



**Dr. Dehai Lai**  
**Associate Professor**

Sun Yat-Sen University

**Dr. Lai has been working for many years on gene function, detection, evolution of zoonotic parasites and their parasite-host interaction as well as their co-evolution. These activities have led to the generation of 38 publications in international scientific journals, with 9 of them in journals of IF≥10 , e.g. PNAS, Mol Bio Evol and Lancet Inf Dis, an h index of 12. Of them, 18 are the first or corresponding author (including equal contribution) paper. All his publications were cited 695 times by peers.**

***Education and research position:***

1999 – 2003	<b>Bachelor fellow</b>	the Sun Yat-Sen (Zhongshan) University
2003 – 2008	<b>PhD fellow</b>	the Sun Yat-Sen (Zhongshan) University
2006 – 2007	<b>Visiting PhD student</b>	the Czech Academy of Sciences
2008 – 2010	<b>Post-doc fellow</b>	the University of South Bohemia
2010 – 2012	<b>Marie Curie fellow</b> (post-doc)	the University of Oxford
2013 – Present	<b>Associate Professor</b>	the Sun Yat-Sen (Zhongshan) University

***Projects and Grants in Charge:***

- 2007 – 2009 International Foundation for Science (B/4318-1).  
2010 – 2012 Marie Curie International Incoming Fellowship (PIIF-GA-2009-252589).  
2011 – 2013 Guangdong excellence doctoral dissertation project (SYBZXXM201011)  
2014 – 2017 Guangdong Province Sciences Foundation (2014A)  
2015 – 2017 National Sciences Foundation for Youth (31402029)  
2015 – 2018 Guangzhou Pearl Nova project (201506010011)  
2016 – 2020 Guangdong Province Natural Science Funds for Distinguished Young Scholar (2016A030306048)  
2018 – 2021 National Sciences Foundation (31772445)

**Publications:**

- Shen J, **Lai DH(equal contribution)**, Wilson RA, Chen YF, Wang LF, Yu ZL, Li MY, He P, Hide G, Sun X, Yang TB, Wu ZD\*, Ayala FJ\*, Lun ZR\*. (2017) Nitric oxide blocks the development of the human parasite *Schistosoma japonicum*. **Proc. Natl. Acad. Sci. USA.** 114 (38): 10214–10219. doi: 10.1073/pnas.1708578114. (IF: 9.6) 2017.9.5
- Hong XK, Zhang X, Fusco OA, Lan YG, Lun ZR, **Lai DH\***. (2017) PCR-based identification of *Trypanosoma lewisi* and *Trypanosoma musculi* using maxicircle kinetoplast DNA. **Acta Tropica**. 171:207–212. (IF: 2.4)
- Li K, Zhou S, Guo Q, Chen X, **Lai DH**, Lun ZR, Guo X. (2017) The eIF3 complex of *Trypanosoma brucei*: composition conservation does not imply the conservation of structural assembly and subunits function. **RNA**. 23(3):333-345. doi: 10.1261/rna.058651.116. Mar (IF: 3.7)
- Li Z, Guo Q, Zheng L, Ji Y, Xie YT, **Lai DH**, Lun ZR, Suo X, Gao N. (2017) Cryo-EM structures of the 80S ribosomes from human parasites *Trichomonas vaginalis* and *Toxoplasma gondii*. **Cell Res.** doi: 10.1038/cr.2017.104. (IF: 7.3)
- Shen J, **Lai DH(equal contribution)**, Wilson RA, Chen YF, Wang LF, Yu ZL, Li MY, He P, Hide G, Sun X, Yang TB, Wu ZD\*, Ayala FJ\*, Lun ZR\*. (2017) Nitric oxide blocks the development of the human parasite *Schistosoma japonicum*. **Proc. Natl. Acad. Sci. USA.** doi: 10.1073/pnas.1708578114. [Epub ahead of print] (IF: 9.6)
- Hong XK, Zhang X, Fusco OA, Lan YG, Lun ZR, **Lai DH\***. (2017) PCR-based identification of *Trypanosoma lewisi* and *Trypanosoma musculi* using maxicircle kinetoplast DNA. **Acta Tropica**. 171:207–212. (IF: 2.4)
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- Xie YT, Gao JM, Wu YP, Tang P, Hide G, **Lai DH\***, Lun ZR\*. (2017) Recombinant α-actinin subunit antigens of *Trichomonas vaginalis* as potential vaccine candidates in protecting against trichomoniasis. **Parasit Vectors**. 10(1):83. doi: 10.1186/s13071-017-2009-8. 2017 Feb 16 (IF: 3.23)
- Gao JM, Xie YT, Xu ZS, Chen H, Hide G, Yang TB, Shen JL, **Lai DH\***, Lun ZR\*. Genetic analyses of Chinese isolates of *Toxoplasma gondii* reveal a new genotype with high virulence to murine hosts. **Vet. Parasitol.** 241:52–60. doi: 10.1016/j.vetpar.2017.05.007. 2017 Jul 15. (IF: 2.5)

