University AWARD 2013 (PI: Prof.ssa A. della Torre)	60.000 €
2011-16	AVECNET —African Vector Control: New Tools	EC-FP7-HEALTH-2010-COORDINATION (Project N°265660, coordinator Prof. H. Ranson, Liverpool School of Tropical Medicine, UK Coordinator of Sapienza Research Unit Prof.ssa A della Torre)	508.000 €
2012	“Sorveglianza e controllo virologico della zanzara tigre”	X Dipartimento Tutela Ambientale e del Verde, ROMA CAPITALE (PI: Prof.ssa A. della Torre)	30.000 €
2010-	Telesorveglianza vettoriale	Ministero della Difesa (conto Terzi, PI:	726.000 €

2012		Prof.ssa A della Torre)	
2009-2012	INFRAVEC - Research capacity for the implementation of genetic control of mosquitoes"	EC-FP7-HEALTH-2007-INFRASTRUCTURES (Project N° 228421, coordinator Prof. A. Crisanti, Imperial College London, UK; Coordinator of Sapienza Research Unit: Dr. A della Torre:)	155.000 €
2011	"Development of high-resolution polytene chromosome map of larval stage of <i>Anopheles gambiae</i> complex (Diptera: Culicidae)"	Sapienza University Research Project 2010 (PI Dr. Marco Pombi)	5.000 €
2009-2012	Genetic and phenotypic characterization of species and "molecular forms" of the <i>Anopheles gambiae</i> complex (Diptera: Culicidae), afrotropical malaria vectors	Istituto Pasteur-Fondazione Cenci Bolognetti (PIs: Prof.ssa A. della Torre & Prof. V. Petrarca,)	60.000 €
2009-2011	" MALVECBLOK - Population biology and molecular genetics of vectorial capacity in <i>Anopheles gambiae</i> : targeting reproductive behaviour and immunity for transmission-refractory interventions"	EC-FP7-HEALTH-2007-COORDINATION (Project N° 223601, coordinator Prof. ssa E Levashina, CNRS, Strasburg, France; Coordinator of Sapienza Research Unit: Dr. A della Torre)	314.342 €
2007-2008	"Analisi di peptidi e proteine coinvolte nella comunicazione chimica in vespe sociali, api e <i>Anopheles</i> mediante tecniche avanzate di Spettrometria di Massa".	PRIN-2006 project (PIs: Prof. S. Turillazzi, Coordinator of Sapienza Research Unit: Prof. Mario Coluzzi).	50.000 €
2005-2006	"Analisi molecolare di taxa e popolazioni di <i>Anopheles gambiae</i> (Diptera: Culicidae) per la valutazione di parametri genetici, fisiologici, e comportamentali rilevanti nell'epidemiologia e nel controllo della malaria umana in zona Afro tropicale, con particolare riferimento allo studio di lipidi epicuticulari.	PRIN-2005 project (PI: Dr.ssa A.della Torre).	19.000 €

Part VII – Research Activities

Keywords

Brief Description

Publications (see list below)

<p>Afrotropical malaria vectors, malaria transmission, population genetics & genomics</p>	<p>This main line of research includes studies on population genetics, ecology and behaviour of Afrotropical malaria vector species and their impact on malaria transmission, started during Phd studies. Studies exploiting neutral molecular markers (e.g. microsatellites and SNPs) as well as on markers under selection (e.g. paracentric inversion) on ad hoc field collected samples have been carried out in strict collaboration with African partners such as: Medical Research Council (The Gambia); Institute Pasteur, Dakar (Senegal); Centre National de Recherche et de Formation sur le Paludisme, Ougadougou, and IRSS/DRO (Burkina Faso), National Institute of Public Health, INASA (Guinea Bissau). The discovery of an hybrid zone between the two major malaria vector species in the western extreme of their sympatric range, gave rise to a new original line of research developed in the frame of the “Futuro in Ricerca” project entitled “Investigating the role of reproductive barriers in an emblematic case of incipient speciation”. This project principal aim was to understand the role of hybridization in the genetic divergence of <i>An. gambiae</i> and <i>An. coluzzii</i> populations and the impact of introgression in gene and phenotype relevant for malaria transmission. The results led to the a project entitled “...” funded by ... (PI: BC), in collaboration with ...</p> <p>Moreover, the research line is presently taking advantage from the participation of BC to the Partner Working group of the “<i>Anopheles gambiae</i> 1.000 genomes project” - http://www.malariagen.net/projects/vector/aq1000g - coordinated by the Wellcome Trust Sanger Institute, Oxford University and Liverpool School of Tropical Medicine. (Researches supported by “Futuro in Ricerca” 2010 MIUR, Istituto Pasteur–Fondazione Cenci Bolognetti”, Institut Pasteur of Paris, University Sapienza, H2020 AVECNET and MALVEBLOCK EU-FP7 projects).</p>	<p>56, 54, 51, 43, 40, 36, 32, 24, 22, 20, 19, 12, 12, 3</p>
<p>European arbovirus mosquito vectors, biology, monitoring, vector control, outbreak diseases, insecticide resistance</p>	<p>Eco-Epidemiological studies on Culicidae species, vectors of human arbovirolosis and zoonotic pathogens in Europe, with particular reference to <i>Aedes albopictus</i>. These research activities focused on: i) analysis of behavioral parameters relevant in determining the mosquito vectorial capacity, such as anthropophily/zoophily, endophily/exophily, population size, dispersion, longevity and insecticide resistance, mostly funded by University of Rome; ii) modelling of risk of</p>	<p>60,59,58,57,55,53,52 50,49,48,47,46,45,44 42,38,35,34,35,33, 31,30, 29, 28, 27, 24,23, 21, 16, 15,14, 13, 9, 8,7, 4</p>

transmission of exotic arboviruses in collaboration with Fondazione Edmund Mach and FBK (Bruno Kessler); iii) development of methods to evaluate the effectiveness of control strategies and of new tools to control *Ae. albopictus* population in urban area supported by H2020 FP7-EDENext project ; iv) analysis of human innate immune response (such as interferon) against antroponotic and zoonotic virus (i.e. Chikungunya, West Nile and Usutu virus) supported by Institute Pasteur Paris “ACIP” programs. V) citizen science approaches to monitor native and invasive mosquitoes; since 2016 BC was founding member of ZANZAMAPP digital app and collaborated to the Global Mosquito Alert initiative. From 2020 is national coordinator of Mosquito Alert-Italy (www.allertanzanvirus.com) and task leader of ... H2020 funded AIM-COST Action (www.aedescost.eu)

