

Curriculum vitae

1. Personal data

Full Name: Ana Isabel Amaro Gonçalves Domingos

Name under which she publish: Ana Domingos or Ana Gonçalves Domingos

Nationality: Portuguese

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2. Academic degrees and positions

Ana Gonçalves Domingos is a researcher at the Medical Parasitology unit, at the Institute of Hygiene and Tropical Medicine, Universidade NOVA de Lisboa (IHMT/UNL), since 2010.

She has a PhD in Biology by University of Lisbon (1997) and did the Agregação (Habilitation) in Biomedical Sciences - Parasitology, UNL (2011).

She is invited professor at the University of Lurio, Mozambique.

3. Teaching experience

Currently, is teaching in Master Courses on a)Medical Parasitology and b)Biomedical Sciences (Coordinator of the Translational research Unit) at IHMT and c)Biotechnology at University Eduardo Mondlane, Mozambique and d)Tropical Medicine and International Health, at University Lurio, Mozambique.

She also participates as regular teacher in PhD Courses on a)Biomedical Sciences, b)Genetic of Human Diseases at IHMT, c)Tropical Knowledge and Management at the Nova School of Business and Economics (Coordinator of the Translational research Unit) d)GABBA-PhD Course, University of Oporto;

In parallel, participated in Courses on “Scientific writing” held at IHMT, University Eduardo Mondlane, Maputo, Mozambique and University Cape Verde, Praia, Cape Verde.

4. Experience as scientific adviser

Last 5 years, she supervised 3 Post-Doc Fellows, 5 PhD students, 6 MSc students and several Grant holders and co-supervised 3 PhD students and 3 MSc students (University of Aveiro, Portugal and University of Eduardo Mondlane and University Lúrio, Mozambique)

5. Research interest and activities

Her research activities rely on a system biology approach, under funded projects, using of methodologies such as proteomics, transcriptomics and functional genomics. These methodologies are being used mainly for the identification of vaccine candidates and drug targets in both parasites and vectors of diseases having a great human health and animal production impact such as malaria, babesiosis and theileriosis. To improve knowledge on parasite and vectors interaction is as well one of her goals in accordance with the group of “Vector borne-diseases” strategy (GHTM). Her team achieved recently the transcriptome for different arthropods and tested newly identified antigens on vaccination trials.

Last 5 years (2012-2017) she participated in 7 (4, as PI) financed projects and during her carrier published 62 papers, 3 books and 2 book chapters.

Currently, she participates in two COST actions and is member of the management committee in one of them.

6. Participation in R&D projects

As principal investigator:

9- PTDC/CVT-WEL/1807/2014 - “Proteomics and functional genomics of the interactome *Rhipicephalus sanguineus*- *Ehrlichia canis* for disease control”. Funded by FCT: 198000,00€

8-Projeto Edital 038/2013 - CAPES-FCT - Functional genomics of *Rhipicephalus sanguineus* and *Babesia* spp. or *Ehrlichia* spp. interactions towards vaccine development.

Funding: 9000,00€

7-PTDC/CVT-EPI/4339/2012 - Functional genomics of *Rhipicephalus bursa* and *Babesia ovis* interactions towards disease control.

Funded by FCT (€ 155 219,00)

6 - PTDC/CVT/112050/2009 - Differential expression and functional characterization of tick (*Rhipicephalus annulatus*) genes in response to pathogen infection (*Babesia bigemina*).

Funded by FCT (€ 149 268,00)

5 - POCTI/SAU-ESP/57696/2004 - Caracterização bioquímica e estudos de inibição de proteases cisteínicas recombinantes de *Plasmodium chabaudi*, um modelo animal para a malária humana” -

Funded by FCT (€ 60.223,00)

4 - POCTI/ESP/42233/2001 - “Proteases da malária como alvo para quimioterapia”

Funded by FCT (€ 75.000,00)

3 - POCTI/BME/43637/2000 - “Proteases de *Plasmodium chabaudi* como alvo na terapia da malária. Design de novos inibidores”

Funded by FCT (€ 55.865,00)

2 - Acções Integradas Luso-britânicas - Principal investigator of the portuguese team.

