

Gerald Spaeth, Professor, ORCID 0000-0002-0256-2029

EDUCATION

- 2006: Habilitation à Diriger des Recherches, Paris Descartes University, France
1997: PhD in Human Genetics, University 7 of Paris, France
1993: Master degree in Biology, University Mainz, Germany

RESEARCH AND PROFESSIONAL EXPERIENCE

- 2023 – today: Member, IP Scientific Council
2016 – 2023: Head of Department ‘Parasites and Insect Vectors’
2016 – 2022: Head Pasteur International Unit IP Paris- IP Shanghai
2016 – 2020: Chair of Excellence ‘*Leishmania* International Coordination’
2014 – 2015: Visiting Scientist at IP Shanghai, Chine
2013 – 2016: Adjunct Head of Department ‘Parasitology & Mycology’
2012 – 2013: Interim Head, Proteomics Platform, Institut Pasteur
2011 – today: Research Director, Head Unité Parasitologie moléculaire et Signalisation
2005 – 2010: Research Director, Head G5 Virulence Parasitaire
2003 – 2005: Adjunct Assistant Professor, Rockefeller University, New York
2002 – 2005: Assistant Professor, Depart. Med. & Mol. Parasitology, New York University

SCIENTIFIC ACTIVITIES

Metrics:

- >100 publications, h-index 45, i10-index 81, 7364 total citations (Google Scholars Mar 2025)
- >40 invitations to international meetings (since 2010)
- Fund raising > 6M euros (since 2010)
- Director of 6 staff members, 11 PhD theses, 12 postdocs, > 30 trainees and interns
- Lecturer at >15 course (since 2010, both national and international)

Scientific coordination:

- 2023 – 2029: ERC Synergy ‘DecoLeishRN’
2022 – 2025: ANR ELATION, “Epigenetic subversion in *Leishmania* macrophage infection”
2018 – 2023: H2020 LeiSHield-MATI consortium, “An integrative clinical approach towards *Leishmania* infection and disease”
2014 – 2016: LeiSHield-PILOT consortium (www.leishield.org), “A systems epidemiology approach to uncover genotype-genotype interactions between *Leishmania* and its hosts”
2014 – 2018: ANR-TranSig, “Trans-signalling: A novel mechanism of *Leishmania* host cell immune evasion through the release of parasite signalling proteins”
2013 – today: LeishRIIP (www.leishriip.org), “The Institut Pasteur International *Leishmania* network”
2012 – 2016: ANR-TransLeish (www.transleish.org), “Discovery of druggable protein kinases in the protozoan parasite *Leishmania* donovani using hit compounds identified by phenotypic screening”
2008 – 2012: FP7 LeishDrug (www.leishdrug.org), “Targeting the *Leishmania* kinome for anti-leishmanial drug discovery”

AWARDS

- Coordinator ERC Synergy consortium (2023 – 2029)
Coordinator ANR ELATION consortium (2022 – 2025)
Prix ‘Tremplaine’ Recherche Franco-Africaine 2021
Prix Georges Zermati 2018
Chair of Excellence, Institut Pasteur (2016 – 2019)
Scientific Director H2020 LeiSHield consortium (www.leishield.org) (2018 – 2023)
Coordinator ANR TranSig consortium (www.transig.org) (2014 – 2018)
Coordinator ANR TransLeish consortium (www.transleish.org) (2012-2015)
Scientific Director FP7 LeishDrug consortium (www.leishdrug.org) (2008-2012)
Equipe FRM (2006-2009)

Equipe INSERM AVENIR (2005-2008)
Starr Foundation Investigator Award 2004
Fellow of the Human Frontiers Science Program (1998-2000)
Fellow of the Deutsche Akademischer Austauschdienst (1998)
Fellow of the Human Capital and Mobility Program, EC (1993-1995)

SUPERVISING AND TRAINING

Scientific staff: Isabelle Louradour (research associate/CR-IP since Sept 2025), Thomas Cokelaer (bioinformatics engineer IP, since Sept 2024), Juliana Pipoli da Fonseca (research engineer IP, since May 2022), Laura Piel (research engineer 2022 - 2024), Hervé Lecoeur (research engineer IP, since 2015), Najma Rachidi (research associate/CR-IP, since 2014), Eric Prina (research associate/CR-IP, since 2014), Olivier Leclercq (research engineer IP, since 2008), Pascale Pescher (research engineer IP since 2006)

PostDocs: Laura Piel (since Sept 2024), Maria Gutierrez (since Jan 2024), Ana-Maria Santi (2022 - 2025), Isabelle Louradour (2021 - 2024), Suzanne Lamotte (2018 - 2019), Sima Drini (2016 - 2017), Penny Smirlis (2015 - 2017), Mathieu Cayla (2014 - 2015), Mariko Dacher (2012 -2014), Najma Rachidi (2011 - 2015), Wai-Lok Yau (2011 - 2012), Dirk Schmidt-Arras (2007 - 2010), Claire Forestier (2005 - 2008), Miguel Morales (2003 - 2011)

PhD students: Director/co-Director of thesis: Marcella Funetes (since 2022), Paul Jenkins (since 2021), Sheng Zhang (since 2020), Maria Gutierrez (2019 - 2023), Laura Piel (2015 - 2020), Daniel Martel (2015 - 2019), Suzanne Lamotte (2014 - 2018), Sima Drini (2012 - 2016), Mathieu Cayla (2010 - 2014), Mariko Dacher (2008 -2012), Wai-Lok Yau (2009 - 2012)

M2 students: Paul Jenkins (2021), Marcela Fuentes (2020/21), Thibault Rosazza (2018/19), Marie Ajavon (2018), Candide Dossa (2018), Daniel Martel (2014), Adrien Blisnick (2014), Laura Piel (2013), Suzanne Lamotte (2013), Franck Dumetz (2012), Amel Abdelkarim (2010)

