

Curriculum vitae

Ilda Santos Sanches

Nationality: Portuguese
Year of birth: 1958

INSTITUTIONAL ADDRESS

Departamento de Ciências da Vida. Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa (FCT/UNL). Campus de Caparica. 2829-516 Caparica. PORTUGAL

CONTACT DATA

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WEBSITES

Researcher ID <http://www.researcherid.com/rid/C-5693-2011>
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SCOPUS <http://www.scopus.com/authid/detail.url?authorId=6603634226>

ACADEMIC QUALIFICATIONS/INSTITUTION

- 1991 Ph.D. in Biology – Molecular Biology, 1991. Faculdade de Ciências e Tecnologia. Universidade Nova de Lisboa (FCT/UNL), Portugal
- 1983 B.Sc. (5-year degree course) in Biology, Faculdade de Ciências. Universidade de Lisboa, Portugal

ACADEMIC CAREER

- 2003 - present Associate Professor. FCT/UNL
- 1996 - 2003 Assistant Professor w/tenure. FCT/UNL
- 1991 - 1996 Assistant Professor. FCT/UNL
- 1987 - 1991 Teaching Assistant. FCT/UNL
- 2003 - present Head of research laboratory in 'Molecular Epidemiology and Genetics of Bacteria' (Dept. Life Sciences, FCT/UNL)
- 2015 - present Integrated Member of Research Unit - Applied Molecular Biosciences, UCIBIO
- 2007 - 2014 Group Leader of Research Group "Interactions Microorganism-Environment". Centro de Recursos Microbiológicos - CREM. FCT/UNL
- 2008 - 2012 Coordinator (elected) of CREM. FCT/UNL
- 2003 - 2007 Group Leader of Research line "Molecular Characterisation of Pathogenic Bacteria: beta-hemolytic streptococci in carriage and disease". CREM. FCT/UNL
- 2000 - 2002 Head of Microbial Pathogenesis Laboratory. Instituto de Tecnologia Química e Biológica (ITQB/UNL)
- 1991 - 2000 Member of the team of Molecular Genetics Laboratory. ITQB/UNL
- 1990 - 1995 Visiting scientist (2 month periods/year). Laboratory of Microbiology and Infectious Diseases. The Rockefeller University. NY, US
- 1989 - 1991 PhD student. ITQB/UNL
- 1983 - 1989 PhD student. Instituto Gulbenkian de Ciência (IGC), Oeiras, Portugal

Area of scientific activity: Biology: Molecular Biology, Cell Biology, Molecular Microbiology

Domain of specializations: Molecular Epidemiology and Genetics of Gram-Positive Bacteria. Molecular Biology of Bacteriophages.

MAIN RESEARCH INTERESTS

The main research interest of our laboratory is to understand the dynamics of populations of bacterial pathogens from human and animal origin and the molecular mechanisms involved in pathogen adaptation and virulence.

Research activities include: i) Comparison of phenotypes/genotypes of bacterial species/strains from different niches, clinical origins and hosts; ii) Analysis of the genomic structure and potential for horizontal gene transfer of phages (bacterial virus) and of other mobile genetic element; iii) Study of antimicrobial resistance patterns and mechanisms of resistance; iv) Investigation of the biological activity of new materials and new biocompounds against various pathogens; iv) Investigation of tailor-made strategies for infection control and risk assessment for bacterial colonization and infection.