Funded by CRUP (€ 5.000,00)

1 - PROTAL - “Proteases de *Plasmodium chabaudi* como alvo na terapia da malária”

Funded by Agência de Inovação (Iberoeka) (€ 343.701,00)

As coordinator of the institution team:

8 - PTDC/CVT-EPI/3460/2012 - Let’s make them fall: A genomic, proteomic and immuno-histologic approach on the involution of tick aggregation cement.

Funded by FCT (€ 163.759,00)

7 - Proposal nº245145 - Improvement of current and development of new vaccines for theileriosis and babesiosis of small ruminants-Pirovac

Funded by FP7 (FP-KBBE-2009) (€ 3.000.000,00)

6 - PTDC/CVT/098290/2008 - “Um desafio para o tratamento de doenças parasitárias: conceção e síntese de derivados de Trifluralina e respectivas nanoformulações”

Funded by FCT (€ 193.670,00)

5 - POCTI/MGI/44905/2002 - “Effect of chloroquine in mosquito response to the infection by *Plasmodium*”

Funded by FCT (€ 80.000,00)

4 - “Isolamento e caracterização de proteases aspárticas de *Centrophorus squamosus*. Amplificação e sequenciação dos genes”

Funded by FCT.

3 - PRAXIS/P/QUI/10039/1998 - “Toward a rational design of mechanism-based irreversible protease inhibitors using the beta-lactam motif”

Funded by FCT (€ 50.250,00)

2 - MECASCI - “Melhoramento do queijo Castelões por utilização de Ciprozinas para coagulação de leite de vaca”

Funded by Agência de Inovação (PRAXIS XXI) (€ 110.331,57)

1- Projecto nº 3010 - “Avaliação da aplicabilidade de proteases de *Centaurea calcitrapa* no desenvolvimento de produtos lácteos”

Funded by PAMAF-IED (€ 93.873,70)

7. Publications

Thesis

Domingos A. (2011). Curricular Unit Report on “Molecular Biology Applied to Babesiosis”, presented to obtain the title of “Agregado” (Habilitation) in Biomedical Sciences-Parasitology.

Domingos A. (2011). Seminar on “Gene Functional Analysis for vaccine development against tick and tick-borne diseases” presented to obtain the title of “Agregado” (Habilitation) in Biomedical Sciences-Parasitology.

Domingos A. (1997). "An aspartic proteinase from flowers of *Centaurea calcitrapa*; purification, molecular cloning and modelling of its three-dimensional structure". – PhD thesis, Faculdade de Ciências de Lisboa.

Domingos A. (1990). “One-step purification of amidases from mutant strains of *Pseudomonas aeruginosa* / production and characterization of monoclonal antibodies anti - hCG” - MSc report presented at INETI.

Books and book chapters

5. Patrício C., Antunes S., Domingos A. 2015. Recombinant protein production: A case study research report Ed. Verlag: LAP - Lambert Academic Publishing (ISBN: 978-3-659-78170-4).

4. Couto J., Silva R., Domingos A. 2015. Transcriptomic analysis of *Anopheles stephensis* salivary glands. Ed. Verlag: LAP - Lambert Academic Publishing (ISBN: 978-3-659-77756-1).
3. Domingos A., Antunes S., Villar M., de la Fuente, J. 2015. "Functional genomics of tick vectors challenged with the cattle parasite *Babesia bigemina*." In: Molecular Diagnostics in Laboratory Veterinary Practice – Section IV: Integrative Omics and High-Throughput Platforms to Unravel the Biology of Pathogens and their Interaction with the host. Edts: Cunha, M. & Inácio, J., Editor: Springer – Series "Methods in Molecular Biology." 1247:475-89.
2. Domingos A., Lérias J., Antunes S., Madeira de Carvalho L. 2013. Calreticulin from *Rhipicephalus annulatus* infected by *Babesia bigemina*. Ed. Verlag: LAP - Lambert Academic Publishing (ISBN 978-3-659-36106-7).
1. Couri S., Park Y., Pastore G., Domingos, A. 2008. Enzimas na produção de alimentos e bebidas. Em: Enzimas em Biotecnologia, produção, aplicações e mercado. Editora Interciência. 153-178.