Mosquito vectors of diseases, chemical communication, biochemical approaches

Analysis of chemical communication in mosquitoes. This line of research started during a undergraduate training period at Department of Biological Sciences, Staffordshire University Stoke on Trent, UK at was later developed in synergy with Centro Interdipartimentale di Spettrometria di Massa (CISM, University of Florence. Biochemical approaches have been applied to study: 1) epicuticular lipid profiles in *An. gambiae* taxa, at different physiological stages by GC-MS; 2) antennal peptides and proteins involved in chemical communication in *An. gambiae* and *Aedes albopictus* by MALDI profiling, Imaging Mass Spectrometry (IMS), LC-MS/MS, with particular focus on soluble proteins (Odorant Binding proteins) involved in olfaction; iii) protein and peptides as candidate biomarkers for mosquito age-grading. These researches have been carried out in the frame of “PRIN” Italian Project and EDENEXT EU-FP7 projects.

[39, 37, 26, 17, 11, 5, 2, 1].

Part VIII– Summary of Scientific Achievements to the total amount of publications

Product type Number Data Base (scopus) (date search 20/10/2020)

Papers [international] 58

Papers [national] (no IF=Impact factor) 2

Scopus Database

Total IF (not year 2020) 223.994 (average 4.392 on 51 papers from 2005 to 2019)

Total Citations 1.148 (60 papers from 2005 to

	2019)
Average Citations per Product	19.13 (60 papers from 2005 to 2019)
Hirsch (H) index	18
H-index negli ultimi 10 anni (2010-2020)	15
H-index negli ultimi 5 anni (2010-2020)	11

Position of the candidate among authors:

first: 14

second: 16

last: 7

others: 23

corresponding author: 8

ABILITAZIONE SCIENTIFICA NAZIONALE:

Settore Concorsuale 07/H3 - - MALATTIE INFETTIVE E PARASSITARIE DEGLI ANIMALI. II Fascia - Primo Quadrimestre Dal 04/04/2017 al 04/04/2023

Settore Concorsuale 05/B1 - - ZOOLOGIA E ANTROPOLOGIA. II Fascia - Primo Quadrimestre. Dal 28/03/2017 al 28/03/2023

Part IX– Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

Part X–Total Publications

PUBBLICAZIONI SCIENTIFICHE IN ESTENSO

papers in which the candidate is corresponding author are marked with *

IF= Impact Factor year of publication on Scopus (5-Year Impact Factor on Scopus)

Caputo B, Manica M, Filipponi F, Blangiardo M, Cobre P, Delucchi L, De Marco CM, Iesu L, Morano P, Petrella V, Salvemini M, Bianchi C, della Torre A ZanzaMapp: a scalable citizen science tool to monitor perception of mosquito abundance and nuisance in Italy and beyond. Accepted in Int J Environ Res Public Health. 2020.

2020

- 60 Guzzetta G, Vairo F, Mammone A, Lanini S, Poletti P, Manica M, Rosa R, **Caputo B**, Solimini A, Torre AD, Scognamiglio P, Zumla A, Ippolito G, Merler S. Spatial modes for transmission of chikungunya virus during a large chikungunya outbreak in Italy: a modeling analysis. BMC Med. 2020 Aug 7;18(1):226. doi: 10.1186/s12916-020-01674-y. PMID: 32762750; PMCID: PMC7412829. (IF5years= 8.809)
- 59 **Caputo B***, Manica M. Mosquito surveillance and disease outbreak risk models to inform mosquito-control operations in Europe. Curr Opin Insect Sci. 2020 Jun;39:101-108. doi: 10.1016/j.cois.2020.03.009. Epub 2020 Apr 13. PMID: 32403040. (IF5years=4.765)
- 58 **Caputo B***, Russo G, Manica M, Vairo F, Poletti P, Guzzetta G, Merler S, Scagnolari C, Solimini A. A comparative analysis of the 2007 and 2017 Italian chikungunya outbreaks and implication for public health response. PLoS Negl Trop Dis. 2020 Jun 11;14(6):e0008159. doi: 10.1371/journal.pntd.0008159. PMID: 32525957; PMCID: PMC7289343. (IF5years=4.236)
- 57 **Caputo B**, Manica M, Russo G, Solimini A. Knowledge, Attitude and Practices towards the Tiger Mosquito Aedes Albopictus. A Questionnaire Based Survey in Lazio Region (Italy) before the 2017 Chikungunya Outbreak. Int J Environ Res Public Health. 2020 Jun 3;17(11):3960. doi: 10.3390/ijerph17113960. PMID: 32503246; PMCID: PMC7312532. (IF5years=2.948)
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ABSTRACTS A CONGRESSI

