

Curriculum Vitae Bruno Arcà “ai fini della pubblicazione”

Part I – General Information

Full Name	Bruno Arcà
Spoken Languages	Italian, English

Part II – Education/qualifications

Type	Year	Institution	Notes (Degree, Experience,...)
University graduation	1986	Federico II University, Naples	Laurea in Biological Sciences
Post-graduate training	1986-1989	Federico II University, Naples	Training Molecular Biology (Department of Genetics, General and Molecular Biology)
Habilitation Biologist	1987	Federico II University, Naples	State exam
PhD	2004	University of Pavia	PhD Cellular Biology
ASN 05/E2 II Fascia	2014	MIUR – Abilitazione Scientifica Nazionale (ASN)	Habilitation Associate Professor 05/E2 BIO/11 (Molecular Biology) - ASN 2012
ASN 05/E2 I Fascia	2017	MIUR – Abilitazione Scientifica Nazionale (ASN)	Habilitation Full Professor 05/E2 BIO/11 (Molecular Biology) - ASN 2016
ASN 07H3 I Fascia	2017	MIUR – Abilitazione Scientifica Nazionale (ASN)	Habilitation Full Professor 07/H3 VET/06 (Parasitology) - ASN 2016

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
2002	2011	Federico II University, Naples (Dept. Structural and Functional Biology)	Researcher, Molecular Biol. (BIO/11)
2011	to date	Sapienza University of Rome (Dept. Public Health and Infectious Diseases)	Researcher, Molecular Biol. (BIO/11)

IIIB – Other Appointments

Start	End	Institution	Position
1989	1990	CNR, Institute of Cybernetics, Arco Felice (Naples)	CNR fellow
1990	1995	IMBB, Inst. of Molecular Biology & Biotechnology (Heraklion, Crete, GR)	IMBB and EU (Biotechnology programme) Research fellow
1996	1998	Sapienza University of Rome (Institute of Parasitology)	Fondazione Istituto Pasteur-Cenci Bolognetti Research fellow
1998	1999	Federico II University, Naples (Dept. of Genetics, General and Molecular Biology)	EU Return grant holder (Biotechnology programme)
1999	2000	EMBL, European Molecular Biology Laboratory (Heidelberg, DE)	Research fellow (TMR programme)
2000	2002	Sapienza University of Rome (Dept. Public Health Sciences)	Research fellow and then Research contractor (Assegnista di Ricerca)

Part IV – Teaching experience

Year	Institution	Lecture/Course
1999-2001	Sapienza University of Rome	Lezioni nell'ambito della Scuola di Specializzazione in Microbiologia e Virologia
2002-2003	Federico II University, Naples	Biologia Molecolare I (CdL Scienze Biologiche II)
2002-2005	Federico II University, Naples	Laboratorio di Biologia – Biologia Molecolare (CdL Biologia Generale ed Applicata)
2004-2005	Federico II University, Naples	Biologia Molecolare II (CdL Scienze Biologiche II)
2005-2009	Federico II University, Naples	Biologia Molecolare Avanzata ed Applicata – Biologia Molecolare Avanzata (CdL Magistrale in Biologia)
2005-2009	Federico II University, Naples	Biologia Molecolare Avanzata ed Applicata – Biologia Molecolare Applicata (CdL Magistrale in Biologia)
2006-2007	Federico II University, Naples	Laboratorio di Biologia – Biologia Molecolare (CdL Biologia Generale ed Applicata)
2006-2011	Federico II University, Naples	Lezioni nell'ambito del Corso di Dottorato in Biologia Avanzata
2009-2010	Federico II University, Naples	Biologia Molecolare e Bioinformatica - Biologia Molecolare Avanzata (CdL Magistrale in Biologia)
2011-2012	Federico II University, Naples	Biologia Molecolare e Bioinformatica - Biologia Molecolare Avanzata (CdL Magistrale in Biologia)
2011-2014	Sapienza University of Rome	Lezioni nell'ambito della Scuola di Specializzazione in Microbiologia e Virologia
2012-to date	Sapienza University of Rome	Elementi di Biologia – Biologia Applicata (CdL in Tecniche della Prevenzione nell'Ambiente e nei Luoghi di Lavoro – Polo di Rieti)
2012-to date	Sapienza University of Rome	Basi Biochimiche delle Scienze Diagnostiche – Biologia Molecolare (CdL in Tecniche di Laboratorio Biomedico – Polo di Rieti)
2018-to date	Sapienza University of Rome	Biologia Molecolare (CdL Magistrale in Farmacia)

Part V - Society memberships, Awards and Honors

Year	Title
1996-to date	Member - <i>Italian Society of Parasitology (SOIPA)</i>
2003-2005	Member - Management Committee COST 857 <i>Apicomplexan Biology in the post-Genomic Era</i>
2004-2009	Member - Network of Excellence FP6 BioMalPar <i>Biology and Pathology of the Malaria Parasite</i>
2007-2017	Member - <i>Centro Interuniversitario di Ricerche sulla Malaria - Italian Malaria Network (CIRM-ISS)</i>
2009-2011	Member – Scientific Council <i>Centro Interuniversitario di Ricerche sulla Malaria - Italian Malaria Network</i> (representative of University of Naples Federico II)

2009-2014	Affiliated member - Network of Excellence FP7 EVIMalaR <i>European Virtual Institute for Malaria Research</i>
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Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
1996-2000	Insect-Parasite interactions: molecular aspects of infection and immunity in Diptera (48 months)	EU FP4 TMR Research Network (FMRXCT96-0017) [role:I, PI: M. Coluzzi, Coordinator: F.C. Kafatos]	241200 ecu/euro
1998-1999	Trapping cDNAs encoding secreted and membrane proteins from the <i>Anopheles gambiae</i> salivary glands (12 months)	EU Return Grant (BIO4CT98-5020) [role: PI]	39576 ecu/euro
2000-2002	Isolation and molecular characterization of salivary gland-specific promoters from the African malaria vector <i>Anopheles gambiae</i> (36 months)	World Health Organization - Tropical Diseases Research (ID 980619) [role:I, PI: M. Coluzzi]	120000 US\$
2000-2004	Insect innate immunity and the critical stages of malaria-mosquito interactions (48 months)	EU FP5 Research Training Network (HPRN-CT-2000-00080) [role:I, PI: M. Coluzzi, Coordinator: J. Hoffmann]	200000 euro
2003-2005	Caratterizzazione biologica, genetica e molecolare di popolazioni di laboratorio e di campo di Anofelini vettori di malaria (24 months)	PRIN 2003(2003062554_003) [role:I, PI: V. Petrarca, Coordinator: M. Coluzzi]	???
2004-2009	Biology and Pathology of Malaria Parasite (60 months)	EU FP6 Network of Excellence BioMalPar (LSHP-CT-2004-503578) [role: coPI with M. Coluzzi, Coordinator: A. Scherf]	200000 euro
2007-2009	Malaria da Plasmodium falciparum: Aspetti Molecolari, Fisiopatologici, Farmacologici, Genetici ed Epidemiologici delle Interazioni fra Parassita, Vettore ed Ospite Umano (34 months)	Fondazione Compagnia di San Paolo (Torino), Network Italiano sulla Malaria [role: PI, Coordinator: P. Arese]	60000 euro
2009-2013	Research capacity for the implementation of genetic control of mosquitoes (48 months)	EU FP7 Infrastructure (228421) [role: PI, Coordinator: A. Crisanti]	126000 euro
2012	Toward a functional analysis of the salivary repertoires of the mosquito vectors <i>Anopheles gambiae</i> and <i>Aedes albopictus</i> (12 months)	Finanziamenti di Ateneo 2012 (C26A12SLP3) [role: PI]	3000 euro