Papers in Scientific Journals

64. Antunes, S., Ferrolho, J., Couto, J., Rodrigues, F., Nobre, J., Santos, A. S., Santos-Silva, M. M., de la Fuente, J., Domingos, A. (2018). "*Rhipicephalus bursa* sialotranscriptomic response to blood feeding and *Babesia ovis* infection: identification of candidate protective antigens" *Front. Cell. Infect. Microbiol* (accepted)
63. Antunes S, Rosa C, Couto J, Ferrolho J, Domingos A. 2017. Deciphering *Babesia*-Vector Interactions. *Front Cell Infect Microbiol*. 2017; 7: 429.
62. Matsimbe A. M., Magaia V., Sanches G. S., Neves L., Noormahomed E., Antunes S., Domingos A. 2017. Molecular detection of pathogens in ticks infesting cattle in Nampula province, Mozambique. *Exp. Appl. Acarol*. doi: 10.1007/s10493-017-0155-5.
61. Couto J., Antunes S., Pinheiro-Silva R., do Rosário V., de la Fuente V., Domingos A. 2017. Solute carriers affect *Anopheles stephensi* survival and *Plasmodium berghei* infection in the salivary glands". *Sci. Reports*. 7(1):6141.
60. Silva M. G, Knowles D., Antunes S. A., Domingos A., Esteves M. A., Suarez C. E. 2017. Inhibition of the in vitro growth of *Babesia bigemina*, *Babesia caballi* and *Theileria equi* parasites by trifluralin analogues. *Ticks Tick Borne Dis*. 8(4):593-597.
59. Domingos A., Pinheiro-Silva R., Couto J., Rosário V., de la Fuente J. 2017. The *Anopheles gambiae* transcriptome – a turning point for malaria control. *Insect Molecular Biology* 26(2):140-151. doi: 10.1111/imb.12289.