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2017

- A7. Solimini A, Manica M, Rosà R, della Torre AI, Caputo B. Estimating the probability of arbovirus outbreaks in non-endemic countries highly infested by *Aedes albopictus*: the case study of Rome. Pavia, Italy, April 10-12, 2017. Poster see *Pathogens and Global Health*. 10.1080/20477724.2017.1333560.
- A8. Manica, M, Solimini, A.G., Rosà, R., della Torre, A., Caputo B. Monitoring *Aedes albopictus* and the risk of arbovirus transmission in Rome, Italy. B. ISTISAN Congressi 17/C3 III Seminar - PhD Day. Interdisciplinary approaches in Health Sciences: a bridge to the future. Istituto Superiore di Sanità, Rome, June 5, 2017.
- A9. Manica, M., Solimini, A.G.; Rosà, R, della Torre, A, Caputo. Arbovirosi trasmesse da *Aedes albopictus* (DENV, CHIKV, ZIKAV) a Roma. Preparatevi, l'outbreak sta arrivando, o no? 1° Convegno di Primavera, Associazione Italiana di Epidemiologia 2017 Roma 5-6 Giugno, 2017.
- A10. Estimating the probability of arbovirus outbreaks in large southern European city infested by *Aedes albopictus*. Solimini, A.G.; Manica, M.; Rosà, R.; della Torre, A.; Caputo, B. ESCAIDE: European Scientific Conference on Applied Infectious Disease Epidemiology 2017, 6-8 November 2017, Stockholm, Sweden.
- A11. Angelo Solimini, Mattia Manica, Roberto Rosa', Alessandra Della Torre and Beniamino Caputo. Stima del rischio di epidemie di arbovirosi tropicali trasmesse dalla zanzara tigre: il caso di Roma. AIE associazione italiana di epidemiologia. 25-27 ottobre Mantova 2017. Partecipazione: comunicazione orale.
- A12. Pichler V, Kotzakiotsi P, Caputo B, Caccone G, A della Torre. Genomic insights on the biogeography of the Tiger Mosquito, *Aedes albopictus*, in Italy. 7th Congress of the Italian Society for Evolutionary Biology (SIBE). Roma 2017, Italia. Partecipazione: comunicazione orale.

2016

- A13. Mattia Manica, Roberto Rosa, Alessandra della Torre, Beniamino Caputo Estimating human/mosquito contact and risk of exotic arbovirus transmission from eggs counts in ovitrap: a case study for *aedes albopictus* in rome (italy) **65th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta USA, November 13-17, 2016. Partecipazione: comunicazione orale BC.
- A14. Mattia Manica, Federico Filipponi, Roberto Rosa', Markus Neteler, Angelo Solimini, Alessandra della Torre, Beniamino Caputo. Ecoclimatic drivers of spatio-temporal hot spots of *aedes albopictus* abundance in a south european urban area. **65th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta USA, November 13-17, 2016. Partecipazione: poster
- A1. **Caputo B**, Manica M, Cobre P, Filipponi F, Bianchi C, della Torre A. Development of novel non-conventional approaches to monitor *Aedes albopictus* abundance and biting rates. International Conference "FACING THE INVASION OF ALIEN ARTHROPODS SPECIES: ecology, modelling and control of their economic impact and public health implications" Trento, Italy, 7 – 9 November 2016 Partecipazione comunicazione orale BC.
- A2. Manica M, **Caputo B**, Rosà R, della Torre A. Estimating *Aedes albopictus* biting females by ovitrap surveillance data in an area at high-risk of exotic arbovirus introduction. **International Conference "FACING THE INVASION OF ALIEN ARTHROPODS SPECIES: ecology, modelling and control of their economic impact and public health implications"** Trento, Italy, 7 – 9 November 2016 Partecipazione: comunicazione orale
- A3. Pichler V, Manica M, Cobre P, Pinto J, della Torre A, **Caputo B**. Susceptibility of Italian *Aedes albopictus* and *Culex pipiens* populations to insecticides most widely used in interventions against adult mosquitoes. International Conference "FACING THE INVASION OF ALIEN ARTHROPODS SPECIES: ecology, modelling

and control of their economic impact and public health implications” Trento, Italy, 7 – 9 November 2016
Partecipazione: comunicazione orale

- A4. Pichler V, Manica M, Cobre P, della Torre A, Pinto J, Caputo B. A preliminary assessment of the insecticide resistance status of *Aedes albopictus* and *Culex pipiens* populations from Rome. **XXIX CONGRESS of Soipa & European Veterinary Parasitology College: Parasites, Poverty and Social commitment** Bari, Italy, 21-24 June 2016 Partecipazione: comunicazione orale
- A5. Bottà G, Miles A, **Caputo B**, della Torre A. High Resolution Populations Genomics Reveals An Extremely Complex Dynamics Of Early Speciation In Afrotropical Malaria Vectors. **VII Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 1 June 2016 Partecipazione: comunicazione orale
- A6. Manica M, **Caputo B**, Rosà R, della Torre A. Population monitoring of *Aedes albopictus* to assess of the effectiveness of insecticide-based control strategies and the risk of arbovirus transmission. **VII Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 1 June 2016 Partecipazione: comunicazione orale
- A7. Pichler V, Pombi M, Guelbeogo WM, Sagnon N, Ranson H, della Torre A, **Caputo B**. Studio Temporale Del Flusso Genico E Della Resistenza Agli Insetticidi Nei Due Principali Vettori Afrotropicali Di Malaria In Una Zona Di Simpatia Del Burkina Faso. **VII Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 1 June 2016 Partecipazione: comunicazione orale.