2013-2016	La risposta infiammatoria della cute ad agenti infettivi e danno tissutale: analisi trascrittomico, post-trascrittomico e studi funzionali a livello della singola cellula (36 months)	PRIN 2010-2011 (2010C2LKKJ_004) [role:I, PI: D. Modiano, Coordinator: B. Camilloni]	135000 euro
2014	Exploring the olfactory repertoire of the tiger mosquito <i>Aedes albopictus</i> (12 months)	Finanziamenti di Ateneo 2014 (C26A14AKKH) [role: PI]	3000 euro
2015	Characterization of the salivary microRNA repertoire of the African malaria vector <i>Anopheles gambiae</i> (12 months)	Finanziamenti di Ateneo 2015 (C26A159YJT) [role: PI]	4000 euro
2016	Transcriptome profiling of the immune repertoire of the tiger mosquito <i>Aedes albopictus</i> , a competent vector for several arboviruses (12 months)	Finanziamenti di Ateneo 2016 (RM11615501382616) [role: I, PI: F. Lombardo]	10000 euro
2017	FFABR	FFABR 2017	3000 euro
2017-2020	Symbiosis as tool for Malaria epidemiology and control (36 months)	PRIN 2015 (2015JXC3JF_002) [role:I, PI: D. Modiano, Coordinator: G. Favia]	173333 euro
2018	The host-parasite interface: characterization of non-coding RNAs in exosomes of anisakid nematodes of human health concern (12 months)	Finanziamenti di Ateneo 2018 (RM118164279D7D50) [role: I, PI: S. D'Amelio]	10000 euro + assegno ricerca (23000 euro)
2018-2021	SENSOR_Sistema integrato per la sorveglianza dei patogeni trasmessi da vettori (36 months)	Ministry of Defence, Piano Nazionale della Ricerca Militare E.F. 2017 (GSGDNA REG2017 0057071) [role: I, PI: M. Pombi]	442250 euro

Part VII – Research Activities

Keywords	Brief Description
Mosquito saliva and salivary proteins	The main research focus is on mosquito saliva/salivary proteins and their role in vector-host-pathogen interactions (reviewed in 26, 34, 35, 56 from publications list). Transcriptomic, genomic, proteomic, comparative, functional and structural studies allowed for: (i) the characterization of the salivary repertoires of <i>Anopheles</i> (8-9, 15, 22, 25, 58) and <i>Aedes</i> (27-28, 49) mosquitoes of public health relevance; (ii) the classification of the main families of mosquito salivary proteins (34-35); (iii) deep insights into the evolution of mosquito salivary proteins (42, 45, 47, 50); (iv) the characterization of the <i>Anopheles gambiae</i> platelet inhibitor apyrase (10), the D7 gene cluster (14), the gSG6 protein (33) and the powerful thrombin inhibitor cE5 (40, 52, 55). In addition, tissue-specific regulatory elements were identified through studies in transgenic fruit flies and mosquitoes (10, 14, 21, 32).
Pathogen-vector-host interactions	
Transcriptomics	
Functional/structural analyses	
Tissue-specific expression	
Mosquito genomics	

miRNAs from mosquito saliva and salivary glands	Recent studies on miRNAs from saliva and salivary glands of the African malaria vector <i>An. coluzzii</i> highlighted their possible role in modulation of host immune and inflammatory responses (57). Studies on <i>Plasmodium</i> -infected <i>Anopheles</i> mosquitoes and on arbovirus-infected <i>Aedes</i> mosquitoes are currently ongoing.
Mosquito salivary proteins as epidemiological tools	Salivary proteins injected into the host during feeding evoke antibody responses that can be exploited as epidemiological tools to evaluate human exposure to vectors and disease risk. The identification of <i>Anopheles</i> - and <i>Aedes</i> -specific salivary proteins (22, 27, 28, 35) paved the way for the development of ELISA assays based on genus-specific salivary proteins to evaluate human exposure to malaria vectors (29, 37-39, 41, 43-44, 46, 48, 51). Studies on <i>Aedes</i> salivary proteins for the development of markers of host exposure to <i>Aedes</i> vectors of important arboviral diseases are in progress.
Vector control	
Immunoassays	
Vector-borne diseases	
Molecular Biology of <i>Anopheles</i> and <i>Aedes</i> mosquitoes	Molecular, biochemical and structural studies of mosquito genes and proteins involved in relevant aspects of the mosquito life cycle as those involved in olfaction (54), sex determination (36) and tryptophane metabolism (23-24, 31).
Insect genetic manipulation	Earlier studies during the research appointment at IMBB (Crete, GR) were focused on the use of the P element, the FLP site-specific recombination system (3) and on the Minos transposable element for the development of a genetic transformation system for insects of medical and agricultural importance. The transposable element <i>Minos</i> was successfully used for the genetic transformation of the Medfly <i>Ceratitis capitata</i> (4-5), the first non-drosophila insect to be transformed. The molecular mechanisms of <i>Minos</i> transposition in <i>D. melanogaster</i> (6) and its distribution in the genus <i>Drosophila</i> (11) were investigated. The presence and effects of transposable elements in heterochromatin and heterochromatic genes of the fruit fly <i>D. melanogaster</i> were also investigated (7, 18).
Transposable elements	
FLP recombinase	

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	54	Scopus	1991	2019
Books [scientific]	1	Chapman & Hall, London. ISBN 978-94-010-7185-7	1997	1997
Books [scientific]	1	Academic Press, Elsevier Ltd. ISBN 978-0-12-374829-4	2009	2009
Books [scientific]	1	Liguori Editore S.r.l., Napoli. ISBN 978-88-207-5351-1	2014	2014

Total Impact factor	233.01 (InCites JCR)**
Average Impact factor per Product	4.315
Total Citations	2236 (Scopus 02/09/2019)
Average Citations per Product	41.4
Hirsch (H) index	26 (Scopus 02/09/2019)
Normalized H index*	26/28 = 0.928

*H index divided by the academic seniority.

** InCites JCR presently includes only IF for years 1997-2018. Calculation of the Total Impact factor was done as follows: (i) for papers published in the time frame 1997-2018 the IF of the publication year was considered [exceptions: *FEBS Journal* 2005 (IF 2005 n/a, used IF 2006) and *PLoS ONE* 2008 (IF 2008 n/a, used IF 2009)]; (ii) for the three papers published before 1997 (*Compar Biochem and Physiol C, Proc Natl Acad Sci USA, Science*) the IF 1997 was

taken into consideration; (iii) for the two papers published in 2019 (*Scientific Reports*, *BMC Genomics*) the IF 2018 was employed. If only papers with IF of the publication year available are considered, then the Total Impact factor is 183.587 and the Average Impact factor per Product is 183.587/54 = 3.399.

Part IX– Selected Publications: 12 in last 5 years (2014-2019)

IF (inCtes JCR), citations (Scopus at 02/09/2019). ☒, Corresponding author; ♦, first or last author.