Keywords. Veterinary; Infectious Diseases; Virulence; Pathogenesis; Molecular Microbiology; Bacterial Genetics; Molecular Epidemiology; Bacteriophages; Biochemistry & Molecular Biology; Cell Biology

RESEARCH FUNDING

- Principal Investigator/Team Leader of 11 research projects (and member the team of 15 other research projects)

Funding Agencies: *Fundação para a Ciência e a Tecnologia, Ministério da Educação e Ciência, Fundação Calouste Gulbenkian, Ministério da Saúde, Conselho de Reitores das Universidades Portuguesas* (Portugal), European Union

CURRENT AND RECENT PROJECTS

- Unveiling host specificity and host-pathogen interactions of *Streptococcus* - ref PTDC/CVT-EPI/6685/2014 – Fundação para a Ciência e a Tecnologia, Portugal (2016-2018).
Principal Investigator: I. Santos Sanches
- Unraveling the host specificity within *Streptococcus dysgalactiae* subsp. *dysgalactiae* - ref PTDC/CVT-EPI/4651/2012 – Fundação para a Ciência e a Tecnologia, Portugal (2013-2015).
Principal Investigator: I. Santos Sanches
- NANO_GUARD: Fullerene-based systems for oxidative inactivation of airborne microbial pathogens. Ref 269138. MC-IRSES International Research Staff Exchange Scheme (IRSES). FP7-PEOPLE-2010-IRSES (WP3: Antimicrobial and Antiviral Performance of the elaborated Fullerene-based oxidative systems) (2010-2015). Partner/Team leader of WP3: I. Santos Sanches
- Ocean Treasures - Ocean sediments from Madeira Archipelago: a new source of innovative and bioactive compounds. PTDC/QUI-QUI/119116/2010 – Fundação para a Ciência e Tecnologia, Portugal (2012-2015). Team Leader: I. Santos Sanches

- Project "Study of evasion mechanisms to innate immunity in group B streptococcal infections: identification of novel therapeutic targets" - ref PTDC/SAU-MII/105114/2008 – Fundação para a Ciência e a Tecnologia, Portugal (2010-2013). Principal Investigator: I. Santos Sanches

COLLABORATIONS WITH NATIONAL AND INTERNATIONAL RESEARCHERS IN FUNDED R&D PROJECTS

Topics: Molecular epidemiology, genetics, pathogenesis of streptococci
Biological activity of new materials and new biocompounds against various pathogens

Centro de Investigação Interdisciplinar em Sanidade Animal (CIISA), Faculdade de Medicina Veterinária, Universidade de Lisboa, Portugal (R. Bexiga, M. Oliveira, and C. L. Vilela)

Studies of streptococci of bovine origin

Projects ref. PTDC/CVT-EPI/6685/2014; PTDC/CVT-EPI/4651/2012 (PI: I. Santos Sanches)

Biosystems and Integrative Sciences Institute, BioISI, Faculdade de Ciências, Universidade de Lisboa, Portugal (R. Tenreiro, and L. Chambel)

Studies of streptococci of bovine and human origin

Projects ref. PTDC/CVT-EPI/6685/2014; PTDC/CVT-EPI/4651/2012 (PI: I. Santos Sanches)

UCIBIO - FCT/UNL, Portugal (A. Fernandes, R. Mato, M. Diniz)

Studies of streptococci of bovine and human origin

Projects ref. PTDC/CVT-EPI/6685/2014; PTDC/CVT-EPI/4651/2012 (PI: I. Santos Sanches)

LAQV, REQUIMTE, FCT/UNL, Portugal (S. Gaudêncio)

Studies of biocompounds against various pathogens

Project ref. PTDC/QUI-QUI/119116/2010 (PI S. Gaudêncio)

LAQV, REQUIMTE, FCT/UNL, Portugal (S. Lyubchik)

Studies of biocompounds against various pathogens

Project "NANO_GUARD": MC-IRSES International Research Staff Exchange Scheme - IRSES (PI S. Lyubchik)

Instituto Nacional de Saúde Dr. Ricardo Jorge (INSA), Portugal (M. J. Borrego)

Studies of group B streptococci of human origin

Project ref. PTDC/SAU-MII/105114/2008 (PI: I. Santos Sanches)

Instituto de Higiene e Medicina Tropical, Univ. NOVA de Lisboa (HMT/UNL)

(F. Martins Pereira, R. Castro)