Trainees: S. Maestrini, University of Urbino (4 months 2024), V. Flores, University of Bari (3 months 2024, 3 months 2023); M. Bazzas*, IP Iran (4 months 2023); S. El Mazini*, IP Morocco (5 months 2023); C. Gharsallah*, IP Tunis (3 months, 2023 and 6 months 2024); C. Souissi*, IP Tunis (2 months 2023); K. Hebbachi*, IP Algiers (7 month 2023); K. Benallal*, IP Algiers (2 month 2023); E. Gholami*, IP Iran (3 months 2023); Y. Taslimi*, IP Iran (2 months 2023); E. Davarpanah*, IP Iran (3 months 2022); I. Maatallah*, IP Morocco (3 months 2022); A. Bencheikh*, IP Tunis (3 months 2021); I. Kheraci*, IP Algiers (3 months 2019); R. Garni* (3 months 2019); A. Lari*, IP Iran (3 months 2019); F. Bahari*, IP Iran (3 months 2019); T. Taheri*, IP Iran (3 months 2019 and 4 months 2023); M. Boité-Cortes*, Fiocruz Brazil (3 months in 2017); K. Baek*, IP Korea (3 months, 2017); K. Kokou*, IP Shanghai (3 months 2016); E. Gouzou*, Hellenic Pasteur Institute (4 months, 2015); P. Smirlis*, Hellenic Pasteur Institute (EU COST fellow, 1 month, 2015); J. No*, IP Korea (1 month, 2014); A. Bali*, (4 months, 2014); P. Smirlis*, Hellenic Pasteur Institute (4 months, 2013); G. Tewkesbury, Duke University (summer intern Pasteur Foundation, 2 months, 2013); N. Eddaikra*, IP Alger (1 month, 2013); M. Gardner*, IP Montevideo (2 months, 2012); S. Horjales*, IP Montevideo (1 month, 2012); S. Pine, Harvard University (summer intern, 2 months, 2012); S. Houshyar, MIT (summer intern, 2 months, 2011); A. Lima*, IP Montevideo (3 months, 2011); J. Luque-Ortega, CSIC Madrid (EMBO fellow, 2010); S. Murta*, Fiocruz Brazil, (4 months, 2010); N. Joli (1 month, 2010); N. Bilal Farooqi (International Fellow, Aga Khan University Medical College, Karachi, Pakistan, 2 months, 2010); F. Guerfali*, IP Tunis (3 months in 2009); T. Taheri*, IP Iran (3 months, 2008). (*Pasteur Network)

TEACHING ACTIVITIES

2023 – 2024	Visiting Professor Bari University (6 lectures for PhD and vet students, practical course on macrophage isolation)
2023	MOOC Neglected Tropical Diseases, Institut Pasteur (lecture)
2022 – to date	Biology for non-biologists, Institut Pasteur (outreach)
2022 – to date	'Pasteur Class' – talk to Institut Pasteur benefactors (outreach)
2022	Koh-Ed talk (https://www.koh-ed.org) to network of international schools in France, Germany, Egypt and others (outreach)
2020 – to date	Lecturer at the 'International Master of Infectiology', University Paris-Saclay (France) and University of Health Sciences, Phnom Penh, Cambodia

2019	Lecturer at the Societé de Francophonie (outreach)
2018 – to date	Faculty director of ‘Gifted Program of the EJM International School of Paris’ (outreach)
2020 – to date	Lecturer at the ‘International Master of Infectiology’, University Paris-Saclay (France) and University of Health Sciences (Phnom Penh, Cambodia)
2017 – to date	Lecturer at the course “Innate Immunity and Infectious Diseases”, Institut Pasteur, Paris, France
2014 – to date	Lecturer at the course “Genome Analysis”, Institut Pasteur, Paris, France
2018	Lecturer at the course ‘Pharmacology and drug discovery’ – Roma La Sapienza University
2018	Lecturer at the international course “Teaching Asia Pacific Pasteur Institute Network (TAPPIN)”, Institut Pasteur of Shanghai, China
2017	Invited speaker, "Systems level analysis of <i>Leishmania</i> environmental adaptation", the GABBA PhD program, IBMC - Institute for Molecular and Cell Biology, Porto, Portugal
2014 – 2015	Lecturer at the “Biology of Parasitism Course”, Woods Hole, MA, USA
2014	Lecturer at Chinese CDC, Dpt of Parasitology, Infectious Diseases Course, Shanghai, China
2013 – 2016	Lecturer at the “Cours de Microbiologie Générale”, Institut Pasteur Paris, France
2011	Lecturer at the advanced WHO-IRTC/UNIL course on immunology, vaccinology and biotechnology applied to leishmaniasis, Lausanne, Switzerland, “Development of novel anti-leishmanial drugs”.
2010	Lecturer at the Institut Pasteur, Montevideo, Proteomics course
2009- 2018	Lecturer at the Institut Pasteur, Lille, course « Cellular Microbiology»
2009- 2017	Lecturer at the University of Paris 6, course « Microbiologie Fondamentale»
2006- 2017	Lecturer at the University of Paris 6, course « Parasitologie/MYCOLOGIE Fondamentale et Médicale : Biologie Moléculaire et cellulaire des agents infectieux et de la cellule hôte »
2003-2005	Faculty Director of the Molecular Parasitology Course (40 hours/year)
2002-2005	Faculty Director of the Graduate Student Journal Club (20 hours/year)
2002-2005	Group-Instructor at the “Medical Parasitology Course”
2002-2003	Lecturer at the course on “Biology and Pathogenesis of Parasitic Diseases”
2001-2002	Lecturer at the “Molecular Parasitology Course”

ADMINISTRATIVE RESPONSIBILITIES AND COMMITTEE ASSIGNMENTS

2024	Vice-Chair of Gordon Conference ‘Biology of Host-Parasite interaction’
2023 - today	Member Institut Pasteur Scientific Committee
2022	Member of scientific organization committee and session chair at the WorldLeish 7 meeting, Cartagene, Colombia
2022	External ERC Starting Grant expert
2022	Selection committee of G5 candidates
2021/2022	ANR-LabEx IBEID selection committee (postdocs and collaborative projects ‘GIL’)
2021	Comite Evaluation Chefs groupe
2021	Member of Scientific committee for the ‘Pôle des Maladies Vectorielles’ architect competition
2021	Member of the selection committee for the General Director of the Hellenic Pasteur Institute
2021	Member of the scientific committee, Pôle Maladie Vectorielles
2021	Member Scientific selection committee, Bourse Roux-Cantarini
2017 - today	Member, steering committee Institut Pasteur Biomics Pole
2017 - 2020	Co-direction committee Pasteur-Institut Carnot
2016 - today	Member, steering committee Institut Pasteur Center of Bioinformatics, Biostatistics and Integrative Biology (C3BI)
2016 - 2023	Head of Department ‘Parasites and Insect Vectors’
2016 - 2020	Chair of Excellence ‘International Coordination’ Institut Pasteur
2015	Chair Departmental retreat organizing committee
2015	Chair LeiShield symposium and molecular typing course committee
2014	Chair organization committee Labex IBEID symposium
2013	Member of the AERES evaluation committee CNRS UMR 8076

2013 Chair, search committee Department of Parasitology and Mycology
 2013 Chair, search committee ANR-LabEx IBEID Chair
 2013 Chair, search committee Department of Parasitology and Mycology
 2013 Chair, search committee ANR-LabEx IBEID Chair
 2012 Member, search committee ANR-LabEx IBEID Junior (G5) group
 2012 Member, search committee Proteomics Director position
 2011 - 2012 Member of the INSERM scientific committee CSS5
 2012- Committee Bourse Roux, Institut Pasteur
 2012 Member of the AERES evaluation committee INSERM UPR 9022
 2011 President of the AERES evaluation committee INSERM UMR 906
 2010 - today Expert ANR review panel
 2010 Committee "Development of scientific careers", Institut Pasteur
 2009 Scientific committee member of concours CR2, INRA
 2009- Scientific committee member International division, Institut Pasteur
 2008 Junior Faculty (G5) Departmental Search Committee
 2007 Committee member «Colloque scientifique sur le thème
 "Interactions hôte-pathogène", Institut Armand-Frappier
 2006 HDR committee member Dr. Christelle Faveeuw, University of Lille
 2006 Committee member Pasteur-Fiocruz Program
 2005 Ad Hoc committee member CNRS – Evaluation d'Unités
 2005-2009 Director of Departmental Parasitology Seminar Series, IP, Paris
 2002-2005 Director of Departmental Parasitology Seminar Series, NYU
 2002-2005 Library Committee, Department Medical & Molecular Parasitology
 2002-2005 Bio-Safety Committee, Department Medical & Molecular Parasitology