1. Arcà B, Struchiner CJ, Pham VM, Sferra G, Lombardo F, Pombi M, Ribeiro JM. (2014) Positive selection drives accelerated evolution of mosquito salivary genes associated with blood-feeding. *Insect Mol Biol* 23: 122-131. **IF: 2.589** (JCR 2014), **Citations: 16** ♦
2. Rizzo C, Ronca R, Lombardo F, Mangano V, Sirima SB, Nébié I, Fiorentino G, Troye-Blomberg M, Modiano D, Arcà B. (2014) IgG1 and IgG4 antibody response to the *Anopheles gambiae* salivary protein gSG6 in the sympatric ethnic groups Mossi and Fulani in a malaria hyperendemic area of Burkina Faso. *PloS ONE* 9(4):e96130. **IF: 3.234** (JCR2014), **Citations: 8** ☒ ♦
3. Rizzo C, Lombardo F, Ronca R, Mangano V, Sirima SB, Nébié I, Fiorentino G, Modiano D, Arcà B. (2014) Differential antibody response to the gSG6 and cE5 *Anopheles gambiae* salivary proteins in individuals naturally exposed to bites of malaria vectors. *Parasite & Vectors* 7(1): 549. **IF: 3.430** (JCR2014), **Citations: 13** ☒ ♦
4. Neafsey DE, Waterhouse RM, Abai MR, Aganezov SS, Alekseyev MA, Allen JE, Amon J, Arcà B, Arensburger P, Artemov G, Assour LA, Basseri H, Berlin A, Birren BW, Blandin SA, Brockman AI, Burkot TR, Burt A, Chan CS, Chauve C, Chiu JC, Christensen M, Costantini C, Davidson VLM, Deligianni E, Dottorini T, Dritsou V, Gabriel SB, Guelbeogo WM, Hall AB, Han MV, Hlaing T, Hughes DST, Jenkins AM, Jiang X, Jungreis I, Kakani EG, Kamali M, Kemppainen P, Kennedy RC, Kirmitzoglou IK, Koekemoer LL, Laban N, Langridge N, Lawtonchuk MKN, Lirakis M, Lobo NF, Lowy E, MacCallum RM, Mao C, Maslen G, Mbogo C, McCarthy J, Michel K, Mitchell SN, Moore W, Murphy KA, Naumenko AN, Nolan T, Novoa EM, O'Loughlin S, Oringanje C, Oshaghi MA, Pakpour N, Papathanos PA, Peery AN, Povelones M, Prakash A, Price DP, Rajaraman A, Reimer LJ, Rinker DC, Rokas A, Russell TL, Sagnon NF, Sharakhova MV, Shea T, Simão FA, Simard F, Slotman MA, Somboon P, Stegniy V, Struchiner CJ, Thomas GWC, Tojo M, Topalis P, Tubio JMC, Unger MF, Vontas J, Walton C, Wilding CS, Willis JH, Wu YC, Yan G, Zdobnov EM, Zhou X, Catteruccia F, Christophides GK, Collins FH, Cornman RS, Crisanti A, Donnelly MJ, Emrich SJ, Fontaine MC, Gelbart W, Hahn MW, Hansen IA, Howell PI, Kafatos FC, Kellis M, Lawson D, Louis C, Luckhart S, Muskavitch MAT, Ribeiro JM, Riehle MA, Sharakhov IV, Tu Z, Zwiebel LJ, Besansky NJ. (2015) Highly evolvable malaria vectors: the genomes of 16 *Anopheles* mosquitoes. *Science* 347 (6217): 1258522. **IF: 34.661** (JCR2015), **Citations: 214**
5. Dritsou V, Topalis P, Windbichler N, Simoni A, Hall A, Lawson D, Hinsley M, Hughes D, Napolioni V, Crucianelli F, Deligianni E, Gasperi G, Gomulski LM, Savini G, Manni M, Scolari F, Malacrida AR, Arcà B, Ribeiro JM, Lombardo F, Saccone G, Salvemini M, Moretti R, Aprea G, Calvitti M, Picciolini M, Papathanos PA, Spaccapelo R, Favia G, Crisanti A, Louis C. (2015) A draft genome sequence of an invasive mosquito: an Italian *Aedes albopictus*. *Pathog Glob Health* 109(5): 207-20. **IF: 1.486** (JCR2015), **Citations: 19**
6. Ribeiro JM, Martin-Martin I, Arcà B, Calvo E. (2016). A deep insight into the sialome of male and female *Aedes aegypti* mosquitoes. *PloS ONE* 11(3):e0151400. **IF: 2.806** (JCR2016), **Citations: 18**
7. Arcà B, Lombardo F, Struchiner CJ, Ribeiro JM. (2017). Anopheline salivary protein genes and gene families: an evolutionary overview after the whole genome sequence of sixteen *Anopheles* species. *BMC Genomics* 18(1):153. **IF: 3.730** (JCR2017), **Citations: 12** ☒ ♦
8. Pirone L, Ripoll-Rozada J, Leone M, Ronca R, Lombardo F, Fiorentino G, Andersen JF, Pereira PJB, Arcà B, Pedone E. (2017). Functional analyses yield detailed insight into the mechanism of thrombin inhibition by the antihemostatic salivary protein cE5 from *Anopheles gambiae*. *J Biol Chem* 292(30): 12632-42 Epub 2017 Jun 7. **IF: 4.011** (JCR2017), **Citations: 8** ☒
9. Lombardo F, Salvemini M, Fiorillo C, Nolan T, Zwiebel LJ, Ribeiro JM, Arcà B. (2017). Deciphering the Olfactory Repertoire of the Tiger Mosquito *Aedes albopictus*. *BMC Genomics* 18:770. **IF: 3.730** (JCR2017), **Citations: 4** ♦
10. Arcà B, Ribeiro JCM. (2018). Saliva of hematophagous insects: a multifaceted toolkit. *Curr Opin Insect Sci* 29:102-109. **IF: 3.784** (JCR2018), **Citations: 5** ☒ ♦

11. Arcà B, Colantoni A, Fiorillo C, Severini F, Benes V, Di Luca M, Calogero RA, Lombardo F. (2019). MicroRNAs from saliva of anopheline mosquitoes mimic human endogenous miRNAs and may contribute to vector-host-pathogen interactions. *Scientific Reports* **9**:2955. IF: n/a (JCR2018 IF: 4.011), Citations: 1 ✉ ♦
12. Scarpassa VM, Debat HJ, Alencar RB, Saraiva JF, Calvo E, Arcà B, Ribeiro JMC. (2019). An insight into the sialotranscriptome and virome of Amazonian anophelines. *BMC Genomics* **20**:166. IF: n/a (JCR2018 IF: 3.501), Citations: 1

Part X– Complete List of Publications

Scientific articles (✉, Corresponding author; ♦, first or last author.)