Studies of group B streptococci of human origin

Project ref. PROC 60839 (PI F. Martins Pereira)

Hospital de Sta Maria, Portugal (J. Gonçalo Marques, MD)

Centro de Saúde de Oeiras (A. Brito Avô, MD; Ana Morais)

Studies of group A streptococci

Projects Ref POCTI/ESP/41971/2001 (PI: I. Santos Sanches); Ref. 212/1999 (PI J. Gonçalo Marques)

Institute of Experimental Medicine, Saint-Petersburg, Russia (A. Dmitriev)

Studies of streptococci of bovine and human origin

Project "NANO_GUARD": MC-IRSES International Research Staff Exchange Scheme - IRSES (PI S. Lyubchik)

Instituto de Microbiologia Professor Paulo de Góes, Universidade Federal do Rio de Janeiro, Brazil
(A. M. Figueiredo)

Studies of streptococci of bovine and human origin

Projects "NANO_GUARD": MC-IRSES International Research Staff Exchange Scheme – IRSES (PI S. Lyubchik) and PTDC/CVT-EPI/6685/2014 (PI: I. Santos Sanches)

Microbial Pathogenesis Helmholtz Centre for Infection Research, Braunschweig, Germany
(G. S. Chatwall)

Studies of group A streptococci

Project ref. PTDC/CVT-EPI/4651/2012 (PI: I. Santos Sanches)

University of Ulm, Institute of Medical Microbiology and Hygiene, Germany (B. Spellerberg)

Studies in group B streptococci of human origin

Project ref. PTDC/SAU-MII/105114/2008 (PI: I. Santos Sanches)

Universidad de Barcelona, Hospital Universitari de Bellvitge, Fundació ÌDIBELL, Spain
(J. Linares, and C. Ardanuy)

Studies of group A streptococci

Bilateral Agreement: (CRUP), Portugal & Ministerio de Ciencia y Tecnologia, Spain (PI: I. Santos Sanches)

Karolinska Institutet, Stockholm, Sweden (B. Henriques-Normark)

Studies in group A streptococci

Projects Ref POCTI/ESP/41971/2001; POCTI/ESP/48407/2002 (PI: I. Santos Sanches)

AWARDS

- 2006 "Best Oral Communication", Sociedade Portuguesa de Pediatria (Portugal)
- 2004 "Best Oral Communication", Sociedade Portuguesa de Pediatria (Portugal)
- 2000 Award of Clinical Pathology (co-author). Portuguese Society of Internal Medicine
- 1999 Award of Clinical Pathology (co-author). Hospital Dona Estefânia, Lisbon, Portugal
- 1996 First Krugman Award in the area of clinical research (co-author). International Society of Pediatrics.

REFEREEING ACTIVITIES

- 2015 Evaluator of research projects in the framework of the Scientific Bilateral Cooperation Agreement FCT-CAPES (Portugal-Brazil). Fundação para a Ciência e a Tecnologia, Portugal
- 2013 - 2014 Member of the evaluation panel of Individual Doctoral and Post-doctoral Grant proposals (area Biological Sciences). Fundação para a Ciência e a Tecnologia, Portugal
- 2013 Expert Evaluator in the "FCT Investigator 2013" call (area Life.Health). Fundação para a Ciência e a Tecnologia, Portugal
- 2009 - 2010 Coordinator of the External Advisory Board of the Research Centre of Malaria and Tropical Diseases, Associate Laboratory - CMDT-LA (Centro de Malária e Outras Doenças Tropicais), Portugal
- 2012 Member of the Review Panel of the 'Santander Totta – Universidade Nova de Lisboa' Scientific Merit Award (area Life Sciences).