PhD committees: Jamie Hahn (NYU, 2002), Heather Green (NYU, 2004), Jesse Wright (NYU, 2003), Ramya Natarajan (NYU, 2005), John Schmieg (NYU, 2004), Mélanie Breton (U. Lausanne, 2007), Marjorie Mauduit (Paris 6, 2008), Audrey Gego (Paris 6, 2009), Fouad Benhnini (U. Paris 6, 2009), Elodie Gazanion (U. Montpellier, 2010), Jan Mani (U. Anvers, 2011), Nadine N'Dilimabaka (U. Paris 7, 2011), Manu Vanaershot (U. Anvers, 2011), Julien Lancelot (U. Lille, 2013), Lauriane Sollelis (U. Montpellier, 2016), Marion Morel (U. Lille, 2016), Samuel Duncan (U. Glasgow, 2016), Amanda Albanaz (University of Ostrava, 2024), Kamel Benallala (Prague University, 2025), Justine Couble (University Paris Cité, 2024), Dynang Seng (Univeristy Saclay and IP Cambodia, since 2023).

HDR committees: Christelle Faveeuw (2006), Sebastian Baumgarten (2020), Fatma Guerfali (2024)

Editorial assignment: Editorial Board Member 'NAR Genomics and Bioinformatics' (since 2019) and Scientific Reports (from June 2019 to May 2021); Guest Associate Editor for PLoS Pathogens (assignments: 1 in 2018, 1 in 2020, 1 in 2021, 2 in 2022), Guest Editor for PLoS NTD (assignments: 1 in 2017, 1 in 2018, 1 in 2024).

Manuscript Reviewer: Nature, Nature Communications, Cell Host&Microbes, Cell Reports, Journal of Experimental Medicine, PLoS Pathogens, PLoS NTD, PLoS ONE, Molecular Microbiology, Cellular Microbiology, Microbes and Infection, International Immunology, Immunological Letters, Proteomics, Parasitology, Molecular and Biochemical Parasitology, FASEB Journal, Annals of Clinical Microbiology and Antimicrobials, Cytotherapy, Infection & Immunity, Journal of Leukocyte Biology, Journal of Antimicrobial Chemotherapy, Frontiers in Microbiology

Project Reviewer: ERC Starting and Synergy grants, UK Medical Research Council (MRC), Agence Nationale de Recherche (ANR), Swiss National Science Foundation (SNSF), Human Frontier Science Program (HFSP) Organization, USA-Israeli Binational Science Foundation (BSF), Wellcome TRUST, German-Israeli Foundation for Scientific Research and Development (GIF)

INVITED SPEAKER

2025 Invited Plenary speaker, 2nd ImmunoMicroTope Symposium, 'Going nuclear: Leishmania epigenetic subversion of macrophage immune-metabolic functions', April 9 – 11,

- Erlangen, Germany.
- 2025 Invited Speaker, Symposium 'Da Mendel alla Post-Genomica in Medicina Veterinaria', Istituto Zooprofilattico Sperimentale dalla Sicilia, 28.01.2025, title: 'Dal modello computazionale alla filogenesi: la *Leishmania*'.
- 2023 Keynote speaker, Spring meeting of the British Society of Parasitology, 11.04 - 14.04.2023 (Edinburgh, UK), title: Darwin in a dish: Experimental Evolution reveals novel mechanisms of *Leishmania* fitness gain.
- 2022 Invited Plenary speaker, 3rd International Caparica Conference on Leishmaniasis 2022. 23th – 26th October (Caparica, Portugal), title: Darwin in a dish: Experimental Evolution (EE) in *Leishmania*.
- 2022 Invited speaker at the Gordon Research Conference "Biology of Host-Parasite Interactions", Newport (Rhode Island, USA) June 13th-17th, 2022, title: *Leishmania* genome instability as a driver of evolutionary adaptation in the field and in culture"
- 2022 Invited speaker at the LeishVet ALIVE conference (Malaga, Spain), March 31st – April 2nd, title: "The Leishield consortium: An ecological genomics approach towards *Leishmania* biomarker discovery"
- 2021 Invited speaker "Epigenetics & regulation of gene expression in kinetoplastid protozoa", title: "Epigenetic and post-transcriptional regulation at the *Leishmania*/macrophage interface", 29-30.06.2021, online symposium
- 2020 Invited speaker "Symposium of the Korean Society for Parasitology 2020", Seoul, Korea; "The enemy within: *Leishmania* mechanisms of macrophage immune subversion and their relevance for host-directed therapies" (delivered via video)
- 2019 Invited speaker "Quantitative Biology symposium", Gladstone Institutes, San Francisco, California, "From *Leishmania* environmental adaptation to host-directed drug discovery"
- 2018 Invited speaker "The EuroLeish consortium", Barcelona, "The Leishield-MATI consortium: A multi-disciplinary international effort to identify clinical, molecular and social factors impacting cutaneous leishmaniasis"
- 2018 Invited speaker "Drug Discovery Strategy for Kinetoplastid Diseases – Future Directions", Novartis Institute of Tropical Diseases, Emeryville, California, "New phenotypic assays, animal models and drug targets"
- 2018 Plenary speaker at "Frontiers in Parasitology" meeting, The Weizmann Institute, Israel, "Systems analysis of *Leishmania donovani* stage differentiation and adaptation to stress"
- 2018 Invited speaker at the "London Molecular Parasitology Club", London School of Hygiene and Tropical Medicine, "The good, the bad, and the ugly: *Leishmania* genome instability as a driver of evolutionary adaptation in the field and in culture"
- 2017 Invited speaker and session chair (molecular biology), WorldLeish 6, Toledo, Spain, "New insight into *Leishmania donovani* stage-specific expression and phosphorylation using a systems-level approach"
- 2016 Keynote lecture, PTR/ACIP event, Institut Pasteur International Network Meeting, Paris, France "The impact of Institut Pasteur incentive funding on the development of international *Leishmania* research programs"
- 2016 Keynote lecture, MATI meeting, Tehran, Iran, "Networking the *Leishmania* community"
- 2016 BSP Autumn Symposium on Microbial Protein targets: towards understanding and intervention, Durham, UK, "Targeting host/parasite interaction for anti-leishmanial drug discovery"
- 2016 Global Challenges in Neglected Tropical Diseases, Leon, Spain, Inaugural Key Note Lecture "Targeting host/parasite interaction for anti-leishmanial drug discovery"
- 2015 2015 Queenstown Molecular Biology Meetings in Shanghai, "*Leishmania* drug target discovery: Challenges and opportunities in the post-genomic era"
- 2015 4th Conference On Protein Kinases Of Parasites, Haifa "Probing druggability and biological functions of *Leishmania* protein kinases combining facilitated null mutant and plasmid shuffle analyses"
- 2014 Conférence du Conseil Scientifique, "Mechanisms of *Leishmania* intra-macrophagic survival"
- 2014 Réunion Régionale MATI - Casablanca, "From LeishRIIP to Leishield: Networking the IP international *Leishmania* community"
- 2014 INsPiRE Workshop: Cell cycle and natural products, Athens, Greece, "Drug development efforts at Institut Pasteur".
- 2013 DNDi/Institut Pasteur conference - 10 year anniversary event, Paris, "Tools and challenges for the next decade of leishmaniasis research".
- 2013 Symposium "Agents against Infectious Diseases – an Interdisciplinary approach", Wurzburg, Germany, "Anti-leishmanial drug development efforts at Institut Pasteur: From basic parasite biology to drug target identification and validation".