- 1) Geraci G, Arcà B, Cirotto C, Fucci L. (1991). The hemoglobins in the ontogeny of the chicken embryo. In *Macromolecules in the functioning cell*. Proceedings of the 6th Soviet-Italian Symposium (A.A. Bayev, A.D. Mirzabekov, M.Y.Timofeeva, eds). Pushchino 1991, **6**: 106-125.
- 2) De Petrocellis L, Di Marzo V, Arcà B, Gavagnin M, Minei R, Cimino G. (1991). Effect of diterpenoidic diacylglycerols on tentacle regeneration. *Compar Biochem and Physiol* **100C**, 3: 603-607. IF 0.813 (IF1997)
- 3) Konsolaki M, Sanicola M, Kozlova T, Arcà B, Savakis C, Gelbart WM, Kafatos FC. (1992). FLP-mediated Intermolecular recombination in the Cytoplasm of Drosophila embryos. *New Biol* **4**: 551-557.
- 4) Loukeris TG, Arcà B, Livadaras I, Dialetaki G, Savakis C. (1995). Introduction of the transposable element *Minos* into the germline of *Drosophila melanogaster*. *Proc Natl Acad Sci USA* **92**: 9485-9489. IF 9.040 (IF1997)
- 5) Loukeris TG, Livadaras I, Arcà B, Zabalou S, Savakis C. (1995). Gene transfer into the Medfly, *Ceratitis capitata*, with a *Drosophila hydei* transposable element. *Science* **270**: 2002-2005. IF 24.676 (IF1997)
- 6) Arcà B, Zabalou S, Loukeris TG, Savakis C. (1997) Mobilization of a *Minos* transposon in *Drosophila melanogaster* chromosomes and chromatid repair by heteroduplex formation. *Genetics* **145**, 267-279. IF 4.275 ♦
- 7) Dimitri P, Arcà B, Berghella L, Mei E. (1997). Genetic instability of heterochromatin following transposition of the Line-like *I factor* in *Drosophila melanogaster*. *Proc Natl Acad Sci USA* **94**: 8052-8057. IF 9.040
- 8) Arcà B, Lombardo F, Capurro M, della Torre A, Dimopoulos G, James AA, Coluzzi M (1999) Trapping cDNAs encoding secreted proteins from the salivary glands of the malaria vector *Anopheles gambiae*. *Proc Natl Acad Sci USA* **96**: 1516-1521. IF 10.260 ♦ ✉
- 9) Arcà B, Lombardo F, Capurro M, della Torre A, Spanos L, Dimopoulos G, Louis C, James AA, Coluzzi M. (1999) Salivary gland-specific gene expression in the malaria vector *Anopheles gambiae*. In *The Malaria Challenge after One Hundred Years of Malariology* - (M. Coluzzi, D. Bradley, eds) *Parassitologia* **41**: 483-487. ISSN 0048-2951 ♦ ✉
- 10) Lombardo F, Di Cristina M, Spanos L, Louis C, Coluzzi M, Arcà B. (2000) Promoter sequences of the putative *Anopheles gambiae apyrase* confer salivary gland expression in *Drosophila melanogaster*. *J Biol Chem* **275**: 23861 23868. IF 7.368 ♦ ✉
- 11) Arcà B, Savakis C. (2000) Distribution of the transposable element *Minos* in the genus *Drosophila*. *Genetica* **108**, 263-267. IF 1.440 ♦ ✉
- 12) Arcà B, Lombardo F, Lanfrancotti A, Coluzzi M. (2001) Malaria: prospettive biotecnologiche di lotta al vettore. *Atti dell'Accademia di Medicina di Torino* 2001, 226-239. ♦ ✉
- 13) Luoni G, Verra F, Arcà B, Sirima BS, Troye-Bloomberg M, Coluzzi M, Kwiatowski D, Modiano D. (2001) Antimalarial antibody levels and IL4 polymorphism in the Fulani of West Africa. *Genes and Immunity* **2**: 411-414. IF 3.787
- 14) Arcà B, Lombardo F, Lanfrancotti A, Spanos L, Veneri M, Louis C, Coluzzi M. (2002) A cluster of four *D7-related* genes is expressed in the salivary glands of the african malaria vector *Anopheles gambiae*. *Insect Mol Biol* **11**: 47-55. IF 2.890 ♦ ✉
- 15) Lanfrancotti A, Lombardo F, Santolamazza F, Veneri M, Castrignanò T, Coluzzi M, Arcà B. (2002) Novel cDNAs encoding salivary proteins from the malaria vector *Anopheles gambiae*. *FEBS letters* **517**: 67-71. IF 3.912 ♦ ✉

- 16) Ascoli V, Manno D, Guzzinati S, Tognazzo S, Zambon P, **Arcà B**, Costantini C, Coluzzi M. (2002) La puntura di artropodi ematofagi quale possibile cofattore nella trasmissione dell'HHV8 e nell'espressione del sarcoma di Kaposi. *Rend Fis Acc Lincei* **13**: 71-88.
- 17) Coluzzi M, Manno D, Guzzinati S, Tognazzo S, Zambon P, **Arcà B**, Costantini C, Ascoli V. (2002) The bloodsucking arthropod bite as possible cofactor in the transmission of human herpesvirus-8 infection and in the expression of Kaposi's sarcoma disease. *Parassitologia*, **44**: 123-129.
- 18) Dimitri P, Junakovic N, **Arcà B**. (2003) Colonization of heterochromatic genes by transposable elements in *Drosophila*. *Mol. Biol. Evol.*, **20**: 503-512. **IF 6.050** ♦
- 19) Ascoli V, Zambon P, Manno D, Guzzinati S, Zorzi M, **Arcà B**, Costantini C, Coluzzi M. (2003) Variability in the incidence of classic Kaposi's sarcoma in the Veneto region, Northern Italy. *Tumori* **89** (2):122-4. **IF 0.348**
- 20) Verra F, Luoni G, Calissano C, Troye-Blomberg M, Perlmann P, Perlmann H, **Arcà B**, Sirima Bienvenu Sodionmon, Konaté A., Coluzzi M., Kwiatkowski D., Modiano D.. (2004) IL4-589C/T polymorphism and IgE levels in severe malaria. *Acta Tropica* **90**:205-209. **IF 1.952**
- 21) Lombardo F, NolanT, Lycett G, Lanfrancotti A, Stich N, Catteruccia F, Louis C, Coluzzi M, **Arcà B**. (2005) An *Anopheles gambiae* salivary gland promoter analysis in *Drosophila melanogaster* and *Anopheles stephensi*. *Insect Mol. Biol.* **14**: 207-216. **IF 2.390** ♦ ☐
- 22) **Arcà B**, Lombardo F, Valenzuela JG, Francischetti IMB, Coluzzi M, Ribeiro JMC. (2005) An updated catalog of salivary gland transcripts in the adult female mosquito, *Anopheles gambiae*. *J Exp Biol* , **208**: 3971-3986. **IF 2.712** ♦
- 23) Rossi F, Lombardo F, Paglino A, Cassani C, Miglio G, **Arcà B**, Rizzi M. (2005) Identification and biochemical characterization of the *Anopheles gambiae* 3-hydroxykynurenine transaminase. *FEBS J.*, **272**: 5653-5662. **IF 3.033** (IF2006)
- 24) Rossi F, Garaviglia S, Giovenzana GB, **Arcà B**, Li J, Rizzi M. (2006) Crystal structure of the *Anopheles gambiae* 3-hydroxykynurenine transaminase. *Proc. Natl. Acad. Sci. USA* **103**, 5711-5716. **IF 9.643**
- 25) Calvo E, Pham VM, Lombardo F, **Arcà B**, Ribeiro JCM. (2006) The sialotranscriptome of adult male *Anopheles gambiae* mosquitoes. *Insect Biochem Mol Biol* **36**, 570-575. **IF 2.711**
- 26) Lombardo F, Lanfrancotti A, Mestres-Simòn, Rizzo C, Coluzzi M, **Arcà B**. (2006) At the interface between parasite and host: the salivary glands of the African malaria vector *Anopheles gambiae*. *Parassitologia* **48**: 573-580. ♦ ☐
- 27) Ribeiro JMC, **Arcà B**, Lombardo F, Calvo E, Pham VM, Chandra PK, Wikle SK. (2007) An annotated catalogue of salivary gland transcripts in the adult female mosquito *Aedes aegypti*. *BMC Genomics* **8**: 6. **IF 4.180**
- 28) **Arcà B**, Lombardo F, Francischetti IMB, Pham VM, Mestres-Simon M, Andersen JF, Ribeiro JMC. (2007) An insight into the sialome of the adult female mosquito *Aedes albopictus*. *Insect Biochem. Mol. Biol.* **37**: 107-127. **IF 2.827** ♦
- 29) Poinsignon A, Cornelie S, Mestres-Simon M, Lanfrancotti A, Rossignol M, Boulanger D, Cisse B, Sokhna C, **Arcà B**, Simondon F, Remoue F. (2008) Novel peptide marker corresponding to Salivary Protein gSG6 potentially identifies exposure to *Anopheles* bites. *PLoS ONE* 2008 3(6): e2472. **IF 4.351** (IF2009)
- 30) della Torre A, **Arcà B**, Favia G, Petrarca V, Coluzzi M. The role of research in molecular entomology in the fight against malaria vectors. XXV Congresso Società Italiana di Parassitologia 18-21 Giugno 2008, Pisa, Italy. *Parassitologia* **50**: 137-140.
- 31) Paglino A, Lombardo F, **Arcà B**, Rizzi M, Rossi F. (2008) Purification and biochemical characterization of a recombinant *Anopheles gambiae* Tryptophane 2,3-dioxygenase expressed in *Escherichia coli*. *Insect Biochem. Mol. Biol.* **38**: 871-876. **IF 2.626**
- 32) Lombardo F, Lycett G, Lanfrancotti A, Coluzzi M, **Arcà B**. (2009) Analysis of Apyrase 5'upstream region validates improved *An. gambiae* transformation technique. *BMC Research Notes* 2009 2:24. ♦
- 33) Lombardo F, Ronca R, Rizzo C, Mestres-Simòn M, Lanfrancotti A, Currà C, Fiorentino G, Bourgouin C, Ribeiro JM, Petrarca V, Ponzi M, Coluzzi M, **Arcà B**. (2009) The *Anopheles gambiae* salivary protein gSG6: an anopheline-specific protein with a blood-feeding role. *Insect Biochem Mol Biol* **39**: 457-66. **IF 3.117** ♦ ☐
- 34) Ribeiro JM, Mans BJ, **Arcà B**. (2010) An insight into the sialome of blood-feeding Nematocera. *Insect Biochem. Mol. Biol.* **40**: 767-784. **IF 4.018** ♦
- 35) Salvemini M, Mauro U, Lombardo F, Milano A, Zazzaro V, **Arcà B**, Polito LC, Saccone G. (2011) Genomic organization and splicing evolution of the doublesex gene, a *Drosophila* regulator of sex