- 2008-2009 Evaluator of research projects – Integrated Actions. CRUP - Council of Rectors of Portuguese Universities
- 2003 Coordinator of the NATO/IMB/ARW working groups for elaboration of recommendations. NATO/International Medical Association Bulgaria (IMAB) - Advanced Research Workshop (ARW) on “Risk Infections and Biomedical Terrorism”. Varna, Bulgaria

REFEREEING ACTIVITIES

- Ad-hoc reviewer of several international journal manuscripts.
- Editorial Board of ‘Interdisciplinary Perspectives on Infectious Diseases’. Hindawi Publishing Corporation - <http://www.hindawi.com/journals/ipid/editors/>
- Review Editor of ‘Frontiers in Antimicrobials, Resistance and Chemotherapy’ - http://community.frontiersin.org/people/IldaSantos_Sanches/21862
- Editor, Journal of “Bioanalytical Techniques” - <https://sciforschenonline.org/journals/bioanalytical-techniques/ilda-santos-sanches.php>
<https://sciforschenonline.org/journals/bioanalytical-techniques/aim-scope.php>

OTHERS

- 2008 - 2014 Pool of Scientific Advisors on Risk Assessment (Commission Decision 2008/721/EC) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:049:0033:0042:EN:PDF>
- 2009 Organization of the 3rd Joint National Congress of the Portuguese Society of Microbiology and the Portuguese Society of Biotechnology – MicroBiotec09, Vilamoura, Portugal
- 2008 Technical Expert of Molecular Biology, Internal Quality of Laboratory Standards (NP EN ISO/IEC 17025:2005) of the biotech company Biopremier, Portugal <http://biopremier.com/>
- 2007- Member of the European Study group on Microbial Biofilms - European Society of Clinical Microbiology and Infectious Diseases (ESCMID)
- 2004- Member of the European Study group on Microbial Epidemiological Markers - European Society of Clinical Microbiology and Infectious Diseases (ESCMID)
- 2001 - 2002 Co-coordination of the activity “Biological Risk” of the Associate Laboratory ITQB/IBET/IGC, Portugal
- 2001 Invited Participant in the thematic workshops “*European Conference on Antibiotic Use in Europe*” and “*Link between Consumption and Resistance – Data Analysis and Mathematical Modelling*” for recommendation of priority topics of research in medical microbiology and infectious diseases. Brussels. Belgium.
- 1998 Invited Participant in the thematic workshop “*Biological Threat*” (“*Ameaça Biológica*”) for recommendation of priority topics of research in medical microbiology and infectious diseases. Direcção Geral da Saúde, Lisbon, Portugal.

ACADEMIC AND SCIENCE MANAGEMENT ACTIVITIES

- 2009 - present Member (elected) of the Faculty Council ('Conselho da Faculdade'), FCT/UNL
<http://www.fct.unl.pt/en/faculty/governance/faculty-council>
- 2009 - present Member (elected) of the Scientific Council, FCT/UNL, as representative of Academic Staff and Researcher
<http://www.fct.unl.pt/en/faculty/governance/scientific-council>
- 2008 - 2012 Coordinator (elected) of the R&D Unit - Centro de Recursos Microbiológicos - CREM. FCT/UNL
- 2011 - 2013 Coordinator of the Master of Science Program in Medical Microbiology of UNL
- 2006 - 2011 Coordinator of the Master of Science Program in Molecular Genetics and Biomedicine of FCT/UNL
- 2004 - 2006 Coordinator of the Degree in Cellular and Molecular Biology of FCT/UNL
- 2002 - 2004 Installation committee of the Cellular and Molecular Biology Degree of FCT/UNL
- 2008 - present Co-coordinator of Core Unit – Research Training (I) of the PhD program in Molecular Biosciences (MolBioS) funded by Fundação para a Ciência e Tecnologia (PD-F), Portugal

ACADEMIC AND SCIENCE MANAGEMENT ACTIVITIES

- 2009 - present Member of the Scientific Committee of the PhD program in Biology of FCT/UNL
- 2003 - present Member of the Scientific Committee of the Master of Science Program in Medical Microbiology of UNL
- 2003 - 2005 Member of the Scientific Committee of the Master of Science Program in Clinical Microbiology of the Faculty of Medicine, University of Lisbon

