

## National Project

- 1- Preparation of ELISA kits for IFN-g and IL-5 measurement in mice model( Pasteur Institute of Iran 1374-75).
- 2- Immunological evaluation of 24 KDa protein of *L. major* amastigote as a vaccine in BALB/c mice. (IPI, 1997-1998, NO:83)
- 3- Cloning and expression of cysteine proteinases of *L. major* and their immunological evaluation in human model. (Pasteur Institute of Iran, no 114 1377-78)
- 4- Isolation, cloning and expression of cysteine proteinase a and b from *L. infantum* and immunological evaluation of recombinant proteins in infected dogs.(IPI, 1999-2000, NO:144)
- 5- Genetic vaccination of BALB/c mice against *L. major* with cysteine protease fused gene with IL-12.( IPI, 2001, NO: 169)
- 6-DNA vaccination using CPa, CPb of *L. infantum* and its evaluation in dog model, Pasteur Institute of Iran, 185, 1381-82)
- 7- Comparison of DNA and recombinant protein vaccination with Signal peptidase type I of *L. major* in BALB/c mice.( IPI, 2003-2005, NO: 218)
- 8- Evaluation of IgG subclass responses to different overlapping CTE peptides in active and recovered Visceral leishmaniasis individuals.( IPI, 2004-2007, NO: 230)
- 9- Evaluation of combined DNA and protein vaccination of C terminal extension from cysteine proteinase type I against *L. infantum* infection in BALB/c mice. (IPI, 2004-2006, NO: 239)
- 10- Searching for virulence factors in non-pathogenic parasite *LeishmaniaTarentolae*.( IPI, 2006-2008, NO: 282)
- 11- Searching for virulence factors in non-pathogenic parasite *LeishmaniaTarentolae*. ( Iran National Science Foundation, 2006, NO: 84102/16)
- 12- Isolation, cloning and expression of GRP94 from *L. major* and its evaluation in human and mice.( IPI, 2006-2008, NO: 267)
- 13- Gene disruption of type I signal peptidase and evaluation of its role in growthTsurvivalT infectivity and protection in *Leishmania major*. (IPI, 2006-2009, NO: 271)
- 14- Cloning and expression of *Leishmania major*Amastin and its recognition by cutaneous leishmaniasis sera.( IPI, 2006-2007, NO: 285)
- 15- Cloning and expression of *Leishmaniainfantum* cysteine proteinase type III or CPC. ( IPI, 2006-2007, NO: 319)

16- Immunotherapy study using the combination of dSLIM and Sodium stibogluconate (Sb) against *Leishmania major* infection in susceptible BALB/c mice.( IPI, 2008-2009, NO: 401)

17- Evaluation of VP22 of HSV-1 and its efficiency in DNA vaccination by fusing to Amastin of *L. major*. ( IPI, 2007-2009, NO: 493)

18- Production of different transgenic *Leishmania* strains expressing green fluorescent proteon (GFP) through homologous recombination into the chromosomal 18S rRNA locus of parasite. ( IPI, 2009-2011, NO: 499)

19- Designing a *Leishmania major* protective polytope vaccine based on human HLA class I epitope using bioinformatics and *in silico* prediction models and evaluation in HLA transgenic.( Iran National Science Foundation, 2009-2011, NO: 87020176)

20- Generation and evaluation of *Leishmania major* stably expressing fusion GFP-LUC genes (IPI, ID#577).

21- Comparison of infectivity rate of transfected *Leishmania major* expressing EGFP-LUC with wild-type in *ex vivo* and *in vivo* and luciferase measurement using anti *Leishmania* drug. (Submitted to IPI)