58. Ferrolho J., Antunes S., Sanches G. S., Couto J., Évora P. M., Rosa C., André M. R., Machado R. Z., Bechara G. H., Domingos A. 2017. Ferritin 1 silencing effect in *Rhipicephalus sanguineus sensu lato* (Acari: Ixodidae) during experimental infection with *Ehrlichia canis*. Ticks Tick Borne Dis. 8(1):174-184.
57. Cornelia Silaghi Ana Sofia Santos, Jacinto Gomes, Iva Christova, Ioana Adriana Matei, Gernot Walder, Ana Domingos, Lesley Bell-Sakyi, Hein Sprong, Friederike D. von Loewenich, Jose Oteo, José de la Fuente, J Stephen Dumler. 2017. Guidelines for the direct detection of *Anaplasma* spp. in diagnosis and epidemiological studies. Vector Borne Zoonotic Dis. 17(1):12-22. doi: 10.1089/vbz.2016.1960.
56. Lempereur L., Beck R., Fonseca I., Marques C., Duarte A., Santos M., Zúquete S., Gomes J., Walder G., Domingos A., Antunes S., Baneth G., Holman S. P., Zintl A. 2017. Guidelines on *Babesia* and *Theileria* direct detection. Vector Borne Zoonotic Dis. 17(1):51-65. doi: 10.1089/vbz.2016.1955.
55. Couto J., Antunes A., Ferrolho J., de la Fuente J., Domingos A. 2017. Reduction of mosquito survival in mice vaccinated with *Anopheles stephensi* glucose transporter. BioMed Res Int. doi: 10.1155/2017/3428186.
54. de la Fuente J., Antunes S., Bonnet S., Cabezas-Cruz A., Domingos A. G., Estrada-Peña A., Johnson N., Kocan K. M., Mansfield K. L., Nijhof A. M., Papa A., Rudenko N., Villar M., Alberdi P., Torina A., Ayllón N., Vancova M., Golovchenko M., Grubhoffer L., Caracappa S., Fooks A. R., Gortazar C., Rego R. O. M. 2017. Tick-Pathogen Interactions and Vector Competence: Identification of Molecular Drivers for Tick-Borne Diseases. Front Cell Infect Microbiol. 7:114.
53. Ferrolho J., Sanches G. S., Couto J., Antunes S., Domingos A. 2017. "What makes your dog itch? There is a tick in the kennel!" Frontiers for young minds. 5:28: doi10.3389/frym.2017.00028.
52. Santos-Silva M. M., Melo P., Santos N., Antunes S., Duarte L. R., Ferrolho J., Milhano N., Santos P. T., Domingos A., Santos A. S. 2017. PCR screening of tick-borne agents in sensitive conservation areas, Southeast Portugal. Mol. Cell Probes. 31:42-45. doi: 10.1016/j.mcp.2016.11.005.
51. Elelu N., Ferrolho J., Couto J., Domingos A., Eisler M.C. 2016. Molecular diagnosis of the tick-borne pathogen *Anaplasma marginale* in cattle blood samples from Nigeria using qPCR. Exp Appl Acarol. 70(4):501-510
50. Antunes S., Ferrolho J., Domingues N., Santos A. S., Santos-Silva M., Domingos, A. 2016. *Anaplasma marginale* and *Theileria annulata* in questing ticks from Portugal. Exp Appl Acarol. DOI: 10.1007/s10493-016-0057-y.

49. Ferrolho J., Domingos A., Campino L. Cattle Specific Immune Mechanisms used against the Protozoan *Theileria annulata*. Int. Trends in Immunity. 2016. Vol.4 No.2. doi: 0.18281/iti.2016.2.2.
48. Couto J., Ferrolho J., de la Fuente J., Domingos A. *Anopheles gambiae* and *A. stephensi* Immune Response during *Plasmodium berghei* Infection Uncovered by Sialotranscriptomic Analysis. Int. Trends in Immunity. 2016. Vol.4 No.2. doi: 10.18281/iti.2016.2.4.
47. Ferrolho J., Antunes S., Santos A. S., Velez R., Padre L., Cabezas-Cruz L., Santos-Silva M. M., Domingos A. 2016. Detection and phylogenetic characterization of *Theileria* spp. and *Anaplasma marginale* in *Rhipicephalus bursa* in Portugal. Ticks Tick Borne Dis. 7(3):443-8. doi: 10.1016/j.ttbdis.2016.01.004.
46. Ferreira L. M., Garcia-Herreros M., Domingos A., Marques C. C., Mesquita P., Barbas J. P., Baptista M. C., Pimenta J., Horta A. E., Prates J. A., Pereira R. M. 2016. Prion protein 2 (dublet) gene (PRND): role in ovine semen capacitation, cryopreservation and fertility. Reprod Fertil Dev. 29(5):985-997. doi: 10.1071/RD15214.
45. Pinheiro-Silva R., Coelho L. P., Cabezas-Cruz L. P., Valdés J., do Rosário V., de la Fuente J., Domingos A. 2015. Gene expression changes in the salivary glands of *Anopheles coluzzii* elicited by *Plasmodium berghei* infection. Parasites & Vectors 8:485.
44. Ferrolho J., Domingues N., Domingos A., Santos-Gomes G. 2015. The regulatory CD4⁺CD25⁺T cell subset in host homeostasis during protozoan infection: an overview. Int Trends Immun (3)1: 6-16.
43. Contreras M., Moreno-Cid J. A., Domingos A., Canales M., Díez-Delgado I., Pérez de la Lastra J. M., Sánchez E., Merino O., Zavala R. L., Ayllón N., Boadella M., Villar M., Gortázar C., de la Fuente J. 2015. Bacterial membranes enhance the immunogenicity and protective capacity of the surface exposed tick Subolesin-*Anaplasma marginale* MSP1a chimeric antigen. Ticks Tick Borne Dis. 820-8.
42. Antunes S., Domingues N., Lérias J., Merino O., Mosqueda J., de la Fuente J., Domingos A. 2015. Artificial feeding of *Rhipicephalus microplus* female ticks with anti calreticulin serum do not influence tick and *Babesia bigemina* acquisition. Ticks Tick Borne Dis. 6(1):47-55.
41. Antunes S., Merino O., Mosqueda J., Moreno-Cid J. A., Bell-Sakyi L., Fragkoudis R., Weisheit S., Pérez de la Lastra J. M., Alberdi P., Domingos A., de la Fuente J. 2014. Tick capillary feeding for the study of proteins involved in tick-pathogen interactions as potential antigens for the control of tick infestation and pathogen infection. Parasites & Vectors 7: 42.