RESEARCH SUPERVISION

Topics: -Molecular epidemiology, genetics, pathogenesis of streptococci and staphylococci
 -Biological activity of new materials and new biocompounds against various pathogens

Supervision and co-supervision:

- 7 Postdoc Fellows and PhD researchers (1994-2000; 2012 – present)
- 9 PhD Students (2002 – present)
- 21 MSc Students (2004 – present)
- 57 BSc Students (2000 – 2007)

Recent Supervision

- Ongoing

PhD Theses

Inês Silvestre. "Contribution of genomics and transcriptomics to the understanding of the biological role of DNases in *Streptococcus agalactiae*".

PhD Program in Biology-Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT/UNL), Portugal

Supervisor: I. Santos Sanches (FCT/UNL). Co-Supervisor: M. J. Borrego (Instituto Nacional de Saúde Dr. Ricardo Jorge, INSA, Lisboa, Portugal). Start: February 2016

Cinthia Alves Barroco. "Unravelling the host specificity within streptococci".

PhD Program in Biology-Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT/UNL), Portugal.

Supervisor: I. Santos Sanches (FCT/UNL). Co-supervisor: A. Fernandes (FCT/UNL). Start: April 2014

MSc Theses

João Brito. "Evolution of the genomic structure of *Streptococcus dysgalactiae* subsp. *dysgalactiae*".

MSc in Medical Microbiology, UNL. Supervisor: I. Santos Sanches (FCT/UNL). Co-supervisor: R. Mato (FCT/UNL). Start: September 2015.

- Completed

PhD Theses

Célia Leão. 2015. "Novel pangenomic approaches for the characterization of *Mycobacterium avium* subsp. *paratuberculosis*". PhD grant Ref. SFRH/BD/62469/2009. PhD Program in Biology-Molecular Biology, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT/UNL), Portugal. Supervisor: J. Inácio (School of Pharmacy and Biomolecular Sciences. University of Brighton, UK). Co-supervisor: I. Santos Sanches (FCT/UNL); K. Stevenson (Moredun Research Institute, UK).

Carlos Florindo. 2014. "Molecular Epidemiology and Virulence Factors of *Streptococcus agalactiae*".

PhD grant Ref. SFRH/BD/48231/2008 from FCT. PhD in Biology, Faculdade de Ciências e Tecnologia, UNL. Supervisor: M. J. Borrego (INSA, Portugal). Co-Supervisors: I. Santos Sanches (FCT/UNL); B. Spellerberg (University of Ulm, Germany).

Renato Pires. 2011. "Evolution of genotypes of group A streptococci from colonization and infection".

PhD grant Ref. SFRH/BD/32374/2006 from FCT. PhD in Biology, Faculdade de Ciências e Tecnologia, UNL. Supervisor: I. Santos Sanches (FCT/UNL).

Márcia Rato. 2011. "Epidemiological characterization, antimicrobial resistance and virulence mechanisms in animal and human streptococci". PhD in Biology, Faculdade de Ciências e Tecnologia, UNL. Supervisor: I. Santos Sanches (FCT/UNL). Co-supervisor: C. L. Vilela (Faculdade de Medicina Veterinária, UL).

MSc Theses

João Caço. 2015. “Expression of *Streptococcus* virulence genes and evaluation of infection potential. MSc in Medical Microbiology, Universidade NOVA de Lisboa, Portugal.

Supervisor: I. Santos Sanches (FCT/UNL). Co-supervisor: A. Fernandes (FCT/UNL)

Constança Pulido Garcia. 2014. “Incorporação de Prata em Fibras Poliméricas e Avaliações da sua Citotoxicidade e Acção Antimicrobiana”. MSc in Biomedical Engineering, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT/UNL), Portugal.

Supervisor: C. Henriques (FCT/UNL). Co-supervisor: I. Santos Sanches (FCT/UNL).

