CURRICULUM VITAE

Erol Fikrig, MD

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Contact Information:

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School: Yale School of Medicine

Education:

08/1977 - 05/1981	BA, Cornell University, Chemistry, Ithaca, NY
08/1981 - 01/1985	MD, Cornell University, New York, NY

Career/Academic Appointments:

07/1985 - 06/1988	Resident, Internal Medicine, Vanderbilt University Hospital, Nashville, TN
07/1988 - 06/1991	Fellow, Infectious Diseases, Yale University School of Medicine, New Haven, CT
01/1992 - 06/1992	Associate Research Scientist, Immunobiology, Yale School of Medicine, New Haven, CT
07/1992 - 06/1996	Assistant Professor, Rheumatology, Yale School of Medicine, New Haven, CT
07/1996 - 06/2001	Associate Professor on Term, Rheumatology, Yale School of Medicine, New Haven, CT
07/2000 - 06/2005	Associate Professor on Term, Health Policy and Management, Yale School of Medicine, New Haven, CT
07/2000 - 06/2002	Associate Professor Tenure, Rheumatology, Yale School of Medicine, New Haven, CT
07/2002 - Present	Professor, Rheumatology, Yale School of Medicine, New Haven, CT
07/2002 - 06/2007	Professor, Health Policy and Management, Yale School of Medicine, New Haven, CT
07/2003 - 06/2023	Professor, Microbial Pathogenesis, Yale School of Medicine, New Haven, CT
06/2007 - Present	Waldemar Von Zedtwitz, Professor, Infectious Diseases, Yale School of Medicine, New Haven, CT
07/2007 - 06/2027	Professor, Epidemiology of Microbial Diseases, Yale School of Medicine, New Haven, CT

09/2007 - Present Professor, Infectious Diseases, Yale School of Medicine, New Haven, CT

Administrative Positions:

2021 - Present Affiliated Faculty, Yale Institute for Global Health, Yale University, New Haven, CT
2007 - Present Section Chief, Infectious Diseases, Internal Medicine, Yale School of Medicine, New Haven, CT

Board Certification:

1990 - 2000 AB of Internal Medicine, Infectious Disease
1988 AB of Internal Medicine, Internal Medicine

Professional Honors & Recognition:

International/National/Regional

1980 Phi Beta Kappa, Cornell University
1990 Daland Fellow, American Philosophical Society
1993 Young Investigator Award, Infectious Disease Society of America
1993 Young Investigator Award for Vaccine Development, Infectious Disease Society of America
1997 Pew Scholar in the Biomedical Sciences, Pew Foundation
1998 Fellow, Infectious Disease Society of America
1998 Member, American Society for Clinical Investigation
2002 Established Investigator Award, American Heart Association
2002 Clinical Scientist in Translational Research Award, Burroughs Wellcome Foundation
2002 Member, Interurban Clinical Club
2005 Boerhaave Professor , Leiden University
2007 Member, Henry Kunkel Society
2008 Member, Association of American Physicians
2013 Frontiers of Science Professor, Abo Akademi University
2014 Ruysch Visiting Professor, University of Amsterdam
2016 Merit Award, National Institute of Health

Yale University/Yale School of Medicine/Hospital System

1992 Dean's Young Faculty Award, Yale University School of Medicine

Grants/Clinical Trials History:

Current Clinical Trials

Agency: National Institute on Drug Abuse (NIDA)
I.D.#: HIC# 0510000728
Title: Immune System Research in Rheumatoid Arthritis and Healthy Volunteers

P.I.:	Ruth R Montgomery
Role:	SubInvestigator
Percent effort:	N/A
Total costs for project period:	0.0000
Project period:	10/20/2005

Agency:	Yale University School of Medicine
I.D.#:	HIC# 1502015318
Title:	HIV Associated Reservoirs and Comorbidities (The HARC Plus Study)
P.I.:	Serena Spudich
Role:	SubInvestigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	6/3/2015