40. Da Costa M., Pinheiro-Silva R., Moreno-Cid J. Á., Custodio A., Villar M., Silveira H., de la Fuente J., Domingos A. 2014. Mosquito Akirin as a potential antigen for malaria control. *Malaria J* 13(1):470.
39. Silva M. G., Domingos A., Esteves M. A., Cruz M. E. M., Suarez C. E. 2013. Evaluation of the *in vitro* growth-inhibitory effect of trifluralin analogues on *Babesia bovis* parasites. *Int. J. Parasitol: Drugs and Drug Resistance* 3: 59–68.
38. Pinheiro-Silva R., do Rosário V., de la Fuente J., Domingos A. 2013. Identification of genes differentially expressed in *Anopheles gambiae* salivary glands in response to infection with *Plasmodium berghei*. *Trop Med & Int Health* 18:155.
37. Fafetine J. M., Antunes S., Neves L., Domingos A. 2013. Diagnostic of Rift Valley fever virus using monoclonal antibodies produced against nucleocapsid (N) protein. – *Transbound. Emerg. Dis. (J. Vet. Med.)* 60: 24–30.
36. Merino O., Sandra A., Mosqueda J., Moreno-Cid J. A., Perez de la Lastra J. M., Rosario-Cruz R., Rodriguez S., Domingos A., de la Fuente J. 2013. Vaccination with proteins involved in tick–pathogen interactions reduces vector infestations and pathogen infection. *Vaccine*. 31: 5889– 5896.
35. Popara M., Villar M., Mateos-Hernandez L., Fernandez de Mera I. G., Marina A., del Valle M., Almazan C., Domingos A., de la Fuente J. 2013. Lesser protein degradation machinery correlates with higher BM86 tick vaccine efficacy in *Rhipicephalus annulatus* when compared to *Rhipicephalus microplus*. *Vaccine*. 31: 4728– 4735.
34. Pérez B., Antunes S., Gonçalves L. M., Domingos A., Gomes J. R. B., Gomes P., Teixeira, C. 2013. Toward the discovery of inhibitors of babesipain-1, a *Babesia bigemina* cysteine protease: in vitro evaluation, homology modeling and molecular docking studies. *J Comput Aided Mol Des*. 27(9): 823-835.
33. Armada A. M., Gazarini M., Gonçalves L. M., Antunes S., Custódio A., Rodrigues A., Almeida A. J., Silveira H., do Rosário V. E., Santos-Gomes G., Domingos A. 2013. Generation of an antibody that recognizes *Plasmodium chabaudi* cysteine protease (chabaupain-1) in both sexual and asexual parasite life cycle and evaluation of chabaupain-1 vaccine potential. *Exp. Parasitol*. 135 (2013) 166–174.
32. Domingos A., Antunes S., Borges L., do Rosário V. E. 2013. Approaches towards tick and tick-borne diseases control. *Rev. Soc. Bras. Med. Trop.* 46(1): 1-5.
31. Pimenta J., Sardinha J., Marques C. C., Domingos A., Baptista M. C., Barbas J. P., Martins I. C., Mesquita P., Santos P., Soares R., Viegas A., Cabrita E., Horta A. E., Fontes C. A., Prates J. A., Pereira R.M. 2013. Inhibition of ovine *in vitro* fertilization by anti-Prt antibody. Hypothetical model for Prt-ZP interaction. *Reprod. Biol. and Endocrinol.* 11(25).