Tiago Dias. 2013. “Estudo da biodiversidade em bactérias marinhas, provenientes de sedimentos oceânicos colhidos no Arquipélago da Madeira”. MSc in Biotechnology. Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa (FCT/UNL), Portugal.

Supervisor: S. Gaudêncio (FCT/UNL). Co-supervisor: I. Santos Sanches (FCT/UNL).

Inês Silvestre. 2013. “Evolution of genotypes of *Streptococcus agalactiae* causing colonization in pregnant women”. MSc in Medical Microbiology, Universidade NOVA de Lisboa, Portugal

Supervisor: I. Santos Sanches (FCT/UNL). Co-supervisor: M. J. Borrego (Instituto Nacional de Saúde Dr. Ricardo Jorge, INSA, Lisboa, Portugal) and R. Castro (IHMT/UNL).

Sara Morini. 2013. “Antimicrobial effectiveness and cellular viability of wound dressings of polymeric nanofibers”. Internship-Placement (ERASMUS program). MSc in Life Sciences and Biotechnologies, Faculty of Biosciences and Biotechnologies, University of Modena and Reggio Emilia, Italy.

Supervisor: C. Henriques (FCT/UNL) and I. Santos Sanches (FCT/UNL).

SCIENTIFIC PRODUCTIVITY:

Book Chapters: **6**

Publications (published): **64**

Extended Abstracts published in ISI WoS Journals: **2**

Abstract published in ISI WoS Journals: **14**

Invited Talks at Congresses and Workshops: **18**

SCIENTIFIC IMPACT:

RID: C-5693-2011

Number of Publications (ISI WoS): **65**

Articles with Citation Data: **54**

Sum of the Times Cited: **2392**

Average Citations per Article: **44.30**

h-index: **30**

SELECTED PUBLICATIONS

BOOK CHAPTERS

(*Corresponding author)

Santos Sanches, I.*, L. Chambel, and R. Tenreiro. 2015. Pulsed-Field Gel Electrophoresis (PFGE): Application in Population Structure Studies of Bovine Mastitis-Causing Streptococci, p. 323-334 (Ch. 23), *In* M. Cunha and J. Inácio (ed.), *Veterinary Infection Biology: Molecular Diagnostics and High-Throughput Strategies*, *Methods in Molecular Biology*, vol. 1247. Springer Science+Business Media New York, United States. ISBN 978-1-4939-2004-4. doi: 10.1007/978-1-4939-2004-4_23

Santos Sanches, I.*, and R. Bexiga. 2014. Epidemiologia molecular de *Streptococcus uberis* associados a mastites em bovinos: análise do polimorfismo de macrofragmentos de restrição separados por electroforese de campo pulsado (PFGE) e sequenciação de múltiplos loci (MLST), p. 307-313 (Ch. 26), *In* M. Cunha and J. Inácio (ed.), *Abordagens Moleculares em Veterinária - Como desvendar a etiologia e a epidemiologia da infeção*. Section IV: Exemplos práticos de aplicações moleculares em veterinária. Lidel Edições Técnicas Lda, Portugal. ISBN 978-989-752-034-1

Santos Sanches, I.* 2014. *Streptococcus*, p. 255-276 (Ch. 21), *In* H. Barroso, A. Meliço-Silvestre, N. Taveira (ed.), *Microbiologia Médica*, Vol 1. Part IV. Bacteriologia médica. Lidel Edições Técnicas Lda, Portugal. ISBN 978-989-752-057-0

PUBLICATIONS – LAST 5 YEARS (OUT OF 62)

(* Corresponding author)

Roma-Rodrigues, C., C. Alves-Barroco, L. R. Raposo, M. N. Costa, E. Fortunato, P. Viana Baptista, A. R. Fernandes*, and **I. Santos-Sanches***. 2015. Infection of human keratinocytes by *Streptococcus dysgalactiae* subspecies *dysgalactiae* isolated from milk of the bovine udder. *Microbes Infect.* pii: S1286-4579(15)00253-1. doi: 10.1016/j.micinf.2015.11.005