2015

- A8. **Caputo B**, “Monitoring and control of the mosquito *Aedes albopictus* in urban area” Research and Innovation Centre, Fondazione Edmund Mach, San Michele all'Adige, TN – Italy. Invited speaker
- A9. Iovinella I, **Caputo B**, Michelucci E, Dani FR, A. della Torre. A proteomic-based “shotgun” approach opens new perspectives to mosquito age-grading. **64th Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia USA, October 25-29, 2015. Partecipazione: comunicazione orale
- A10. della Torre A., Bottà G, Miles, **Caputo B**, K Rockett, Donnelly, Kwiatkowski D, Ag1000G Consortium. Speciation, hybridisation and introgression in natural *Anopheles gambiae* and *A. coluzzii* populations from the Ag1000G phase-1 data. **64th Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia USA, October 25-29, 2015. Partecipazione: poster
- A11. Miles A, Ag1000G Consortium. Deep sequencing of *Anopheles gambiae* from natural populations spanning sub-Saharan Africa – a resource for vector control research. **64th Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia USA, October 25-29, 2015. Partecipazione: comunicazione orale
- A12.** Solimini A, **Caputo B**, Manica M, Rizzo F, della Torre A. A pilot exercise to assess population vulnerability to diseases transmitted by the tiger mosquito in Rome. **9th European Congress on Tropical Medicine and International Health**, Basel, Switzerland 6 - 10 September 2015 Partecipazione: poster
- A13. della Torre A, Bottà G, Miles, **Caputo B**, K Rockett, Donnelly, Kwiatkowski D, Ag1000G Consortium. Preliminary insights on genome variation in natural *Anopheles gambiae* and *A. coluzzii* populations from the Ag1000G phase 1 data. **EMBO conference: Molecular and Population Biology of Mosquitoes and Other Disease Vectors**, Kolybari, Greece 24 – 29 July 2015. Partecipazione: comunicazione orale
- A14. Miles A, Ag1000G Consortium. 765 *Anopheles gambiae* genomes from natural populations spanning sub-Saharan Africa - the Ag1000G phase-1 data resources. **EMBO conference: Molecular and Population Biology of Mosquitoes and Other Disease Vectors**, Kolybari, Greece 24 – 29 July 2015. Partecipazione: comunicazione orale

- A15. Gomes B, Clarkson CS, **Caputo B**, Pombi M, Mancini E, Vicente JL, Sousa CA, Dinis J, Rodrigues A, Donnelly MJ, Ag1000g consortium, Weetman D, della Torre A, Pinto J. Population structure and hybridisation between *Anopheles coluzzii* and *An. gambiae* may affect malaria epidemiology and control in Guinea Bissau **EMBO conference: Molecular and Population Biology of Mosquitoes and Other Disease Vectors**, Kolybari, Greece 24 – 29 July 2015. Partecipazione: poster
- A16. **Caputo B**, Manica M, Petrarca V, Rosà R, della Torre A. Assessment of the efficacy of insecticide control strategies in Rome (Italy) using novel monitoring and statistical approaches. **Genes, Ecosystems and Risk of Infection (GERI 2015) conference**, Heraklion, Crete, Greece, 21-23 April 2015. Partecipazione: comunicazione orale BC
- A17. Manica M, **Caputo B**, Rosà R, della Torre A. Metodi statistico-matematici per il controllo integrato di zanzare vettrici di patogeni. **VI Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 16 April 2015 Partecipazione: comunicazione orale
- A18. Bottà G, Miles A, **Caputo B**, della Torre A. Malaria Vectors, Speciation Processes And Evolutionary Dynamics: Tackling A Devastating Public Health Issue While Studying Biological Phenomena. **VI Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 16 April 2015 Partecipazione: comunicazione orale
- A19.** Pichler V, **Caputo B**, della Torre A. Studio del differenziamento genomico e flusso genico tra i principali vettori afrotropicali di malaria all'estremo occidentale del loro areale di distribuzione e valutazione dell'impatto sulla trasmissione di *Plasmodium falciparum*. **VI Seminario di studio. Salute globale e scenari attuali: nuovi contributi di ricerca Istituto Superiore Sanità**. Rome, Italy, 16 April 2015 Partecipazione: comunicazione orale

2014

- A20. **Caputo B**, Nwakanma D, Caputo FP, Jawara M, Oriero EC, Adiamoh MH, Dia I, Konate L, Petrarca V, Pinto J, Conway DJ, della Torre A. Unexpected strong reduction of gene-flow within *Anopheles gambiae* in an area of hybridization. **63rd Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana USA, November 2-6, 2014.
- A21. **Caputo B**, V Pichler, Mancini M, Pombi M, Vincente J, Rodrigues A, Dinis J, Petrarca V, Pinto J, della Torre A, Weetman D. X-chromosome localized recombination hotspots undermine existing molecular diagnosis of *Anopheles gambiae* and *An. coluzzii* under high hybridization. **63rd Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana USA, November 2-6, 2014.
- A22. Vicente JL, **Caputo B**, Pombi M, Sousa CA, Dinis J, Rodrigues A, Weetman D, della Torre A, Pinto J. Population subdivision within *Anopheles gambiae* may impact malaria transmission in Guinea Bissau. **63rd Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana USA, November 2-6, 2014.
- A23. **Caputo B**, Pichler V, Mancini E, Pombi M, Vicente J, Rodrigues A, Dinis J, Petrarca V, Pinto J, della Torre A, Weetman D. Does hybridization promote degradation of the chromosome-X island of genomic divergence between *Anopheles gambiae* and *An. coluzzii*? **Genomic Epidemiology of Malaria Meeting**, Wellcome Trust Genome Campus Hinxton, Cambridge UK, 8-11 June 2014. Partecipazione: poster
- A24. Pichler V, Weetman D, Mancini E, Pombi M, Vicente J, Rodrigues A, Dinis J, Petrarca V, Pinto J, della Torre A, **Caputo B**. First evidence of recombination in the X-chromosome centromeric region of the malaria mosquitoes *Anopheles gambiae* and *An. coluzzii* (Diptera: Culicidae). **XXVIII Congresso Società Italiana di Parassitologia**, Roma, Italia, June 24-27. Partecipazione: comunicazione orale
- A25. **Caputo B**, Ienco AM, Manica M, Rosà R, Petrarca V, della Torre A. Evaluation of insecticide treatments against *Ae. albopictus* in the campus of University of Rome SAPIENZA. **XXVIII Congresso Società Italiana di Parassitologia**, Roma, Italia, June 24-27. Partecipazione: comunicazione orale BC