- differentiation, in the dengue and yellow fever mosquito *Aedes aegypti*. *BMC Evol Biol* 11 (1): 41. **IF 3.521**
- 36) Rizzo C, Ronca R, Fiorentino G, Verra F, Mangano V, Poinsignon A, Sirima SB, Nébié I, Lombardo F, Remoue F, Coluzzi M, Petrarca V, Modiano D, **Arcà B.** (2011) Humoral response to the *Anopheles gambiae* salivary protein gSG6: a serological indicator of exposure to Afrotropical malaria vectors. *PLoS ONE* 6(3):e17980. **IF 4.092** ♦ ☐
- 37) Rizzo C, Ronca R, Fiorentino G, Mangano V, Sirima SB, Nébié I, Petrarca V, Modiano D, **Arcà B.** (2011) Wide cross-reactivity between *Anopheles gambiae* and *Anopheles funestus* SG6 salivary proteins supports exploitation of gSG6 as a marker of human exposure to major malaria vectors in tropical Africa. *Malaria Journal* 10: 206. **IF 3.191** ♦ ☐
- 38) Stone W, Bousema T, Jones S, Gesase S, Hashim R, Gosling R, Carneiro I, Chandramohan D, Theander T, Ronca R, Modiano D, **Arcà B.**, Drakeley C. (2012) IgG Responses to *Anopheles gambiae* Salivary Antigen gSG6 Detect Variation in Exposure to Malaria Vectors and Disease Risk PLoS ONE 7(6): e40170. **IF 3.730**
- 39) Ronca R, Kotsyfakis M, Lombardo F, Rizzo C, Currà C, Ponzi M, Fiorentino G, Ribeiro JMC, **Arcà B.** (2012) The *Anopheles gambiae* cE5, a tight- and fast-binding thrombin inhibitor with post-transcriptionally regulated salivary-restricted expression. *Insect Biochem Mol Biol* 42 (9): 610-620. **IF 3.234** ♦ ☐
- 40) Proietti C, Verra F, Bretscher MT, Stone W, Kanoi BN, Balikagala B, Egwang TG, Corran P, Ronca R, **Arcà B.**, Riley EM, Crisanti A, Drakeley C, Bousema T. (2013) Influence of infection on malaria-specific antibody dynamics in a cohort exposed to intense malaria transmission in northern Uganda. *Parasite Immunol* 35: 164-173. **IF 1.849**
- 41) **Arcà B.**, Struchiner CJ, Pham VM, Sferra G, Lombardo F, Pombi M, Ribeiro JM. (2014) Positive selection drives accelerated evolution of mosquito salivary genes associated with blood-feeding. *Insect Mol Biol* 23: 122-131. **IF 2.589** ♦
- 42) Rizzo C, Ronca R, Lombardo F, Mangano V, Sirima SB, Nébié I, Fiorentino G, Troye-Blomberg M, Modiano D, **Arcà B.** (2014) IgG1 and IgG4 antibody response to the *Anopheles gambiae* salivary protein gSG6 in the sympatric ethnic groups Mossi and Fulani in a malaria hyperendemic area of Burkina Faso. *PLoS ONE* 9(4):e96130. **IF 3.234** ♦ ☐
- 43) Rizzo C, Lombardo F, Ronca R, Mangano V, Sirima SB, Nébié I, Fiorentino G, Modiano D, **Arcà B.** (2014) Differential antibody response to the gSG6 and cE5 *An. gambiae* salivary proteins in individuals naturally exposed to bites of malaria vectors. *Parasites & Vectors* 7(1): 549. **IF 3.430** ♦ ☐
- 44) Neafsey DE, Waterhouse RM, Abai MR, Aganezov SS, Alekseyev MA, Allen JE, Amon J, **Arcà B.**, Arensburger P, Artemov G, Assour LA, Basseri H, Berlin A, Birren BW, Blandin SA, Brockman AI, Burkot TR, Burt A, Chan CS, Chauve C, Chiu JC, Christensen M, Costantini C, Davidson VLM, Deligianni E, Dottorini T, Dritsou V, Gabriel SB, Guelbeogo WM, Hall AB, Han MV, Hlaing T, Hughes DST, Jenkins AM, Jiang X, Jungreis I, Kakani EG, Kamali M, Kempainen P, Kennedy RC, Kirmitzoglou IK, Koekemoer LL, Laban N, Langridge N, Lawtonchuk MKN, Lirakis M, Lobo NF, Lowy E, MacCallum RM, Mao C, Maslen G, Mbogo C, McCarthy J, Michel K, Mitchell SN, Moore W, Murphy KA, Naumenko AN, Nolan T, Novoa EM, O'Loughlin S, Oringanje C, Oshaghi MA, Pakpour N, Papathanos PA, Peery AN, Povelones M, Prakash A, Price DP, Rajaraman A, Reimer LJ, Rinker DC, Rokas A, Russell TL, Sagnon NF, Sharakhova MV, Shea T, Simão FA, Simard F, Slotman MA, Somboon P, Stegniy V, Struchiner CJ, Thomas GWC, Tojo M, Topalis P, Tubio JMC, Unger MF, Vontas J, Walton C, Wilding CS, Willis JH, Wu YC, Yan G, Zdobnov EM, Zhou X, Catteruccia F, Christophides GK, Collins FH, Cornman RS, Crisanti A, Donnelly MJ, Emrich SJ, Fontaine MC, Gelbart W, Hahn MW, Hansen IA, Howell PI, Kafatos FC, Kellis M, Lawson D, Louis C, Luckhart S, Muskavitch MAT, Ribeiro JM, Riehle MA, Sharakhov IV, Tu Z, Zwiebel LJ, Besansky NJ. (2015) Highly evolvable malaria vectors: the genomes of 16 *Anopheles* mosquitoes. *Science* 347 (6217): 1258522. **IF 34.661**
- 45) Marie A, Ronca R, Poinsignon A, Lombardo F, Drame PM, Cornelie S, Besnard P, Le Mire J, Fiorentino G, Fortes F, Carnevale P, Remoue F, **Arcà B.** (2015) The *Anopheles gambiae* cE5 salivary protein: a sensitive biomarker to evaluate the efficacy of insecticide-treated nets in malaria vector control. *Microbes & Infection* 17(6): 409-16. **IF 2.291** ♦ ☐
- 46) Dritsou V, Topalis P, Windbichler N, Simoni A, Hall A, Lawson D, Hinsley M, Hughes D, Napolioni V, Crucianelli F, Deligianni E, Gasperi G, Gomulski LM, Savini G, Manni M, Scolari F, Malacrida AR, **Arcà B.**, Ribeiro JM, Lombardo F, Saccone G, Salvemini M, Moretti R, Aprea G, Calvitti M, Picciolini