Vasilyeva, A., I. Santos Sanches*, C. Florindo, and A. Dmitriev. 2015. Natural Mutations in *Streptococcus agalactiae* Resulting in Abrogation of β Antigen Production. *PLoS One.* 5;10(6):e0128426. doi: 10.1371/journal.pone.0128426

Florindo, C., V. Damião, I. Silvestre, C. Farinha, F. Rodrigues, F. Nogueira, F. Martins-Pereira, R. Castro, M. J. Borrego, I. Santos-Sanches, and The Group for the Prevention of Neonatal GBS Infection. 2014. Epidemiological surveillance of colonising group B *Streptococcus* epidemiology in the Lisbon and Tagus Valley regions, Portugal (2005 to 2012): emergence of a new epidemic type IV/clonal complex 17 clone. *Euro Surveill.* 2014;19(23):pii=20825. doi: <http://dx.doi.org/10.2807/1560-7917.ES2014.19.23.20825>

Leão, C., D. Machado, I. Santos Sanches, I. Couto, M. Viveiros, J. Inácio, and A. Botelho. 2014. Relatedness of *Mycobacterium avium* subspecies *hominissuis* clinical isolates of human and porcine origins assessed by MLVA. *Vet. Microbiol.* **173**: 92-100
doi: 10.1016/j.vetmic.2014.06.027

Rato, M. G., R. Bexiga, C. Florindo, L. M. Cavaco, C. L. Vilela, and I. Santos-Sanches*. 2013. Antimicrobial resistance and molecular epidemiology of streptococci from bovine mastitis. *Vet. Microbiol.* **161**: 286-294. doi: 10.1016/j.vetmic.2012.07.043

Pires, R., C. D. Rolo, A. Morais, A. Brito-Avô, C. Johansson, B. Henriques-Normark, J. Gonçalo-Marques, and I. Santos-Sanches*. 2012. Description of macrolide-resistant and potential virulent clones of *Streptococcus pyogenes* causing asymptomatic colonization during 2000-2006 in Lisbon area. *Eur. J. Clin. Microbiol. Infect. Dis.* **31**:849-857. doi: 10.1007/s10096-011-1384-x

Florindo, C., J. P. Gomes, M. G. Rato, L. Bernardino, B. Spellerberg, I. Santos-Sanches, and M. J. Borrego. 2011. Molecular epidemiology of group B streptococcal meningitis in children beyond the neonatal period from Angola. *J. Med. Microbiol.* **60**: 1276-1280. doi: 10.1099/jmm.0.031674-0

Rato, M. G., A. Nerlich, R. Bergmann, R. Bexiga, S. F. Nunes, C. L. Vilela, I. Santos-Sanches*, and G. S. Chhatwal. 2011. Virulence gene pool detected in bovine group C *Streptococcus dysgalactiae* subsp. *dysgalactiae* using a group A *Streptococcus pyogenes* virulence microarray. *J. Clin. Microbiol.* **49**:2470-2479. doi: 10.1128/JCM.00008-11

Pires R., C. Ardanuy, D. Rolo, A. Morais, A. Brito-Avô, J. Gonçalo-Marques, J. Liñares, and I. Santos-Sanches*. 2010. Emergence of ciprofloxacin-nonsusceptible *Streptococcus pyogenes* isolates from healthy children and pediatric patients in Portugal. *Antimicrob. Agents Chemother.* **54**:2677-2780. doi: 10.1128/AAC.01536-09

Rato, M., R. Bexiga, S. F. Nunes, C. L. Vilela, and I. Santos-Sanches*. 2010. Human group A streptococci virulence genes in bovine group C streptococci. *Emerg. Infect. Dis.* **16**:116-119. doi: 10.3201/eid1601.090632