Qin A, **Lai DH(equal contribution)**, Liu Q, Huang W, Wu Y, Chen X, Yan S, Xia H, Hide G, Lun ZR\*, Ayala FJ\*, Xiang\* AP. (2017) Guanylate-binding protein 1 (GBP1) contributes to the immunity of human mesenchymal stromal cells against *Toxoplasma gondii*.

**Proc. Natl. Acad. Sci. USA.** 114(6):1365–1370. (IF: 9.6) 2017.2.7

Wen YZ, Su BX, Lyu SS, Hide G, Lun ZR, **Lai DH\***. (2016) Trehalose, an easy, safe and efficient cryoprotectant for the parasitic protozoan *Trypanosoma brucei*. **Acta Tropica** 164, 297–302. (IF: 2.4) Dec

**Lai DH**, Wu N, Xie YT, Hong XK, Chen YF, Liao LF, Lun ZR\*. Pathogen identification in an imported case of cutaneous Leishmaniasis. *Chin. J. Parasitol. Parasit. Dis.* 2016, 34(3):295-296. (In Chinese) Jun

Wen YZ, Lun ZR, Zhu XQ, Hide G, **Lai DH\***. (2016) Further evidence from SSCP and ITS DNA sequencing support *Trypanosoma evansi* and *Trypanosoma equiperdum* as subspecies or even strains of *Trypanosoma brucei*. **Infect. Genet. Evol.** 41:56-62. (IF: 3.0) July

**Lai DH\***, Hong XK, Su BX, Liang C, Hide G, Zhang X, Yu X, Lun ZR. (2016) Current status of *Clonorchis sinensis* and clonorchiasis in China. **Trans. R. Soc. Trop. Med. Hyg.** 110:21–27.

Lin RH, **Lai DH\***, Zheng LL, Wu J, Lukeš J, Hide G, **Lun ZR\*** (2015). Analysis of the mitochondrial maxicircle of *Trypanosoma lewisi*, a neglected human pathogen. **Parasit. & Vectors** 8:665.

Lun ZR\*, **Lai DH**, Wen YZ, Zheng LL, Shen JL, Yang TB, Zhou WL, Qu LH, Hide G\*, Ayala FJ\* (2015) Cancer in the parasitic protozoans *Trypanosoma brucei* and *Toxoplasma gondii*.

**Proc. Natl. Acad. Sci. USA.** July 112(29):8835-8842.

Flegontov P, Michalek J, Janouskovec J, **Lai DH**, Jirku M, Hajduskova E, Tomcala A, Otto TD, Koeeling PJ, Pain A, Obornik M, Lukes J (2015) Divergent Mitochondrial Respiratory Chains in Phototrophic Relatives of Apicomplexan Parasites. **Mol. Biol. Evol.** May. 32(5): 1115-1131. DOI: 10.1093/molbev/msv021

Gao JM, Yi SQ, Wu MS, Geng GQ, Shen JL, Lu FL, Hide G, **Lai DH (co-corresponding author)**, Lun ZR. (2015) Investigation of infectivity of neonates and adults from different rat strains to *Toxoplasma gondii* Prugniaud shows both variation which correlates with iNOS and Arginase-1 activity and increased susceptibility of neonates to infection. **Exp. Parasitol.** 149: 47–53.