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- 47) Yman V, White MT, Rono J, **Arcà B**, Osier FH, Troye-Blomberg M, Boström S, Ronca R, Rooth I, Färnert A. (2016) Antibody acquisition models: A new tool for serological surveillance of malaria transmission intensity. *Sci Rep* 5:6: 19472. **IF 4.259**
- 48) Ribeiro JM, Martin-Martin I, **Arcà B**, Calvo E. (2016). A deep insight into the sialome of male and female *Aedes aegypti* mosquitoes. *PloS ONE* 11(3):e0151400. **IF 2.806**
- 49) **Arcà B**, Lombardo F, Struchiner CJ, Ribeiro JM. (2017). Anopheline salivary protein genes and gene families: an evolutionary overview after the whole genome sequence of sixteen *Anopheles* species. *BMC Genomics* 18(1):153. **IF 3.730** ♦ ☐
- 50) Idris ZM, Chan CW, Mohammed M, Kalkoa M, Taleo G, Junker K, **Arcà B**, Drakeley C, Kaneko A (2017). Serological measures to assess the efficacy of malaria control programme on Ambae Island, Vanuatu. *Parasites & Vectors* 10: 204. **IF 3.163**
- 51) Pirone L, Ripoll-Rozada J, Leone M, Ronca R, Lombardo F, Fiorentino G, Andersen JF, Pereira PJB, **Arcà B**, Pedone E. (2017). Functional analyses yield detailed insight into the mechanism of thrombin inhibition by the antihemostatic salivary protein cE5 from *Anopheles gambiae*. *J Biol Chem* 292(30): 12632-42 **IF 4.011** ☐
- 52) Charlwood JD, Hall T, Nenhep S, Rippon E, Branca-Lopes A, Steen K, **Arcà B**, Drakeley C. (2017). Spatial repellents and malaria transmission in an endemic area of Cambodia with high mosquito net usage. *MalariaWorld Journal* 8:11.
- 53) Lombardo F, Salvemini M, Fiorillo C, Nolan T, Zwiebel LJ, Ribeiro JM, **Arcà B**. (2017). Deciphering the Olfactory Repertoire of the Tiger Mosquito *Ae. albopictus*. *BMC Genomics* 18:770. **IF 3.730** ♦
- 54) Di Gaetano S, Del Gatto S, Pirone L, Comegna D, Zaccaro L, Saviano M, **Arcà B**, Capasso D, Pedone E. (2018). A selective $\alpha_v\beta_5$ integrin antagonist hidden into the anophelin family protein cE5 from the malaria vector *Anopheles gambiae*. *Peptide Science* 110(2): e24054.
- 55) **Arcà B**, Ribeiro JCM. (2018). Saliva of hematophagous insects: a multifaceted toolkit. *Curr Opin Insect Sci* 29:102-109. **IF 3.784** ♦ ☐
- 56) **Arcà B**, Colantoni A, Fiorillo C, Severini F, Benes V, Di Luca M, Calogero RA, Lombardo F. (2019). MicroRNAs from saliva of anopheline mosquitoes mimic human endogenous miRNAs and may contribute to vector-host-pathogen interactions. *Scientific Reports* 9:2955. **IF 4.011** (IF2018) ♦ ☐
- 57) Scarpassa VM, Debat HJ, Alencar RB, Saraiva JF, Calvo E, **Arcà B**, Ribeiro JMC. (2019). An insight into the sialotranscriptome and virome of Amazonian anophelines. *BMC Genomics* 20:166. **IF 3.501** (IF2018)

Book chapters

- 1) **Arcà B**, Savakis C. (1997). The polymerase chain reaction (PCR) and RT-PCR. In *The molecular biology of insect disease vectors: a method manual*. (J.M. Crampton , C.B. Beard and C. Louis, eds), pp. 244-260. Chapman & Hall, London. ISBN 978-94-010-7185-7. ♦
- 2) Ribeiro JMC, **Arcà B**. (2009) From Sialomes to the Sialoverse: An insight into Salivary Potion of Blood Feeding Insects. In: *Physiology of Human and Animal Disease Vectors* (Simpson SJ & Casas J, eds.). *Adv Insect Physiol* 37, pp 59-118. Academic Press, Elsevier Ltd. ISSN 0065-2806, ISBN 978-0-12-374829-4. **IF 5.250** ♦
- 3) **Arcà B**, della Torre A, Pombi M. (2014). Gli Insetti Vettori di Patogeni Animali. Cap. 16 in: *Gli Insetti e il loro Controllo* (a cura di F. Pennacchio), pp. 443-477. Liguori Editore S.r.l., Napoli. ISBN 978-88-207-5351-1. ♦ ☐

Part XI– Invited seminars/presentations and abstracts selected for oral presentation

International

- 1) “Application of the Signal Sequence Trap to the salivary glands of the African malaria vector *Anopheles gambiae*”. European Molecular Biology Laboratory, Heidelberg - Germany, 8 December 1997. **Invited seminar** Prof. F.C. Kafatos
- 2) “Salivary gland-specific gene expression in the malaria vector *Anopheles gambiae*.” Malariaology Centenary Conference: *The Malaria Challenge after One Hundred Years of Malariaology* . Roma, Accademia dei Lincei , 16-19 November 1998. **Invited speaker**