2013

- A26. **Caputo B**, "Genetic analyses of *Anopheles gambiae* M and S populations from the "far-west" reveal habitat segregation and further population structure". 6th International Congress of the Society for Vector Ecology (SOVE) La Quinta, at California, USA): September 22-27, 2013. Invited speaker BC
- A27. Weetman D, **Caputo B**, Vicente JL, Pombi M, Rodrigues A, Mancini E, Maslen G, MacInnis B, Kwiatkowski D, della Torre A, Pinto J, and Donnelly MJ. Genomes in flux: 'real-time' variation in incipient speciation in *Anopheles gambiae*. **62nd Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, USA, November 11-15, 2012. Da control
- A28. Pichler V, Weetman D, Mancini E, Pombi M, Vicente J, Rodrigues A, Pinto J, della Torre A, **Caputo B**. Evidence of recombination on the "speciation island" X-chromosome centromeric region between the malaria mosquitoes *Anopheles gambiae* and *An. coluzzii*. **Meeting "Italian Society for Evolutionary Biology"**, Trento 2013. Partecipazione: comunicazione orale
- A29. Mancini E, Spinaci MI, **Caputo B**, Pichler V, Vicente JL, Rodrigues A, Pombi M, Petrarca V, Pinto J, della Torre A Allelic variation at the immunity gene TEP1 in an area of hybridization between the malaria mosquitoes *Anopheles gambiae* and *An. coluzzii*. **Meeting "Italian Society for Evolutionary Biology"**, Trento 2013. Partecipazione: comunicazione orale
- A30. José L. Vicente, Weetman D, **Caputo B**, Pombi M, Sousa CA, Dinis J, Rodrigues A, Calderón I, della Torre A, Pinto J Spatial analysis of a hybrid zone between incipient species of *Anopheles gambiae* s.s. in Guinea Bissau. **EMBO conference: Molecular and Population Biology of Mosquitoes and Other Disease Vectors**, Kolymbari, Greece 15 – 19 July 2013. Partecipazione: comunicazione orale
- A31. Weetman D, **Caputo B**, Vicente JL, Pombi M, Rodrigues A, Mancini E, della Torre A, Pinto J, and Donnelly MJ Temporal variation in incipient speciation in *Anopheles gambiae*. **Genomic Epidemiology of Malaria Meeting**, Wellcome Trust Genome Campus Hinxton, Cambridge UK, 8-11 June 2013. Partecipazione: poster
- A32. **Caputo B**, Mancini E, Pombi M, Petrarca V, della Torre A. Firb-Futuro In Ricerca 2010: "Investigating the role of reproductive barriers in an emblematic case of incipient speciation" **Annual Meeting "Italian Malaria Network"**, Torino, January 2013. Partecipazione: comunicazione orale

2012

- A33. **Caputo B**, Weetman D, Mancini M, Pombi M, Vincente J, Rodrigues A, Donnelly M, Pinto J, della Torre A Evidence of recombination in the X-chromosome centromeric region in *Anopheles gambiae* molecular forms from an area of putative secondary contact. **61st Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, USA, November 11-15, 2012. Da controll
- A34. Weetman D, **Caputo B**, Vincente J, Pombi M, Rodrigues A, Mancini M, Maslen G, MacInnis B, Kwiatkowski D, della Torre A, Pinto J, Donnelly M. Genomes in flux: 'real-time' variation in incipient speciation in *Anopheles gambiae*. **61st Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, USA, November 11-15, 2012.
- A35. Santolamazza F, Mancini E, **Caputo B**, Nwakanma DC, Conway DJ, Pinto J, della Torre A. New insights on an area of secondary contact between *Anopheles gambiae* M and S forms from polymorphism analysis of Intron-1 of the voltage-gated sodium channel gene. **61st Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, USA, November 11-15, 2012.

- A36. Weetman D, **Caputo B**, Vincente J, Pombi M, Rodrigues A, Mancini M, della Torre A, Pinto J, Donnelly M. Temporal variation in incipient speciation in *Anopheles gambiae*. **Genomic Epidemiology of Malaria Meeting**, Wellcome Trust Genome Campus Hinxton, Cambridge UK, 9-12 June 2012. Partecipazione: poster
- A37. **Caputo B**, Ienco A, Cianci D, Pombi M, Petrarca V, Baseggio A, Devine GJ, della Torre A. Wild mosquito females can contribute to the control of *Aedes albopictus* pre-imaginal stages in urban areas. **18th International Conference of European Society of Vector Ecology**, Montpellier, France 8-12 October 2012. Partecipazione: comunicazione orale BC
- A38. Pombi M, Colangelo P, Maetzke R, **Caputo B**, Vicente JL, Calzetta M, Guelbeogo WM, Petrarca V, Rodrigues A, Sagnon N'F, Pinto J, della Torre A. Shaping the differences: a phenotypic study of the wings of *Anopheles gambiae* molecular forms by geometric morphometrics. **18th International Conference of European Society of Vector Ecology**, Montpellier, France 8-12 October 2012. Partecipazione: comunicazione orale
- A39. **Caputo B**, Nwakanma DC, Caputo FP, Pinto J, Conway DJ, della Torre A. Genetic analyses of *Anopheles gambiae* M and S populations from the "far-west" reveal habitat segregation and further population structure. **18th International Conference of European Society of Vector Ecology**, Montpellier, France 8-12 October 2012. Partecipazione: poster
- A40. **Caputo B**, Ienco A, Cianci D, Pombi M, Petrarca V, Baseggio A, Devine GJ, della Torre A. The "auto-dissemination" approach: a novel concept to fight *Aedes albopictus* in urban areas. **XXVII Congresso Società Italiana di Parassitologia**, Alghero, Italia, 26-29 June 2012. Partecipazione: comunicazione orale BC
- A41. Santolamazza F, Mancini M, **Caputo B**, Conway DJ, Pinto J, della Torre A. Polymorphism analysis of Intron-1 of the sodium channel gene in species and molecular forms of the *Anopheles gambiae* complex. **XXVII Congresso Società Italiana di Parassitologia**, Alghero, Italia, 26-29 June 2012. Partecipazione: comunicazione orale