- 2012 Alliance for Molecular Research in Infectious Disease, Institut Pasteur of Montevideo, "Exploiting *Leishmania* stress signaling for anti-parasitic drug development".
- 2012 Symposium "Cellular and Molecular Parasitology", Institut Pasteur Lille, France, "Post-translational regulation of the *Leishmania* stress response".
- 2012 British Society of Parasitology Spring meeting 2012, Glasgow, UK, "Genetic analysis of *Leishmania* signal transduction".
- 2012 German Society of Parasitology, Heidelberg, 2012, "A touch of Zen: Post-translational regulation of the *Leishmania* stress response".
- 2011 Institut Pasteur International Network European Regional meeting, Rome, Italy, "Targeting protein kinases for drug development in cancer and parasitic disease".
- 2011 Advanced WHO-IRTC/UNIL course on immunology, vaccinology and biotechnology applied to leishmaniasis, Lausanne, Switzerland, "development of novel anti-leishmanial drugs".
- 2010 Annual Meeting of the Institut Pasteur International Network, Hong Kong, China, "Networking the *Leishmania* research community for the development of novel anti-leishmanial intervention strategies".
- 2010 XXVI Annual meeting of the Brazilian Society of Protozoology, Foz do Iguaçu, Brasil, "Stress-induced activation of the *L. major* MAP kinase LmaMPK7 increases parasite resistance to the leishmanicidal drug miltefosine".
- 2010 2D-DIGE Symposium, Marseille, France, "Applying quantitative proteomics on questions of molecular parasitology".
- 2010 3rd Conference on Protein Kinases of Parasitic Protozoa, Lausanne, CH, "*Leishmania major* MAP kinases: Genetic, biochemical, and structural approaches towards drug target validation".
- 2010 British Society of Parasitology Spring meeting 2010, Cardiff, UK, "Targeting the *Leishmania* kinome for anti-parasitic drug development".
- 2010 Swiss trypanosomatid meeting 2010, Leysin, CH, "A signaling approach towards *Leishmania* virulence".
- 2009 9th Annual Meeting of the Human Proteome Organization (HUPO 2009), Toronto, Canada, "Phosphoproteome dynamics reveals heat shock protein complexes specific to the *Leishmania* infectious stage".
- 2008 Interdisciplinary Forum on Leishmaniasis, Heidelberg, Germany, "Signaling events during the *Leishmania* life cycle".
- 2007 Dormy House Meeting II on "Integrated functional genomics on the road to leishmaniasis control", Broadway, UK, title "*Leishmania* Phosphoproteomics".
- 2006 COST meeting on "Protein kinases involved in cell proliferation, differentiation and homeostasis: targets for anti-parasitic chemotherapy", Glasgow, title "A transgenic approach to study MAP kinase functions during the *Leishmania* infectious cycle".
- 2005 WHO Symposium "*Leishmania* Live-attenuated Vaccine Development", Geneva, "Exploiting *Leishmania* MAP kinase signaling for drug and vaccine development".
- 2004 Immunology Symposium Leiden University Medical Centre, "Innate immune response to *Leishmania* surface glycoconjugates".
- 2004 Grand Rounds of Pharmacology, NYU, New York, "A genetic approach to study *Leishmania* virulence and pathogenicity".
- 2002 The Annual Meeting of the Swedish Society for Microbiology, Umea, "A genetic approach to study *Leishmania major* glycoconjugates in parasite virulence and persistence".
- 2002 University of Pennsylvania School of Veterinary Medicine, Philadelphia, "*Leishmania* surface glycoconjugates: A sweet story of virulence and immune evasion".
- 2002 University of Palermo, Italy, "I ruoli del lipofosfoglicano di *Leishmania* nell'infezione dell'ospite umano".

MEDIA AND PUBLIC ENGAGEMENT

Press release:

<https://www.pasteur.fr/fr/journal-recherche/documents-presse/leishmania-parasite-qui-s-adapte-son-environnement-amplification-chromosomique>

Communications:

<https://research.pasteur.fr/fr/news/erc-synergy-grant-2022-congratulations-to-gerald-spaeth/>

<https://www.pasteur.fr/fr/institut-pasteur/institut-pasteur-monde/actualites-international/erc-nouveaux-financements-synergy-grants-remportes-octobre-2022>

<https://www.pasteur.fr/fr/journal-recherche/actualites/nouveaux-eclairages-mecanismes-adaptation-parasites-leishmania>

<https://www.pasteur.fr/fr/institut-pasteur/institut-pasteur-monde/actualites-international/prix-tremplin-cooperation-bilaterale-recherche-afrique-recompense-deux-pasteuriens>
<https://www.pasteur.fr/fr/institut-pasteur/institut-pasteur-monde/actualites-international/leishmaniose-mecanismes-epigenetiques-mis-cause-infection>

Web sites:

<https://research.pasteur.fr/en/team/molecular-parasitology-and-signaling/>
<https://www.leishield.org>
<http://www.leishriip.org>

Videos:

<https://www.youtube.com/watch?v=xhlfJZcwv28>
<https://www.youtube.com/watch?v=qYiawqPsbQ4>
<https://www.youtube.com/watch?v=s3ulONK9REE>
<https://www.youtube.com/watch?v=a01CFPXzWFQ>
<https://www.youtube.com/watch?v=bNP34zXJ3S4>