- 3) "A molecular study on the salivary glands of the malaria vector *Anopheles gambiae*: isolation of cDNAs encoding secreted proteins by the Signal Sequence Trap technique." Applied Genetics Department, Université Libre de Bruxelles, 14 September 2000. **Invited seminar**, Prof. A. Bollen.
- 4) "Toward a more detailed understanding of the salivary glands of the malaria vector *Anopheles gambiae*". Institute Pasteur, Paris, 22 March 2002. **Invited seminar**, Dr. Paul Brey.
- 5) "Toward the understanding of function and complexity of the *Anopheles gambiae* salivary glands." EMBO workshop on: "*Molecular and population biology of mosquitoes*", 13-19 August 2003, Kolymbari, Crete, Greece.
- 6) "The *Anopheles gambiae* salivary glands: transcriptome analysis and tissue-specific promoters." First Annual BioMalPar Conference on the Biology and Pathology of the Malaria Parasite. 2-4 March, 2005, EMBL, Heidelberg, Germany.
- 7) "The *Anopheles gambiae* salivary transcriptome: toward a functional analysis". EMBO workshop on: "*Molecular and population biology of mosquitoes and other disease vectors*", 24-31 July 2005, Kolymbari, Crete, Greece.
- 8) "The mosquito salivary glands: Transcriptome, RNAi and Salivary antigens." BioMalPar Cluster 3&4 Meeting, St. Catherine's College, 14-15 December 2006, Oxford, UK.
- 9) "gSG6, an *Anopheles* protein with a role in blood feeding." Third International Meeting on "*Molecular and population biology of mosquitoes and other disease vectors*" 13-20 July, 2007 – Kolymbari, Crete, Greece
- 10) "Contribution of Molecular Biology to Medical Entomology and future perspectives". Third Joint Workshop on "*History of Medical Entomology*" Accademia Nazionale dei Lincei, 11-12 October 2007 – Rome, Italy. **Invited speaker**
- 11) "*Anopheles gambiae* salivary proteins: markers of exposure to bites of anopheline mosquitoes?" BioMalPar Cluster 3 & 4 Meeting 5-7 December, 2007 - Mt. Ste Odile, France
- 12) "Humoral response to mosquito salivary proteins as serological indicator of exposure to disease vectors: IgG response to the *Anopheles gambiae* gSG6 and malaria". EMBO Workshop on "*Molecular and population biology of mosquitoes and other disease vectors*", 19-26 July 2009, Kolymbari, Crete, Greece.
- 13) "The *Anopheles gambiae* gSG6 salivary protein: a serological marker of exposure to African malaria vectors". International Conference EDEN 2010 *Emerging Vector-borne Diseases in a Changing European Environment* 10-12 May 2010, Montpellier, France.
- 14) "The anopheline gSG6 salivary protein: toward the development of a serological marker of exposure to African malaria vectors" Laboratory of Malaria and Vector Research – NIAID-NIH, Rockville, MD (USA) July 1st 2010. **Invited seminar** Dr. Jose Ribeiro.
- 15) "*Anopheles gambiae* salivary proteins as serological markers of exposure to Afrotropical malaria vectors" EVIMalaR Cluster 3 Workshop, 25-27 October 2010, Stockholm, Sweden.
- 16) "*Anopheles* salivary proteins: useful tools for malaria epidemiological studies". *Fightmal Dissemination Workshop* 5 January 2011, London School of Hygiene and Tropical Medicine, London, UK. **Invited speaker**
- 17) "*Anopheles* salivary antigens as markers of human exposure to malaria vectors". IV Annual Meeting COST Action BM0802 *Life or Death of Protozoan Parasites* – II Annual meeting Italian Malaria Network (IMN) CIRM-Centro Universitario Ricerca sulla Malaria. 19-21 January 2012, Università di Milano, Milano, Italy. **Invited speaker**
- 18) "Function and antigenicity of mosquito salivary proteins". *XXIV International Congress of Entomology*. 19-25 August 2012, Daegu, Korea. Insect Immunology, Physiology and Neurobiology: Symposium on Salivary proteins. **Invited speaker**
- 19) "*Anopheles gambiae* salivary proteins as a tool to evaluate spatial and temporal variation of human exposure to malaria vectors." EVIMalaR Cluster 3 Meeting, 3-5 December 2012, Rome, Italy.
- 20) "Differential antibody response to the *Anopheles gambiae* gSG6 and cE5 salivary proteins in individuals naturally exposed to bites of malaria vectors". EMBO Conference on "*Molecular and population biology of mosquitoes and other disease vectors*", 24-29 July 2015, Kolymbari, Crete, Greece.
- 21) "The salivary repertoires of anopheline mosquitoes: functions, evolution and potential applications". *XXV International Congress of Entomology*, Symposium on "Arthropod Saliva: From Basic Science to Practical Applications", September 25-30 2016, Orlando, Florida, USA. **Invited speaker**
- 22) "An RNAseq analysis of small RNAs from *Anopheles coluzzii*". EMBO Conference "*Molecular and population biology of mosquitoes and other disease vectors: vector and disease control*", 24-28 July 2017 Kolymbari, Crete (Greece).

- 23) "Salivary miRNAs from anopheline mosquitoes: additional players in vector-host-parasite interactions?". XI European Congress of Entomology, 2-6 July 2018, Naples, Italy. **Invited speaker**