2011

- A42. **Caputo B**, Vincente J, Calzetta M, Calderón I, Nwakanama D, Adiamoh M, Dia I, Konate L, Pombi M, D Canestrelli, Petrarca V, Rodrigues A, Conway D, Pinto J, della Torre A. Chromosomal and molecular characterization of *Anopheles gambiae* M and S molecular forms in a secondary contact zone at the westernmost extreme of their range. **60th Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia, PA, USA, 4-8 December 2011. Partecipazione: comunicazione orale
- A43. **Caputo B**, Ienco A, Cianci D, Pombi M, Petrarca V, Baseggio A, Devine GJ, della Torre A. The "auto-dissemination" approach: a novel concept to fight *Aedes albopictus* in Italy. **60th Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia, PA, USA, 4-8 December 2011.

2003-2010

- A44. **Caputo B**, Nwakanama D, Oriero EC, Jawara M, Dia I, Konate L, Canestrelli D, Petrarca V, Conway D, della Torre A. The west-side story of *Anopheles gambiae* molecular form speciation. **59th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, Georgia USA, 3-7 November 2010.
- A45. Marini F, **Caputo B**, Pombi M, Travaglio M, Tarsitani G, Montarsi F, Drago A, della Torre A. First data on *Aedes albopictus* dispersal in Italy. **59th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, Georgia USA, 3-7 November 2010.
- A46. Dani FR, Michelucci E, Mastrobuoni G, Felicioli A, Piccolini A, **Caputo B**, Pelosi P, Moneti G, della Torre A. Novel mass spectrometry approaches for the Analysis of the expression of antennal soluble Olfactory

proteins in *Anopheles gambiae*. **59th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, Georgia USA , 3-7 November 2010.

- A47. **Caputo B**, Santolamazza F, Nwakanma D, Mancini E, White B, Petrarca V, Conway D, Besansky NJ, Pinto J, della Torre A. The Far-West of *Anopheles gambiae* Speciation. **Keystone Symposium on Vector-Borne Diseases**, Copper Mountain, Colorado, USA, 11-16 April 2010. Partecipazione: poster
- A48. Marini F, **Caputo B**, Pombi M, Travaglio M, Tarsitani G, Montarsi F, Drago A, della Torre A. Studying *Aedes albopictus* dispersal in Italy by mark-release-recapture experiments. **XXVI Congresso Società Italiana di Parassitologia**, Perugia, 22-25 giugno 2010. Partecipazione: comunicazione orale
- A49. Drago A, Marini F, Caputo B, della Torre A, Pombi M Looking for the golden standard: comparative evaluation of four traps for collecting host-seeking mosquitoes in Italy. **XXVI Congresso Società Italiana di Parassitologia**, Perugia, 22-25 giugno 2010. Partecipazione: poster
- A50. Marini F, Valerio L, **Caputo B**, Facchinelli L, Bongiorno G, Maroli M, Tarsitani G, Pombi M, della Torre A. Exploitation of a sticky-trap in studies on the biology of *Aedes albopictus* in Rome. **5th European Mosquito Control Association (EMCA)**, Torino, 9-13 marzo 2009 Partecipazione: comunicazione orale
- A51. della Torre A, Santolamazza F, **Caputo B**, Mancini E, Palsson K, Nwakanama D, Jawara M, Conway D, Tu Z, Petrarca V, Pinto J. High hybridization rate between *Anopheles gambiae* molecular forms at the western extreme of their range highlights possible gene-flow in the X-chromosome “speciation island”. **57th Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana, USA., December 7-11, 2008.
- A52. Pombi M, **Caputo B**, Costantini C, Di Deco MA, Coluzzi M, della Torre A, , Simard F, Besansky NJ, Petrarca V. Chromosomal plasticity and evolutionary potential in the malaria vector *Anopheles gambiae* sensu stricto: insights from three decades of rare paracentric inversions. **57th Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana, USA., December 7-11, 2008.
- A53. Valerio L, Marini F, Bongiorno G, Facchinelli L, Pombi M, **Caputo B**, Maroli M, della Torre A. High rates of feeding on humans in the generalist biter *Aedes albopictus* in Rome (Italy). **57th Annual Meeting American Society of Tropical Medicine & Hygiene**, New Orleans, Louisiana, USA., December 7-11, 2008.
- A54. Santolamazza F, Pinto J, Mancini J, **Caputo B**, Pombi M, Simard F, Caccone A, Tu Z, Petrarca V, della Torre A. Analysis of genetic diversity within *Anopheles gambiae* s.s. M-form. **XXV Congresso Società Italiana di Parassitologia**, Pisa, 18-21 Giugno 2008. Partecipazione: comunicazione orale
- A55. Pombi M, **Caputo B**, Costantini C, Di Deco Ma, Coluzzi M, della Torre A, Besansky NJ, Simard F, Petrarca V. Three decades of rare paracentric inversions in the malaria vector *Anopheles gambiae* sensu stricto **XXV Congresso Società Italiana di Parassitologia**, Pisa, 18-21 Giugno 2008. Partecipazione: comunicazione orale
- A56. Valerio L, Marini F, Bongiorno G, Facchinelli L, Pombi M, **Caputo B**, Maroli M, della Torre A. Blood-feeding preferences of *Aedes albopictus* (Diptera: Culicidae) in urban and rural settings within the province of Rome, Italy. **XXV Congresso Società Italiana di Parassitologia**, Pisa, 18-21 Giugno 2008. Partecipazione: comunicazione orale
- A57. Valerio L, Marini F, Facchinelli L, Pombi M, **Caputo B**, della Torre A. Exploitation of a sticky trap to study biology of *Aedes albopictus* (Diptera: Culicidae) in Rome. **XXV Congresso Società Italiana di Parassitologia**, Pisa, 18-21 Giugno 2008. Partecipazione: comunicazione orale
- A58. **Caputo B**, Nwakanma D, Jawara M, Dia, I, Konate L, Petrarca V, Conway D, della Torre A. *Anopheles gambiae* s.s. M-molecular form shows Savanna chromosomal karyotypes in the western extremes of its geographical distribution. **55th Annual Meeting American Society of Tropical Medicine & Hygiene**, Atlanta, Georgia, USA, November 12-16, 2006.