RESEARCH FUNDING

1. "DECOLeishRN: Decoding epistatic genome/RNome interactions in eukaryotic fitness gain using *Leishmania* parasites as a unique model system"
Recipient: Gerald Spaeth, PI and coordinator
Agency: European Research Council, Type: ERC Synergy grant, 05/2023 – 04/2029
Amount: **8,620,835 euros total, 3,134,594 euros team funding**
2. "SFLeishHyb: Impact of Reactive Oxygen Species produced by their sand fly vector on *Leishmania* sexual hybrid formation"
Recipient: Isabelle Louradour, PI
Agency: ANR JCJC, Type: Starting grant, 04/2022 – 03/2025
Amount: **210,642 euros**
3. "Deciphering the mechanisms of *Leishmania* sexual reproduction and interaction with their sand fly vectors"
Recipient: Isabelle Louradour, PI
Agency: ANR LabEx IBEID, Type: Starting grant, 10/2022 – 09/2024
Amount: **210,500 euros**
4. "SFLeishHyb: Impact of Reactive Oxygen Species produced by their sand fly vector on *Leishmania* sexual hybrid formation"
Recipient: Isabelle Louradour, recipient
Agency: HORIZON-MSCA-2021-PF-01-01, Type: PostDoxc fellowship, 04/2022 – 03/2025
Amount: **178,500 euros** (total consortium funding 398,225 euros)
5. "Deciphering the mechanisms of *Leishmania* cryptic reproduction sexual *in vitro* and *in vivo* in sand flies"
Recipient: Isabelle Louradour, recipient
Agency: Institut Pasteur Pasteur-Roux-Cantarini program, Type: PostDoc fellowship, 2021 - 2023
Amount: **83,160 euros** (total consortium funding 398,225 euros)
6. "ELATION: Epigenetic subversion in *Leishmania* macrophage infection"
Recipient: Gerald Spaeth, PI (coordinator)
Agency: ANR Blanc International, Type: Collaborative grant, 04/2022 – 03/2025
Amount: **178,500 euros** (total consortium funding 398,225 euros)
7. "TEXLEISH: Targeting host-parasite interactions through the inhibition of EXcreted LEISHmania casein kinase 1"
Recipient: Najma Rachidi, PI (partner)
Agency: ANR Blanc, Type: Type: Collaborative grant, 10/2021 – 09/2025
Amount: **204,987 euros** (total consortium funding 834,232 euros)
8. "EvoLeish: Mapping mechanisms of evolutionary adaptation underlying fitness gain in New World *L. infantum* strains "
Recipient: Gerald Spaeth, PI (partner)
Agency: IP-PTR, Type: Collaborative grant, 10/2021 – 09/2023
Amount: **124,000 euros** (total consortium funding 240,000 euros)
9. "Comparative genomic analysis and phenotypic drug screening of *Leishmania martiniquensis* and *Leishmania orientalis*, the parasites causing emerging leishmaniasis in Thailand"
Recipient: Gerald Spaeth, PI
Agency: Franco-Thai Mobility Programme / PHC SIAM, Type: Staff exchange and bench fee,

01/2021 – 12/2022

Amount: **63,200 euros**

10. "Studying two complementary infection models to identify common mechanisms of intracellular parasite survival: The roles of *Leishmania* and *Eimeria* exo-kinases in subversion of host cell signalling"
Recipient: Najma Rachidi, PI; Gerald Spaeth, co-PI
Agency: ANR-LabEx ParaFrap, Type: PhD fellowship and bench fee, 10/2021 – 01/2024
Amount: **180,000 euros**
11. "Role of kinases in vesicle-mediated regulation of host-pathogen interaction: Focus on *Leishmania donovani* and *Plasmodium falciparum*"
Recipient: Najma Rachidi, PI
Agency: The Pasteur-Weizmann Joint Research Program, Type: Collaborative grant, 01/2022 – 12/2023
Amount: **70,000 euros**
12. "H2020-MSCA-RISE-2017: LeiShield-MATI consortium"
Recipient: Gerald Spaeth, coordinator
Agency: EU, Type: Network grant, 04/2018 – 03/2023
Amount: **1,700,000 euros network funding**
13. "Molecular analysis of *Leishmania* virulence, differentiation, and evolution"
Recipient: Gerald Spaeth, PI.
Agency: INSERM, Type: Unit budget, 01/2019 – 12/2025
Amount: **24,000 euros/year team funding**
14. "Integrative Biology of Emerging Infectious Diseases"
Recipient: Pascale Cossart, Philippe Sansonetti
Agency: ANR Laboratoire d'Excellence, Type: Collaborative grant, 01/01/2020 – 31/12/2025
Amount: **12,000 euros/year team funding**
15. "Molecular Parasitology and Signaling";
Recipient: Gerald Spaeth, PI.
Agency: Pasteur Institute, Type: budget Unit, 01/01/2019 – 31/12/2025
Amount: **42,500 euros/year**

Completed

1. "Comparative genomics study of epidemiology and clinical manifestation of leishmaniasis caused by *Leishmania infantum* in Tunisia"
Recipient: Gerald Spaeth, PI
Agency: Campus France, Type: Staff exchange and symposium, 07/2020 – 07/2022
Amount: 15,000 euros
2. "Genomic and functional approaches to explore the consequences of biologically distinct *Leishmania infantum* genotypes in the interaction with vertebrate and invertebrate hosts and the impact in the epidemiology of American Visceral Leishmaniasis"
Recipient: Gerald Spaeth, PI
Agency: Fiocruz-Pasteur-USP Program, Type: collaborative grant, 02/2019 – 08/2021
Amount: 45,000 euros network funding
3. "Modelling and functional analysis of clonal Evolution in *Leishmania* - possible role of non-coding RNAs and RNA modification"
Recipient: Gerald Spaeth, coordinator
Agency: Campus France, MEAE, Type: Bi-national program France/Israel, 04/2018 – 03/2020
Amount: 40,000 euros/year team funding
4. "PATHO-METHYLOME: The role of lysine methylation in host-pathogen interactions"
Recipient: Jonathan Weitzman (UParis 7), PI; Gerald Spaeth, co-PI
Agency: ANR Blanc, Type: Collaborative grant, 10/2015 – 09/2019
Amount: 67,500 euros/year team funding
5. "A multilevel systems approach to elucidate the host-*Leishmania* interactome and to identify host targets for anti-leishmanial drug discovery"
Recipient: Joo Hwan No (IPK), Gerald Spaeth co-PI
Agency: Pasteur Institute, Type: Collaborative grant, 07/2015 – 06/2017
Amount: 15,000 euros/year
6. "Investigating the reciprocal relationship between macrophage inflammasome activity and intracellular *Leishmania* infection"
Recipient: Eric Prina, PI, Gerald Spaeth, co-PI