Agency:	National Institute on Aging (NIA)
I.D.#:	HIC# 0409027018
Title:	Toll-like Receptors in Older Adults and Response to Vaccination
P.I.:	Albert C Shaw
Role:	SubInvestigator
Percent effort:	N/A
Total costs for project period:	0.0000
Project period:	9/24/2004

Agency:	University of Massachusetts
I.D.#:	HIC# 2000021845REG
Title:	Mechanisms of HIV latency
P.I.:	Ya-Chi Ho
Role:	SubInvestigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	4/19/2018

Agency:	National Institute of Allergy and Infectious Diseases (NIAID)
I.D.#:	HIC# 1305012068
Title:	Host Genetic Control of HIV
P.I.:	Richard Sutton
Role:	SubInvestigator
Percent effort:	N/A
Total costs for project	

period: N/A
Project period: 6/18/2013

Agency: NO FUNDING
I.D.#: HIC# 2000027074REG
Title: Study of Immune Cells after Exposure to a Tick Bite
Role: PrincipalInvestigator
Percent effort: N/A
Total costs for project period: N/A
Project period: 3/20/2020

Agency: National Institute of Allergy and Infectious Diseases (NIAID)
I.D.#: HIC# 2000027037
Title: Effects of circadian regulation and sleep on immune responses
P.I.: Albert C Shaw
Role: SubInvestigator
Percent effort: N/A
Total costs for project period: 0.0000
Project period: 2/26/2020

Past Clinical Trials

Agency: Yale University School of Medicine
I.D.#: HIC# 0609001783
Title: A Randomized Clinical Trial to Prevent Pneumonia in Nursing Home Residents
P.I.: Vincent Quagliarello
Role: SubInvestigator
Percent effort: N/A
Total costs for project period: 6895573.0000
Project period: 8/4/2008 - 4/5/2017

Pending Clinical Trials

Agency: NO FUNDING
I.D.#: HIC# 2000020170
Title: Tick-Immunity in Humans and Development of Anti-Tick Vaccine
Role: PrincipalInvestigator
Percent effort: N/A
Total costs for project period: N/A

Invited Speaking Engagements, Presentations, Symposia & Workshops

Not Affiliated With Yale:

International/National

1. "Lyme disease pathogenesis", M. Glenn Koening Visiting Professor, Vanderbilt University, Nashville, TN, United States, September 2010 (Lecture)
2. "Pathogenesis of Tick-borne Diseases", Plenary Speaker: AAP/ASCI, AAP/ASCI, Chicago, IL, United States, April 2011 (Lecture)
3. "Tick-borne diseases", DeGraff Lecturer, New York University, New York, NY, United States, November 2012 (Lecture)
4. "Borrelia-tick Interactions", Keynote Speaker: Insect Immunology, EMBO , Kraków, Lesser Poland Voivodeship, Poland, July 2013 (Lecture)
5. "Flaviviral Pathogenesis", Northeast Biodefense Conference, NIH, Lake George, NY, United States, October 2013 (Lecture)
6. "Lyme disease pathogenesis", Biology of Spirochetes, Gordon Conference, Newport Beach, CA, United States, May 2014 (Lecture)
7. "Vector-Pathogen Interactions", Keynote Speaker: Symposia on The Arthropod Vector, Keystone Symposia, Taos, NM, United States, April 2015 (Lecture)
8. "Vaccines against Arthropod-borne diseases", Biodefense Center Visiting Professor, University of Texas, Galveston, Galveston, TX, United States, May 2015 (Lecture)
9. "Lyme borreliosis", Keynote Address: Tick-borne Disease Conference, Czech Government, Český Krumlov, South Bohemian Region, Czech Republic, July 2015 (Lecture)
10. "Immunity against spirochetes", Lecturer, James Cook University, Cairns, QLD, Australia, August 2015 (Lecture)
11. "Anaplasmosis", International Meeting of the American Society of Rickettsiology , American Society of Rickettsiology, Big Sky, MT, United States, April 2016 (Lecture)
12. "Arthropod saliva as vaccine targets", 14th Annual Biodefense and Emerging Diseases Conference, American Society for Microbiology, Baltimore, MD, United States, April 2016 (Lecture)
13. "Arthropod-Pathogen Interactions", International Congress of Entomology, International Congress of Entomology, Orlando, FL, United States, September 2016 (Lecture)
14. "Pathogenesis of Tick-borne Diseases", Deans Lecture, Virginia Commonwealth University, Richmond, VA, United States, October 2016 (Lecture)
15. "Lyme disease vaccine", Microbial Immunity , CIC BioGUNE, Bilbao, PV, Spain, October 2016 (Lecture)
16. "Vaccines against Arthropod-borne diseases", Visiting Professor, Johns Hopkins University, Baltimore, MD, United States, November 2016 (Lecture)
17. "Lyme vaccine", Ticks and Tick-Borne Diseases, University of New York, at Stonybrook, Stony Brook, NY, United States, May 2017 (Lecture)
18. "Lyme disease pathogenesis", Department of Microbiology, University of Maryland, Baltimore, MD, United States, November 2017 (Lecture)
19. "Arthropod-Pathogen-Vector Interactions", 2nd International Symposium on Vector-borne Diseases, Tsinghua University, Shenzhen, Guangdong Province, China, May 2018 (Lecture)
20. "Novel Lyme disease Vaccines", 15th International Congress on Lyme Borreliosis, International Congress on Lyme Disease, Atlanta, GA, United States, September 2018 (Lecture)