- A59. Santolamazza F, Caputo B, Pombi M, Avellino P, Facchinelli L, Besansky NJ, Sagnon N'F, Costantini C, della Torre A. Temporal changes in the frequency of the knock-down resistance allele (kdr) in *Anopheles gambiae* molecular form S from central Burkina Faso. **54th Annual Meeting American Society of Tropical Medicine & Hygiene**, Washington, DC, USA, 11-15th December 2005.
- A60. Santolamazza F, Caputo B, Pombi M, Avellino P, Facchinelli L, Besansky NJ, Sagnon N'F, Costantini C, della Torre A. Knock-down resistance (kdr) in *Anopheles gambiae* S molecular form in Goundri village (Burkina Faso) between 1998 and 2003. **4th International Congress of Vector Ecology (SOVE)** Reno Nevada 2- 7th October 2005 Partecipazione: poster
- A61. **Caputo B**, Dani FR, Horne GL, Diabate A, Sagnon N'F, Costantini C. Cuticular hydrocarbons in *Anopheles gambiae*: preliminary results and future perspectives. **EMBO Workshop on "Molecular and Population Biology of Mosquitoes and Other Disease Vectors"**. Kolymbari, Crete, Greece, 24-31 July 2005. Partecipazione: comunicazione orale
- A62. **Caputo B**, Dani FR, Priestman AA, Horne GL, Costantini C, Sagnon N'F, Petrarca V, Turillazzi S, Coluzzi M, , della Torre A. Epicuticular hydrocarbons analysis of adult *Anopheles arabiensis* and *An.gambiae* s.s. molecular forms from Burkina Faso. **53th Annual Meeting American Society of Tropical Medicine & Hygiene**, Miami, Florida, USA, November 7-11, 2004.
- A63. Dani FR, **Caputo B**, Priestman AA, Horne GL, Costantini C, Sagnon N'F, Petrarca V, Turillazzi S, Coluzzi M, , della Torre A. Epicuticular lipids differ between *Anopheles arabiensis* and *A.gambiae* s.s. and between *A.gambiae* s.s. molecular forms (Insecta: Diptera: Culicidae): an application of gas chromatography-mass spectrometry in chemotaxonomy. **International Symposium on Mass Spectrometry**. Bari, Italy, 26-30 September 2004. Partecipazione: comunicazione orale
- A64. Priestman AA, **Caputo B**, Horne GL, Coluzzi M, della Torre A (2003). Characterisation and analysis of cuticular hydrocarbons from field collected and aged lab samples in *Anopheles gambiae*. **52nd Annual Meeting American Society of Tropical Medicine & Hygiene**, Philadelphia, December 2003.

Part XI – Invitation to national & international scientific seminars, international workshop

Year Title

2020	Invited speaker at Webinar organized by ANID (Associazione Nazionale Imprese di Disinfestazione): "Il Pest management ai tempi del coronavirus "-. Le zanzare non rispettano la quarantena. https://www.disinfestazione.org/anid-celebra-il-world-pest-day-webinar-il-pest-control-ai-tempi-del-covid-19/
2019	Key note lecture on "Spread of insecticide resistance in Aedes mosquitoes and operational consequences" at the 1st european workshop on testing procedures for monitoring and managing insecticide resistance in invasive mosquitoes. 18-22 November. IRD-Montpellier
2019	Invited speaker at: Corso di formazione: «Rafforzare la formazione in entomologia di sanità pubblica degli operatori del SSN: identificazione, metodiche di sorveglianza e di controllo» realizzato con il supporto tecnico e finanziario del Ministero della Salute – Direzione Generale della prevenzione. Relazione. Valutazione delle resistenze agli insetticidi. Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale". Teramo (ITALY) Teramo, 11-12-13 settembre e 21-22 ottobre 2019.
2019	Invited speaker at: Expo-Conference della Disinfestazione: "Nuove sfide: il problema della resistenza agli insetticidi nella lotta control i principali vettori di arbovirosi in Italia" (Milano)

6/3/2019) organized by ANID (Associazione Nazionale Imprese di Disinfestazione).

2018 Invited speaker at: Corso ECM per personale ASL -dal titolo “Patologie Infettive emergenti e emergenze infettive ancora attuali” organizzato dal ASL di Roma 6, Villa Slaus Ariccia-Roma, 5-6 Dicembre. Title: “Trasmissione da vettori: le arbovirosi”.