- Agency: Pasteur Institute, Type: Collaborative grant, 10/2014 – 09/2016
Amount: 15,000 euros/year
7. “Trans-signalling: A novel mechanism of *Leishmania* host cell immune evasion through the release of parasite signalling proteins”
Recipient: Gerald Spaeth, PI and Najma Rachidi, co-PI
Agency: ANR Blanc International, Type: Collaborative grant, 03/2014 – 02/2018
Amount: 67,500 euros/year
 8. “LeiSHield: A new collaborative action to determine prevalence, anticipate emergence and assess urbanization of cutaneous and visceral leishmaniasis in LeishRIIP partner countries”
Recipient: Gerald Sapeth, PI
Agency: Division International Institut Pasteur, Type: Collaborative grant, 01/2014 – 12/2016
Amount: 100,000 euros/year
 9. “Anti-Parasitic Drug Discovery in Epigenetics”
Recipient: Gerald Spaeth, PI
Agency: EU-FP7 program, Type: Collaborative grant, 01/09/2013 – 31/08/2016
Amount: 100,000 euros/year
 10. “Discovery of druggable protein kinases in the protozoan parasites *Leishmania donovani* using hit compounds identified by phenotypic screening”
Recipient: Gerald Spaeth, PI and coordinator
Agency: ANR-RPIB, Type: Collaborative grant, 01/01/2012 – 31/05/2016
Amount: 90,000 euros/year (880,000 euros/year for consortium)
 11. “Molecular and immunological analysis of *Leishmania* virulence”;
Recipient: Gerald Spaeth, PI.
Agency: CNRS, Type: budget URA2581, 01/2009 – 12/2014
Amount: 11,000 euros/year
 12. “Systems-wide analysis of *Leishmania* virulence”
Recipient: Gerald Spaeth, co-PI
Agency: Pasteur Institute, Type: Collaborative grant, 10/2011 – 04/2014
Amount: 50,000 euros/year
 13. “Generation and validation of innovative tools for 2D- and 3D-real time imaging of trypanosomatid parasites in their mammalian hosts”
Recipient: Thierry Lang
Agency: Pasteur Institute, Type: Collaborative grant, 10/2011 – 04/2014
Amount: 10,000 euros/year
 14. “Systems-wide analysis of *Leishmania infantum chagasi* antimony resistance”
Recipient: Gerald Spaeth, co-PI
Agency: Pasteur Institute, Type: Collaborative grant, 01/01/2012 – 31/12/2013
Amount: 15,000 euros/year
 15. “Integrative Biology of Emerging Infectious Diseases”
Recipient: Pascale Cossart, Philippe Sansonetti
Agency: ANR Laboratoire d’Excellence, Type: Collaborative grant, 01/01/2012 – 31/12/2020
Amount: 30,000 euros/year
 16. “Targeting the *Leishmania* kinome for the development of novel anti-parasitic strategies”
Recipient: FP7 LEISHDRUG consortium, coordinator: Gerald Spaeth
Agency: EU FP7 Program, 01/10/2008 – 31/03/2012
Amount: 60,000 euros/year (980,000 euros/year for consortium)
 17. “Exploiting the *Leishmania* surface glycocalyx to assess the role of CD1d-restricted iNKT cells in anti-microbial immunity”;
Recipient: Claire Forestier, Ph.D., PI: Claire Forestier, Gerald Spaeth (co-PI)
Agency: HFSP, Type: Career Development Award, 01/04/2008 – 31/05/2012
Amount: 60,000 \$/year
 18. “The role of Mitogen-activated kinases in *Leishmania* differentiation and virulence”;
Recipient: Gerald Spaeth, PI.
Agency: Pasteur Institute, Type: budget Unit, 01/01/2011 – 31/12/2016
Amount: 45,000 euros/year
 19. “Molecular and immunological analysis of *Leishmania* virulence”;
Recipient: Gerald Spaeth, PI.
Agency: CNRS, Type: budget URA2581, 01/01/2006 – 31/12/2010
Amount: 11,000 euros/year
 20. “Functional characterization of the *Leishmania* major MAP kinase homolog LmaMPK10 during the infectious cycle”
Recipient: Dirk Schmidt-Arras, Ph.D., PI: Gerald Spaeth

- Agency: INSERM, Type: CDD, Poste Vert, 01/06/2007 – 31/07/2009
Amount: 50,000 euros/year
21. “Exploiting *Leishmania* glycolipid virulence determinants to stimulate early protective immunity through CD1d-mediated NK T cell activation”
Recipient: Gerald Spaeth, PI.
Agency: FRM, Type: Research grant, 01/04/2007 – 31/03/2010
Amount: 90,000 euros/year
 22. “The role of pathogen-derived galactofuranose in the anti-microbial host response”
Recipient: Gerald Spaeth, PI.
Agency: Pasteur Institute, Type: Collaborative grant, 01/02/2007 – 31/01/2009
Amount: 45,000 euros/year
 23. “Identification of novel *Leishmania* virulence determinants by comparative proteomics”;
Recipient: Gerald Spaeth, PI
Agency: INSERM, Type: AVENIR contract, 01/08/2005 – 31/07/2008
Amount: 60,000 euros/year
 24. “Identification of novel *Leishmania* virulence determinants by comparative proteomics”;
Recipient: Miguel Morales, Ph.D., PI: Gerald Spaeth
Agency: DGS/INSERM, Type: CDD, 01/09/2005 – 31/08/2008
Amount: 33,000 euros/year
 25. “Innate immune response during visceral leishmaniasis”;
Recipient: Claire Forestier, Ph.D., PI: Gerald Spaeth
Agency: Pasteur Institute, Type: Bourse Roux, 01/10/2006 – 30/09/2007
Amount: 30,000 \$/year
 26. “The role of *Leishmania* surface glycolipids in innate immune recognition”;
Recipient: Claire Forestier, Ph.D; PI: Gerald Spaeth
Agency: HFSP, Type: Re-entry grant, 01/09/2005 – 31/08/2006
Amount: 50,000 \$
 27. “The role of the p38MAPK signaling pathway in the immuno-modulatory and anti-parasitic action of imiquimod during *Leishmania* infection”;
Recipient: Iracema Arevalo, M.D./Ph.D., PI: Gerald Spaeth
Agency: Burroughs Wellcome, Type: Fellowship, 01/10/2005 – 30/09/2006
Amount: 50,000 \$
 28. “Identification and characterization of Mitogen-activated kinases in *Leishmania major*”; Recipient: Miguel Morales, Ph.D; Principal Investigator: Gerald Spaeth, Ph.D.
Agency: WHO – Directors Initiative, Type: Short Term Fellowship, 04/15/2003 – 10/14/2004
Amount: 10,000\$/year
 29. “ The role of *Leishmania* glycolipids in CD1d lipid antigen-presentation”; Recipient and Principal Investigator: Gerald Spaeth, Ph.D.
Agency: Starr Foundation; Young Investigator Award, 02/01/2003 – 01/31/2004
Amount: 75,000\$/year
 30. “Identification of LPG-restricted NK T cells implicated in anti-leishmanial immune-recognition”;
Recipient: Gerald Spaeth, PI
Agency: Starr Foundation; Type: Investigator Award, 02/01/2004 – 12/31/2006
Amount: 100,000\$/year

PUBLICATIONS

Published research articles

1. Jariyapan N, Dissook S, Noisagul P, Thongkumkoon P, Mano C, Kittichaiworakul, R, Junkum A, Tantiworawit A, Pescher P, **Späth GF**, Almutairi H, Siriyasatien P., Genome analyses of amphotericin B-susceptible and -resistant strains of *Leishmania Mundinia martiniquensis* reveal variations potentially related to amphotericin B resistance. *Curr Res Parasitol Vector Borne Dis.* 2025 Mar 18;7:100255. doi: 10.1016/j.crvbd.2025.100255. PMID: 40212606; PMCID: PMC11984574.
2. Florêncio M, Chagas MCB, Guimarães-Costa A, Oliveira J, Waclawiak I, Oliveira TKF, Saraiva EM, Freitas-Mesquita AL, Meyer-Fernandes JR, Aragão-Farias L, Trindade CE, Escobar PC, do Nascimento RA, Moreira OC, Ribeiro-Gomes FL, Traub-Csekö YM, Telleria EL, Vaselek S, Leštinová T, Volf P, **Späth GF**, Cupolillo E, Boité MC. Gene deletion as a possible strategy adopted by New World *Leishmania infantum* to maximize geographic dispersion. *PLoS Pathog.* 2025 Mar 20;21(3):e1012938. doi: 10.1371/journal.ppat.1012938. Epub ahead of print. PMID: 40111992.