21. "Arthropod Saliva and Pathogenesis", Biology of Parasitism, Woods Hole Laboratory, Falmouth, MA, United States, September 2018 (Lecture)
22. "Vaccines against Arthropod-borne Diseases", NIH Seminar Series, NIH, Washington, DC, United States, February 2019 (Lecture)
23. "Flavivirus-host interactions", Keystone Symposia: Positive-strand RNA viruses, Keystone , Killarney, KY, Ireland, June 2019 (Lecture)
24. "Tick-borne Lyme Borreliosis", Visiting Professor, University of Singapore, Singapore, Singapore, October 2019 (Lecture)
25. "Arthropod-Pathogen-Host Interactions", International Conference on Vector-borne Diseases, University of Singapore, Singapore, Singapore, April 2021 (Lecture)
26. "Borrelia-Tick Interactions", Visiting Professor, University of California, San Francisco, San Francisco, CA, United States, March 2022 (Lecture)
27. "Acquired Tick Resistance", 16th International Conference on Lyme Disease, International Lyme Borreliosis Committee, Amsterdam, NH, Netherlands, September 2022 (Lecture)

Regional

1. "Immunity against Tick-borne Diseases", Lecturer: Clinical Scholars Program, Rockefeller University, New York, NY, United States, April 2012 (Lecture)
2. "Lyme disease: Clinical Manifestations", Tisdale Professor, University of Vermont, Burlington, VT, United States, September 2013 (Lecture)

Professional Service:

Peer Review Groups/Grant Study Sections

2000 - 2004	Member, Bacteriology Study Section
2012 - 2013	Reviewer, HHMI
2014 - 2015	Reviewer, Finland National Science Institute
2016 - 2020	Member, Vector Biology Study Section

Advisory Boards

2015 - 2022	Advisor, European Tick Vaccine Consortium, European Union

Journal Services

Editorial boards

2020 - 2021	Guest Editor, ASM

Reviewer

2000 - 2021	Reviewer, Nature
2005 - 2017	Reviewer, Science
2008 - 2009	Reviewer, Journal of Experimental Medicine
2012 - 2018	Reviewer, Journal of Clinical Investigation
2018 - 2019	Reviewer, Journal of Infectious Diseases

Yale University / Hospital System

Department

2021 - Present Committee Member, NIH Tick Borne Disease Group, Tick-borne Disease Group

Public Service / Media Presence

Public Service

2016 - Present Board Member, Connecticut Agricultural Experiment Station

Bibliography:

Commentaries, Editorials and Letters

Fikrig E, Bockenstedt L, Barthold S, Chen M, Tao H, Ali-Salaam P, Telford S, Flavell R. Reply The Journal Of Infectious Diseases 1994, 170: 500-500. DOI: 10.1093/infdis/170.2.500.