National

- 1) "Trasformazione genetica di *Drosophila melanogaster* mediante l'elemento trasponibile *Minos* di *Drosophila hydei*: " Stazione Zoologica Anton Dohrn, Napoli, 23 September 1993. **Invited seminar** Prof. R. Di Lauro.
- 2) "Molecular Characterization of *Minos*-mediated Germline Transformants in *D.melanogaster*." XXXIX Congresso della Associazione Genetica Italiana. Senigallia (Ancona), 29 September – 1 October 1993.
- 3) "Mobilizzazione dell'elemento trasponibile *Minos* in *Drosophila melanogaster*: meccanismi molecolari di trasposizione e prospettive per la trasformazione genetica di non-drosofilidi." Dipartimento di Biologia Animale, Università di Siena, 20 December 1994. **Invited seminar** Prof. R. Dallai.
- 4) "Trapping cDNAs coding for receptors and secreted proteins from the salivary glands of the malaria vector *Anopheles gambiae*." XX Congresso della Società Italiana di Parassitologia. Roma, 17-20 June 1998.
- 5) "Identificazione di geni specificamente espressi nelle ghiandole salivari del vettore di malaria *Anopheles gambiae*." Dipartimento di Genetica e Biologia Molecolare, Università di Roma "La Sapienza", 21 March 2000. **Invited seminar**, Prof. P. Dimitri.
- 6) "Malaria: prospettive biotecnologiche di lotta al vettore." Accademia Medica di Torino – 13 April 2000. Tavola rotonda su: "La ricerca malariologica in Italia oggi. Risultati e prospettive." **Invited speaker**.
- 7) "A cluster of *D7-related* genes is expressed in the salivary glands of the African malaria vector *Anopheles gambiae*." XXI Congresso della Società Italiana di Parassitologia. Padova-Legnaro, 20-24 June 2000.
- 8) "Toward a better understanding of composition and functions of the salivary secretions of the African malaria mosquito *Anopheles gambiae*". XXII Congresso della Società Italiana di Parassitologia. Grugliasco (Torino), 11-14 June 2002.
- 9) "The *Anopheles gambiae D7-related* are a cluster of salivary genes involved in blood feeding and belong to the insect odorant-binding protein superfamily". 4° Convegno Federazione Italiana Scienze della Vita, Riva del Garda (TN), 20-23 September 2002.
- 10) "Unraveling the complexity of the *An. gambiae* salivary secretions". Giornate scientifiche dell'Istituto Pasteur-Fondazione Cenci Bolognetti "Microbi e Parassiti tra Biologia di Base e Applicazione", Roma 4-5 November 2002. **Invited speaker**
- 11) "Toward a functional analysis of salivary proteins from the African malaria vector *Anopheles gambiae*: a work in progress." XXIII Congresso della Società Italiana di Parassitologia. Vietri sul Mare (Salerno) 9-12 June 2004.
- 12) "A cluster of Antigen 5 family members expressed in the salivary glands of the African malaria vector *Anopheles gambiae*." XXIII Congresso della Società Italiana di Parassitologia. Vietri sul Mare (Salerno) 9-12 June 2004.
- 13) "Le ghiandole salivari del vettore di malaria *Anopheles gambiae*: verso un'analisi funzionale". Dottorato di Ricerca in Biologia Cellulare e Molecolare, Università dell'Aquila. 9 March 2006. **Invited seminar**, Prof. M. Giorgi.
- 14) "At the interface between parasite and host: the salivary glands of the malaria vector *Anopheles gambiae*". Giornate scientifiche dell'Istituto Pasteur-Fondazione Cenci Bolognetti: "Hosts, Symbionts and Parasites: Molecular and Pharmacological Approaches", Roma, 26-27 October 2006. **Invited speaker**
- 15) "*Anopheles gambiae* salivary glands:parasite-vector-host interactions and implications for malariology". *Italian Malaria Network – Il contributo della ricerca italiana alla lotta contro la Malaria*. 11 January 2011, Istituto Superiore di Sanità, Rome, Italy. **Invited speaker**
- 16) "Positive selection drives accelerated evolution of mosquito salivary genes associated with blood feeding". XXVIII Congresso Nazionale della Società Italiana di Parassitologia (SoIPa). 24-27 June 2014, Roma, Italy.
- 17) "Salivary antigens as epidemiological tools to evaluate human exposure to *Aedes albopictus*". Accademia Nazionale di Entomologia, Seduta Pubblica *Approcci genomici e molecolari per il controllo di specie invasive di insetti di interesse agrario e sanitario*, 8 June 2018, Florence (Italy). **Invited speaker**
- 18) "Salivary miRNAs from anopheline mosquitoes: additional players in vector-host-parasite interactions?". XXX Congresso Nazionale della Società Italiana di Parassitologia (SoIPa). 26-29 June 2018, Milano, Italy.

Part XII– Other Institutional/Scientific/Academic duties

Start	End	Institution	Position
2004	2010	University Federico II, Naples	Researchers representative - <i>Consiglio Facoltà di Scienze MFN</i>
2007	2010	University Federico II, Naples	Researchers representative - <i>Giunta Facoltà di Scienze MFN</i>
2009	2011	University Federico II, Naples	Federico II University representative - Scientific council <i>Centro Interuniversitario di Ricerche sulla Malaria - Italian Malaria Network</i>
2014	2014	XXVIII Congresso Società Italiana di Parassitologia	Organizing and Scientific Committee Member
2014	to date	Sapienza University of Rome	Member – Teaching board <i>PhD Course Genetics and Molecular Biology</i>
2015	to date	Sapienza University of Rome	Member - <i>Research committee Dept. Public Health and Infectious Diseases</i> ,
2018	to date	Sapienza University of Rome	Member – Teaching board <i>Specialisation Course Tropical and Infectious Diseases</i>
2019	to date	Tropical Medicine and Infectious Diseases (Open Access Journal)	Editorial Board Member

Activity as reviewer

Served as reviewer for several International scientific journals as: American Journal of Tropical Medicine and Hygiene, BMC Biology, BMC Molecular Biology, BMC Genomics, BMC Veterinary Research, Epidemiology and Infection, Experimental Parasitology, FEBS Letters, Gene, Insect Biochemistry and Molecular Biology, Insect Molecular Biology, Journal of Insect Physiology, Journal of Molecular Recognition, Journal of Infectious Diseases, Malaria Journal, Medical and Veterinary Entomology, Microbes & Infection, Molecular and Biochemical Parasitology, Parassitologia, Parasite Immunology, Parasites & Vectors, PLoS Neglected Tropical Diseases, PloS One, PLoS Pathogens, Proceeding of the Natural Academy of Science USA, Trends in Parasitology, Vector-Borne and Zoonotic Diseases.

Served as reviewer for the following international funding agencies:

- Pasteur Institute (2005, Call for proposals on Parasitic Diseases; 2019, Programmes Transversaux de Recherche);
- French National Research Agency (ANR, Calls MIE 2008 e 2009, Call Non-Thematic Programme 2010, 2011 e 2012);
- European Union (FP7-HEALTH-2010-single-stage; FP7-PEOPLE-COFUND, Project I-MOVE 267232, 2012; H2020 Marie Skłodowska-Curie COFUND, LEADING Fellows Postdoc project, 2018; Infravec2 Selection Panel member, 2018-2019).

Received additional requests that could not be accepted (conflict of interest or overlapping commitments) from MIUR (Call FIRB Programme "Futuro in Ricerca" 2010), from the European Research Council (ERC, Starting Grants 2010), from the German Research Foundation (DFG, 2011), from Czech Science Foundation (2011), from the Romanian National Research Council (CNCS, 2012), from the Executive Agency for Higher Education, Research, Development and Innovation Funding (Romania 2016 funding call "Experimental Demonstrative Project").

Student supervision and training

Supervised several students in the preparation of their Bachelor or Master thesis (University Federico II Naples, Sapienza University of Rome), 1 master student from University Paris Sud (Paris, France), 6 PhD students from Sapienza University of Rome and 3 postdoctoral fellows. Co-supervised 1 PhD student in the

framework of the EU-funded EVIMalaR's International PhD Programme (PhD student head office University of Montpellier, France).

PhD thesis reviewer and committee membership

University of Perugia, PhD Programme in “Patogenesi Molecolare, Immunologia e Controllo degli Agenti Trasmissibili che Causano le Principali Malattie Associate alla Povertà (Malaria, AIDS e Tubercolosi)”

- 2016, XXVIII cycle. PhD candidate Carla Siniscalchi: “Development of gene drive systems based on TALENs and ZFNs as alternatives to HEGs for vector control”. **Reviewer and committee member**
- 2017, XXVIII cycle. PhD candidate Alessia Cagnetti: “Characterizing and engineering of the *An. gambiae* Y chromosome for vector control”. **Reviewer and committee member**

University of Perugia, PhD Programme in “Systems Biology in Immunity and Infectious Pathologies”

- 2017, XXX cycle. PhD candidate Francesco Papa: “Hematophagous lifestyle drives rapid evolution of female biased genes in the genus of *Anopheles* malaria mosquitoes”. **Reviewer**
- 2017, XXX cycle. PhD candidate Chrysanthi Taxiarchi: “Cellular resolution of the transcriptional profile of mosquito spermatogenesis and its potential application for vector control”. **Reviewer**
- 2018, XXXI cycle. PhD candidate Anastasia Accoti: “Symbiotic based study for advance knowledge and control of mosquito-borne diseases”. **Reviewer**

Charles University, Faculty of Science, Prague (CZ) PhD Programme in “Parasitology”

- 2019. PhD candidate Mgr. Petra Cikrtova: “Characterization and antigenic properties of salivary yellow-related proteins in phlebotomine sand flies”. **Reviewer and committee member**

Roma, 3 Settembre 2019

Bruno Arcà