3. Rajan KS, Aryal S, Hiregange DG, Bashan A, Madmoni H, Olami M, Doniger T, Cohen-Chalamish S, Pescher P, Taoka M, Nobe Y, Fedorenko A, Bose T, Zimmermann E, Prina E, Aharon-Hefetz N, Pilpel Y, Isobe T, Unger R, **Späth GF**, Yonath A, Michaeli S. Structural and mechanistic insights into the function of Leishmania ribosome lacking a single pseudouridine modification. *Cell Rep.* 2024 May 28;43(5):114203. doi: 10.1016/j.celrep.2024.114203. Epub 2024 May 8. PMID: 38722744; PMCID: PMC11156624.
4. Bruno F, Castelli G, Li B, Reale S, Carra E, Vitale F, Scibetta S, Calzolari M, Varani S, Ortalli M, Franceschini E, Gennari W, Rugna G, **Späth GF**. Genomic and epidemiological evidence for the emergence of a putative *L. donovani/L. infantum* hybrid with unusual epidemiology in Northern Italy. *mBio* 2024, Jun 4:e0099524. doi: 10.1128/mbio.00995-24. Epub ahead of print. PMID: 38832792.
5. Talimi H, Daoui O, Bussotti G, Mhaidi I, Boland A, Deleuze JF, Fissoune R, Lemrani M, **Späth GF**. A comparative genomics approach reveals a local genetic signature of *Leishmania tropica* in Morocco. *Microbial Genomics* 2024, Apr;10(4):001230. doi: 10.1099/mgen.0.001230. PMID: 38578294; PMCID: PMC11092093.
6. Xiankai Cao, Kossiwa Kokou, Shi Yu, Mengdan Chen, Junling Niu, Hervé Lecoœur, Eric Prina, **Gerald Späth**, Guangxun Meng. TAK1 Deficiency in Macrophages Increases Host Susceptibility to *Leishmania* Infection. *Infectious Microbes and Diseases*, 2023, 5 (3), pp.127-136. DOI: 10.1097/IM9.000000000000127. URL <https://hal.science/pasteur-04608098v1>.
7. Mano C, Kongkaew A, Tippawangkosol P, Somboon P, Roytrakul S, Pescher P, **Späth GF**, Uthaiyapill C, Tantiworawit A, Siriyasatien P, Jariyapan N. Amphotericin B resistance correlates with increased fitness in vitro and in vivo in *Leishmania (Mundinia) martiniquensis*. *Front Microbiol.* 2023 Apr 6;14:1156061. doi: 10.3389/fmicb.2023.1156061. PMID: 37089544; PMCID: PMC10116047.
8. Louzada-Flores VN, Latrofa MS, Lucente MS, Dambrós BP, Mendoza-Roldan JA, Varotto-Boccazzi I, Cattaneo GM, **Späth GF**, Buonavoglia A, Otranto D. Intracellular persistence of *Leishmania tarentolae* in primary canine macrophage cells. *Acta Trop.* 2023 Apr 29;243:106935. doi: 10.1016/j.actatropica.2023.106935. Epub ahead of print. PMID: 37127215.
9. Bussotti G, Li B, Pescher P, Vojtkova B, Louradour I, Pruzinova K, Sadlova J, Volf P, **Späth GF**. *Leishmania* allelic selection during experimental sand fly infection correlates with mutational signatures of oxidative DNA damage. *Proc Natl Acad Sci U S A.* 2023, Mar 7;120(10):e2220828120. doi: 10.1073/pnas.2220828120. Epub 2023 Feb 27. PMID: 36848551; PMCID: PMC10013807.
10. Villares M, Lourenço N, Berthelet J, Lamotte S, Regad L, Medjkane S, Prina E, Rodrigues-Lima F, **Späth GF**, Weitzman JB. Trifloxystrobin blocks the growth of *Theileria* parasites and is a promising drug to treat Buparvaquone resistance. *Commun Biol.* 2022 Nov 15;5(1):1253. doi: 10.1038/s42003-022-03981-x. PMID:36380082; PMCID: PMC9666453.
11. Bruno F, Vitale F, La Russa F, Reale S, **Späth GF**, Oliveri E, Gargano V, Valenza V, Facciponte F, Giardina S, Marino G, Galante A, Castelli G. Retrospective Analysis of Leishmaniasis in Sicily (Italy) from 2013 to 2021: One-Health Impact and Future Control Strategies. *Microorganisms* 2022 10(9), 1704. <https://doi.org/10.3390/microorganisms10091704>.
12. Di Bello E, Noce B, Fioravanti R, Zwergel C, Valente S, Rotili D, Fianco G, Trisciuglio D, Mourão MM, Sales P Jr, Lamotte S, Prina E, **Späth GF**, Häberli C, Keiser J, Mai A. Effects of Structurally Different HDAC Inhibitors against *Trypanosoma cruzi*, *Leishmania*, and *Schistosoma mansoni*. *ACS Infect Dis.* 2022 Jul 8;8(7):1356-1366. doi: 10.1021/acsinfectdis.2c00232. Epub 2022 Jun 22. PMID: 35732073.
13. Piel L, Rajan KS, Bussotti G, Varet H, Legendre R, Proux C, Douché T, Gaii-Gianetto Q, Chaze T, Cokelaer T, Vojtkova B, Gordon-Bar N, Doniger T, Cohen-Chalamish S, Rengaraj P, Besse C, Boland A, Sadlova J, Deleuze JF, Matondo M, Unger R, Volf P, Michaeli S, Pescher P, **Späth GF**. Experimental evolution links post-transcriptional regulation to *Leishmania* fitness gain. *PLoS Pathog.* 2022 Mar 16;18(3):e1010375. doi: 10.1371/journal.ppat.1010375. PMID: 35294501.
14. Smirlis D, Dingli F, Sabatet V, Roth A, Knippchild U, Loew D, **Späth GF** and Rachidi N. Identification of the Host Substrate of *Leishmania*-Secreted Casein Kinase 1 Using a SILAC-Based Quantitative Mass Spectrometry Assay. *Front. Cell Dev. Biol.* 2022. <https://doi.org/10.3389/fcell.2021.800098>.
15. **Späth GF** and Bussotti G. GIP: an open-source computational pipeline for mapping genomic instability from protists to cancer cells. *Nucleic Acids Res.* 2022 Apr 8;50(6):e36. doi: 10.1093/nar/gkab1237. PMID: 34928370; PMCID: PMC8989552.
16. Bussotti G, Piel L, Pescher P, Domagalska MA, Rajan KS, Cohen-Chalamish S, Doniger T, Hiregange DG, Myler PJ, Unger R, Michaeli S, **Späth GF**. Genome instability drives epistatic adaptation in the human