30. Antunes S., Golovchenko M., Rudenko N., Grubhoffer L., Skap V., do Rosário V. E., de la Fuente J., Domingos A. 2012. Gene silencing of the tick antigens selected after infection with *Babesia bigemina*, in the host tick *Rhipicephalus annulatus* by RNA interference. *Int J Parasitol* 42: 187–195.
29. Martins T. M., do Rosário V. E., Domingos A. 2012. Expression and characterization of the *Babesia bigemina* cysteine protease babesipain-1. *Acta Tropica* 121: 1– 5
28. Pimenta J., Domingos A., Santos P., Marques C. C., Cantante C., et al. 2012. Is *prnt* a Pseudogene? Identification of Ram Prt in Testis and Ejaculated Spermatozoa. *PLoS ONE* 7(8): e42957.
27. Awad H., Antunes S., Garlindo R., do Rosario V. E., de La Fuente J., Domingos A., Elhussein A. M. 2011. Prevalence and genetic diversity of *Babesia* and *Anaplasma* species in cattle in Sudan. *Vet. Parasitol.* 181: 146– 152.
- 26.. Martins T. M, do Rosário V. E., Domingos A. 2011. Identification of papain-like cysteine proteases from the bovine piroplasm *Babesia bigemina* and evolutionary relationship of piroplasms C1 family of cysteine proteases. *Exp. Parasitol.* 127(1):184–94.
- 25.. Martins T. M, Neves L., Pedro O. C., Fafetine J. M., do Rosário V. E, Domingos A. (2010) Molecular detection of *Babesia spp.* and other haemoparasitic infections of cattle in Maputo Province, Mozambique. *Parasitol.* 1-8.
24. Martins T. M., Gonçalves L. M. D., Capela R., Moreira R., do Rosário V. E., Domingos A. (2010) Effect of synthesized inhibitors on babesipain-1, a new cysteine protease from the bovine piroplasm *Babesia bigemina*. *Transbound. Emerg. Dis. (J. Vet. Med.)* 57: 68–69.
23. Capela R., Oliveira R., Gonçalves L. M. D., Domingos A., Gut J., Rosenthal P.J., Lopes F., Moreira R. (2009) Artemisinin-dipeptidyl vinyl sulfone hybrid molecules: design, synthesis and preliminary SAR for antiplasmodial activity and falcipain-2 inhibition. *Bioorg. & Med. Chem. Lett.* 19: 3229–3232.
21. Caldeira R. L., Gonçalves L. M. D., Martins T. M., do Rosário V. E., Novo C., Domingos A. (2009) *Plasmodium chabaudi*: expression of active recombinant chabaupain-1 and localization studies in *Anopheles sp.*. *Exp. Parasitol.* 122: 97–105.
20. Martins T. M., Pedro O.C., Caldeira R. A., do Rosário V. E., Neves L., Domingos A. (2008) Detection of bovine Babesiosis in Mozambique by a novel seminested hot-start PCR method. *Vet Parasitol.* 153(3-4):225-30.
19. Raposo S., Domingos A. (2008) Purification and characterization milk-clotting aspartic proteinases from *Centaurea calcitropa* cell suspension cultures *Process Biochem* 43: 139–144.