2018 Invited speaker at: Corso per personale ASL e per Amministrazioni Comunali ECM dal titolo: “Piano di monitoraggio di *Aedes albopictus*” organizzato dall’ Istituto Zooprofilattico di Lazio e Toscana sede di Roma, Via Appia Nuova, 1411.– Roma, 18-19 giugno. Title: Fattori chiave nella trasmissione di arbovirus e determinazione del rischio epidemico”. -

2017 Invited speaker at: “Harnessing Citizen Science to Tackle Mosquito-Borne Diseases: Towards a locally based, yet Global Platform” United Nations, Geneva, Switzerland. April 3rd & Tuesday April 4th. Title: “Zanzamapp: an Italian experience of citizen science”

2016 Invited speaker at: “**International Workshop on “Insecticide resistance in vectors of emerging arboviruses: Challenge and prospects for vector control”**. 05–08 December 2016, Windsor Marapendi, Rio de Janeiro, BRAZIL. (cited in <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5457540/>)

2016 Monitorare la diffusione di *Aedes albopictus* con la citizen science: ZANZAMAPP. **44° Congresso Nazionale della Società Italiana di Microbiologia**. Pisa,25-28 Settembre 2016

2015 Invited speaker at: “**Research and Innovation Centre, Fondazione Edmund Mach**” (San Michele all’Adige, TN – Italy): “Monitoring and control of the mosquito *Aedes albopictus* in urban area”

2013 Invited speaker at: 6th International Congress of the Society for Vector Ecology (SOVE) (September 22-27, 2013 in La Quinta, at California, USA): “Genetic analyses of *Anopheles gambiae* M and S populations from the “far-west” reveal habitat segregation and further population structure”

Part XII – Research activity in qualified national and international Institutions

Year	Research Institution	Research Activities	Joint Publications (see list below)
2014-2016	Liverpool School of Tropical Medicine, Liverpool, UK	Research activities in LSTMH were carried out to genotype field male <i>An gambiae</i> samples collected in Guinea Bissau to study recombination and introgression in a low recombination centromeric region.	40, 36, 32
2005-2016	Università degli Studi di Firenze	Laboratory experiences were carried at Centro di Servizi di Spettrometria di Massa (CISM) to study chemical communication in mosquitoes. Biochemical techniques applied: Gas-Chromatography-Mass spectrometry, Liquid chromatography Mass spectrometry, Matrix Assisted Laser Desorption	39,37,26,18, 5, 1, 2

Ionization Time-of-Flight.

2012

Instituto de Higiene e
Medicina Tropical,
IHMT, Portugal

Training and research activity in genetic data analysis
on microsatellite data of *An.gambiae* populations
collected from The Gambia.

36,32, 25,
22, 21, 20

2010

Instituto Nacional de
Saúde Pública,
Ministério da Saúde
Pública, Bissau,
Guinea-Bissau

entomological field surveys were carried out in the
Republic of Guinea Bissau by a team of researchers
and technicians of the Instituto Nacional de Saúde
Pública (INASA, Guinea Bissau), Università di Roma “La
Sapienza” (Italy) and Instituto de Higiene e Medicina
Tropical (Portugal). The main objective was to evaluate
the distribution of malaria vectors, in particular species
belonging to the *Anopheles gambiae* complex. In
addition, efforts were made to obtain samples for
cytogenetic and molecular analysis and to conduct
preliminary studies on larval ecology and insecticide
resistance.

20

2008-2009	IRSS/Centre Muraz, Bobo-Dioulasso, Burkina Faso	Field studies were carried out in Burkina Faso by a team of researchers and technicians of IRSS/Centre Muraz, Bobo-Dioulasso, Burkina Faso Università di Roma "La Sapienza" and Imperial College (UK) in the frame of European project (MALVEBLOK). The main objective was to evaluate the degree of reproductive isolation between major malaria vectors studying swarms.	43
2005 and 2006	Medical Research Council, Banjoul, The Gambia	Entomological field surveys and laboratory analysis (molecular genotyping of microsatellites, and sequencing) were carried out in The Gambia during Phd to evaluate the genetic differentiation and habitat partitioning of <i>An.gambiae</i> species-pair.	22, 19, 12, 6, 3
2005 and 2006	l'Institut Pasteur, Dakar, Senegal	Entomological field surveys to evaluate the distribution of malaria vectors, in particular species belonging to the Anopheles gambiae complex in eastern part of Senegal. (Tambacounda, Kedougou regions).	19, 6, 3
2003	Centre National de Recherche et de Formation sur le Paludisme de Ouagadougou, Burkina Faso	Field studies and molecular genotyping of major malaria vectors with the aim to study phenotypic characters important for malaria transmission.	2
2003	Department of Biological Sciences, Faculty of Health and Sciences, Staffordshire University, Stoke-on-Trent, UK	Research activity at Staffordshire University School of Sciences (Biological and Biomedical Sciences) under supervision of Prof. Angela Priestman. Biochemical analysis of mosquito chemical cues by Gas-chromatography coupled by Mass Spectrometry,	1,2

Part XIII – National and international collaborations

Collaborators	Institutions	Joint Publications (see list below)
D Conway	London School of Tropical Medicine & Hygiene UK	22, 19, 10, 6, 3
FR Dani & G Mastrobuoni	Centro Interdipartimentale di Spettrometria di Massa (CISM), Università di Firenze, FIRENZE	39, 37, 26, 18, 11, 5, 2, 1
I Dia	Institut Pasteur, Dakar, SENEGAL	19, 6, 3
A T Offianan	Maître de Recherche Département Parasitologie Mycologie	na

	Institut Pasteur Côte d'Ivoire	
D Kwiatkowski & A Miles	University of Oxford, UK	40, 37
F Catteruccia	Harvard School of Public Health	4
D Nwakanma & M Jawara	Medical Research Council, THE GAMBIA	22, 19, 6, 3
P Pelosi & A Felicioli	Dipartimento di Anatomia, Biochimica e Fisiologia Veterinaria e di Chimica e Biotecnologie Agrarie, Università di Pisa, PISA	18, 17, 11
J Pinto	Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, PORTUGAL	42,36,32,25,22,20,19,12
R Rosà, AP Rizzoli	Fondazione Edmund Mach, San Michele all'Adige, TRENTO	53,49,46,45,38,34,33,31,30,29,24
C Scagnolari & Guido Antonelli	Dipartimento Medicina Molecolare, Sapienza University, ROMA	34,28,18
D Weetman & M Donnelly	Liverpool School of Tropical Medicine, Liverpool, UK	40,37,33,24, 22, 20