- pathogen *Leishmania*. **Proc Natl Acad Sci U S A.** 2021 Dec 21;118(51):e2113744118. doi: 10.1073/pnas.2113744118. PMID: 34903666.
17. Formaglio P, Alabdullah M, Siokis A, Handschuh J, Sauerland I, Fu Y, Krone A, Gintschel P, Stettin J, Heyde S, Mohr J, Philippsen L, Schröder A, Robert PA, Zhao G, Khailaie S, Dudeck A, Bertrand J, **Späth GF**, Kahlfuß S, Bouso P, Schraven B, Huehn J, Binder S, Meyer-Hermann M, Müller AJ. Nitric oxide controls proliferation of *Leishmania major* by inhibiting the recruitment of permissive host cells. **Immunity.** 2021 Dec 14;54(12):2724-2739.e10. doi: 10.1016/j.immuni.2021.09.021. Epub 2021 Oct 22. PMID: 34687607.
 18. Beniklef R, Aoun K, Boudrissa K, Ben Abid M, Cherif K, Aissi W, Benrekta S, Boubidi SC, **Späth GF**, Bouratbine A, Sereno D, Harrat Z. Cutaneous Leishmaniasis in Algeria; Highlight on the Focus of M'Sila. **Microorganisms.** 2021 Apr 29;9(5):962. doi: 10.3390/microorganisms9050962. PMID: 33947003.
 19. Schwabl P, Boité MC, Bussotti G, Jacobs A, Andersson B, Moreira O, Freitas-Mesquita AL, Meyer-Fernandes JR, Telleria EL, Traub-Csekö Y, Vaselek S, Leštinová T, Volf P, Morgado FN, Porrozzì R, Llewellyn M, **Späth GF**, Cupolillo E. Colonization and genetic diversification processes of *Leishmania infantum* in the Americas. **Commun Biol.** 2021 Jan 29;4(1):139. doi: 10.1038/s42003-021-01658-5. PMID: 33514858; PMCID: PMC7846609.
 20. Bazin MA, Cojean S, Pagniez F, Bernadat G, Cavé C, Ourliac-Garnier I, Nourrisson MR, Morgado C, Picot C, Leclercq O, Baratte B, Robert T, **Späth GF**, Rachidi N, Bach S, Loiseau PM, Le Pape P, Marchand P. In vitro identification of imidazo[1,2-a]pyrazine-based antileishmanial agents and evaluation of *L. major* casein kinase 1 inhibition. **Eur J Med Chem.** 2021 Jan 15;210:112956. doi: 10.1016/j.ejmech.2020.112956. Epub 2020 Oct 23. PMID: 33148491.
 21. Andrade JM, Gonçalves LO, Liarte DB, Lima DA, Guimarães FG, de Melo Resende D, Santi AMM, de Oliveira LM, Velloso JPL, Delfino RG, Pescher P, **Späth GF**, Ruiz JC, Murta SMF. Comparative transcriptomic analysis of antimony resistant and susceptible *Leishmania infantum* lines. **Parasit Vectors.** 2020 Nov 30;13(1):600. doi: 10.1186/s13071-020-04486-4. PMID: 33256787; PMCID: PMC7706067.
 22. Bussotti G, Benkahla A, Jeddi F, Souiaï O, Aoun K, **Späth GF**, Bouratbine A. Nuclear and mitochondrial genome sequencing of North-African *Leishmania infantum* isolates from cured and relapsed visceral leishmaniasis patients reveals variations correlating with geography and phenotype. **Microb Genom.** 2020 Oct;6(10):mgen000444. doi: 10.1099/mgen.0.000444. PMID: 32975503; PMCID: PMC7660250.
 23. Lecoœur H, Rosazza T, Kokou K, Varet H, Coppée JY, Lari A, Commère PH, Weil R, Meng G, Milon G, **Späth GF*** and Eric Prina*. *Leishmania amazonensis* Subverts the Transcription Factor Landscape in Dendritic Cells to Avoid Inflammasome Activation and Stall Maturation. **Front Immunol.** 2020 June 09 2020. doi: 10.3389/fimmu.2020.01098.
 24. Rosazza T, Lecoœur H, Blisnick T, Moya-Nilges M, Pescher P, Bastin P, Prina E, **Späth GF**. Dynamic imaging reveals surface exposure of virulent *Leishmania amastigotes* during pyroptosis of infected macrophages. **J Cell Sci.** 2020 May 22;jcs.242776. doi: 10.1242/jcs.242776. Epub ahead of print. PMID: 32501279.
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 26. Lecoœur H, Prina E, Rosazza T, Kokou K, N'Diaye P, Aulner N, Varet H, Bussotti G, Xing Y, Milon G, Weil R, Meng G, **Späth GF**. Targeting Macrophage Histone H3 Modification as a *Leishmania* Strategy to Dampen the NF- κ B/NLRP3-Mediated Inflammatory Response. **Cell Rep.** 2020 Feb 11;30(6):1870-1882.e4. doi: 10.1016/j.celrep.2020.01.030. PMID: 32049017.
 27. Rocha VPC, Dacher M, Young SA, Kolokousi F, Efsthathiou A, **Späth GF**, Soares MBP, Smirlis D. *Leishmania* dual-specificity tyrosine-regulated kinase 1 (DYRK1) is required for sustaining *Leishmania* stationary phase phenotype. **Mol Microbiol.** 2020 May;113(5):983-1002. doi: 10.1111/mmi.14464. Epub 2020 Feb 11. PMID: 31975452.
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 29. Hombach-Barrigah A, Bartsch K, Smirlis D, Rosenqvist H, MacDonald A, Dingli F, Loew D, **Späth GF**, Rachidi N, Wiese M, Clos J. *Leishmania donovani* 90 kD Heat Shock Protein - Impact of Phosphosites on Parasite Fitness, Infectivity and Casein Kinase Affinity. **Sci Rep.** 2019 Mar 25;9(1):5074. doi:10.1038/s41598-019-41640-0.

30. Lamotte S, Aulner N, **Späth GF** and Prina E, "Discovery of novel hit compounds with broad activity against visceral and cutaneous *Leishmania* species by comparative phenotypic screening", **Sci Rep.** **2019** Jan 24;9(1):438. doi: 10.1038/s41598-018-36944-6.
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