18. Caldeira R. L., Martins T. M., Silveira H., do Rosário V. E., Novo C., Domingos A. (2006) Cystein Proteases from *Plasmodium chabaudi* an Important Target on Malaria Therapy, *International Journal of Infectious Diseases*, vol 10 - supl. 1: S298.
17. Salvador S., Novo C., Domingos A. (2006) Evaluation of the presence of aspartic proteases from *Centaurea calcitrapa* during seed germination. *Enz Microbiol Technol.* 38:893-898.
16. Martins T. M., Domingos A., Berry C., Wyatt D. M. (2006) The Activity and Inhibition of the Food Vacuole Plasmepsin from the Rodent Malaria. *Acta Tropica.* 97: 212–218
15. Martins T. M., Novo C., do Rosário V. E., Domingos A. (2003) Aspartic proteases from *Plasmodium chabaudi*: a rodent model for human malaria. *Acta Tropica* 89: 1-12.
14. Martins T. M., Domingos A., Novo C., Lourenço P. M. L (2003) Effect of *Agrobacterium rhizogenes* infection on *in vitro* rooting of *Vitis vinifera*. *Vitis* 42 (3): 159-161.
13. Lourenço P. M. L., de Castro S., Martins T. M., Clemente A., Domingos A. (2002) Growth and proteolytic activity of hairy roots from *Centaurea calcitrapa*: effect of nitrogen and sucrose. *Enz. Microb. Technol.* 133(3): 242-249.
12. Armada A., do Rosário V. E., Novo C., Domingos A. (2002) Preliminary results on the presence of proteases on malaria patients urine. 3rd European Congress on Tropical Medicine and International Health, Acta Tropica P131, Lisboa.
11. Martins T. M., Caldeira R. L., Novo C., do Rosário V. E., Domingos A. (2002) The first cysteine protease found in *Plasmodium chabaudi*, a rodent malaria parasite. 3rd European Congress on Tropical Medicine and International Health, Acta Tropica P080, Lisboa.
10. Martins T. M., Novo C., do Rosário V. E., Domingos A. (2002) Aspartic proteases of the rodent malaria parasite *Plasmodium chabaudi*. 3rd European Congress on Tropical Medicine and International Health. Acta Tropica P142, Lisboa.
9. Novo C., Domingos A., Karmali A. (2001) Purification and Characterization of Monoclonal Antibodies Against the Free α -Subunit of Human Chorionic Gonadotrophin. *Mol. Biotech.* 17: 119-128.
8. Clemente A., Domingos A., Grancho A. P., Iley J., Moreira R., Neres J., Palma N., Santana A. B., Valente E. (2001) Design, Synthesis and Stability of N-Acyloxymethyl- and N-Aminocarbonyloxymethyl-2-Azetidinones as Human Leukocyte Elastase Inhibitors *Bioorg. Med. Chem. Lett.* 11: 1065-1068.
7. Reis P. M., Lourenço P. M. L., Domingos A., Clemente A., Pais M. S., Malcata X. (2000) Applicability of extracts from *Centaurea calcitrapa* in ripening of bovine cheese *Int. Dairy J.*, 10: 775-780.

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4. Brodelius P. E., Cordeiro M., Mercke P., Domingos A., Clemente A., Pais M. S. (1998) Molecular cloning of aspartic proteinases from flowers of *Cynara cardunculus* subsp. *flavescens* cv. Cardoon and *Centaurea calcitrapa*. *Adv Exp Med Biol.* 436: 435-439.
3. Tavaría F., Sousa M. J., Domingos A., Malcata F. X., Brodelius P. E., Clemente A., Pais M. S. (1997) -Degradation of caseins from different types by extracts of *Centaurea calcitrapa*. *J. Agric. Food Chem.* 45: 3760-3765.
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Meetings Proceedings

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2. Cruz A., Nonaka L., Domingos A., Suzuki S., Mendo S. (2006) Tributyltin (TBT) resistance bacterium *Aeromonas veronii*: isolation of TBT resistance gene(s) and protein(s) involved in the resistance. COE International Symposium in Ehime Center for Marine Environmental Studies (CMES), Ehime University, Matsuyama, Japan.
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Lisbon, December 15th, 2017



Ana Gonçalves Domingos