Carnes J, Anupama A, Balmer O, Jackson A, Lewis M, Brown R, Cestari I, Desquesnes M, Gen drin C, Hertz-Fowler C, Imamura H, Ivens A, Koreny L, **Lai DH**, MacLeod A, McDermott S M, Merritt C, Monnerat S, Moon W, Myler P, Phan I, Ramasamy G, Sivam D, Lun ZR\*, Luk eš J\*, Stuart K\*, Schnaufer A\*. (2015) Genome and phylogenetic analyses of *Trypanosoma evansi* reveal extensive similarity to *T. brucei* and multiple independent origins for dyskinetoplasty. **PLOS Negl. Trop. Dis.** 9(1):e3404.

Xie YT, **Lai DH**, Liu GY, Zhou JL, Lun ZR\*. (2015) Severe fever with thrombocytopenia syndrome in China. **Lancet Infect. Dis.** 15 (2): 145 Feb.

**Lai DH**, Poropat E, Pravia C, Landoni M, Couto AS, Pérez Rojo FG, Fuchs AG, Dubin M, Elingold I, Rodríguez JB, Ferella M, Esteva MI, Bontempi EJ, Lukeš J (2014) Solanesyl diphosphate synthase, an enzyme of the ubiquinone synthetic pathway, is required throughout the life cycle of *Trypanosoma brucei*. **Euk. Cell** Feb 13(2): 320–328 (IF: 3.586)

Desquesnes M, Holzmüller P, **Lai DH**, Dargantes A, Lun ZR, Jittapalapong S (2013) *Trypanosoma evansi* and surra: A review and perspectives on origin, history & distribution, taxonomy, morphology, hosts and pathogenic effects. **BioMed. Res. Int.** 194176 (IF: 2.88)

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Wang MH, Wen YZ, Wei Y, **Lai DH**, Bengaly Z, Desquesnes M, Lun ZR (2012) Mitogen-activated protein kinase 5, a novel molecular marker for the identification and detection of *Trypanoz*

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Hashimi H, Benkovičová V, Čermáková P, **Lai DH**, Horváth A, Lukeš J. (2010) The assembly of F<sub>1</sub>F<sub>0</sub>-ATP synthase is disrupted upon interference of RNA editing in *Trypanosoma brucei*. **Int. J. Parasitol.** 40(1): 45-54.

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**Lai DH**, Hashimi H, Lun ZR, Ayala FJ, Lukeš J. (2008) Adaptations of *Trypanosoma brucei* to gradual loss of kinetoplast DNA: *Trypanosoma equiperdum* and *Trypanosoma evansi* are petite mutants of *T. brucei*. **Proc. Natl. Acad. Sci. USA** 105: 1999-2004.

**Lai DH**, Wang QP, Chen W, Cai LS, Wu ZD, Zhu XQ, Lun ZR. (2008) Molecular genetic profiles among individual *Clonorchis sinensis* adults collected from cats in two geographic regions of China revealed by RAPD and MGE-PCR methods. **Acta Trop.** 107(2): 213-216.

Wang QP, **Lai DH**, Zhu XQ, Chen XG, Lun ZR. (2008) Human angiostrongylasis. **Lancet Infect. Dis.** 8: 621-630.

Li FJ, Gasser RB, **Lai DH**, Claes F, Zhu XQ and Lun ZR. (2007) PCR approach for the detection of *Trypanosoma brucei* and *T. equiperdum* and their differentiation from *T. evansi* based on maxicircle kinetoplast DNA. **Mol. Cell. Probes** 21: 1-7.

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classed as *Trypanosoma brucei* or *Trypanosoma evansi*. **Trends Parasitol.** 22: 55-56.

Dai XL, **Lai DH**, Lun ZR. (2006) Comparison of the therapeutic effects of four antiparasitic protozoan drugs on *Trypanosoma evansi*, *T. equiperdum* and *T. b. brucei* in mice. **J. Trop. Med.** 6: 1240-1244,1248. (In Chinese)

Zhu S, **Lai DH**, Li SQ and Lun ZR. (2006) Stimulative effects of insulin on *Toxoplasma gondii* replication in 3T3-L1 cells. **Cell Bio. Int.** 30: 149-153.

Lun ZR, Gasser RB, **Lai DH**, Li AX, Zhu XQ, Yu XB and Fang YY. (2005) Clonorchiasis: a key foodborne zoonosis in China. **Lancet Infect. Dis.** 5: 31-41.

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