Peer-Reviewed Case Reports and Technical Notes

Buitrago MI, Ijdo JW, Rinaudo P, Simon H, Copel J, Gadbaw J, Heimer R, **Fikrig E**, Bia FJ. Human granulocytic ehrlichiosis during pregnancy treated successfully with rifampin. Clinical Infectious Diseases 1998, 27: 213-5. PMID: 9675481, DOI: 10.1086/517678.

Peer-Reviewed Original Research

1. Heistand R, Lauffer R, **Fikrig E**, Que L. Catecholate and phenolate iron complexes as models for the dioxygenases Journal Of The American Chemical Society 1982, 104: 2789-2796. DOI: 10.1021/ja00374a016.
2. HEISTAND R, LAUFFER R, **FIKRIG E**, QUE L. ChemInform Abstract: CATECHOLATE AND PHENOLATE IRON COMPLEXES AS MODELS FOR THE DIOXYGENASES ChemInform 1982, 13: no-no. DOI: 10.1002/chin.198235267.
3. **FIKRIG E**, WORTHINGTON M, LEFKOWITZ L. Septic Shock and Acute Respiratory Distress Syndrome After Salpingitis Caused by Streptococcus pyogenes Group A Southern Medical Journal 1989, 82: 634-635. PMID: 2655106, DOI: 10.1097/00007611-198905000-00024.
4. **Fikrig E**, Barg N. Varicella associated intracerebral hemorrhage in the absence of thrombocytopenia Diagnostic Microbiology And Infectious Disease 1989, 12: 357-359. PMID: 2591170, DOI: 10.1016/0732-8893(89)90103-x.
5. **Fikrig E**, Barthold S, Kantor F, Flavell R. Protection of Mice Against the Lyme Disease Agent by Immunizing with Recombinant OspA Science 1990, 250: 553-556. PMID: 2237407, DOI: 10.1126/science.2237407.
6. **Fikrig E**. Lyme disease and Os-pA Biomedicine & Pharmacotherapy 1991, 45: 274. DOI: 10.1016/0753-3322(91)90034-q.
7. Sears JE, **Fikrig E**, Nakagawa TY, Deponte K, Marcantonio N, Kantor FS, Flavell RA. Molecular mapping of Osp-A mediated immunity against Borrelia burgdorferi, the agent of Lyme disease. The

Journal Of Immunology 1991, 147: 1995-2000. PMID: 1716290, DOI: 10.4049/jimmunol.147.6.1995.

8. Berland R, **Fikrig E**, Rahn D, Hardin J, Flavell RA. Molecular characterization of the humoral response to the 41-kilodalton flagellar antigen of Borrelia burgdorferi, the Lyme disease agent. Infection And Immunity 1991, 59: 3531-5. PMID: 1894359, PMCID: PMC258917, DOI: 10.1128/iai.59.10.3531-3535.1991.
9. **Fikrig E**, Barthold SW, Kantor FS, Flavell RA. Protection of mice from Lyme borreliosis by oral vaccination with Escherichia coli expressing OspA. The Journal Of Infectious Diseases 1991, 164: 1224-7. PMID: 1955724, DOI: 10.1093/infdis/164.6.1224.
10. Simon M, Milward F, Lefebvre R, Schouls L, **Fikrig E**, Wasmoen T, Stover K, Menefee B, Robinson J. Spirochetes: vaccines, animal models and diagnostics Research In Microbiology 1992, 143: 641-647. PMID: 1475524, DOI: 10.1016/0923-2508(92)90122-5.
11. **Fikrig E**, Barthold SW, Marcantonio N, Deponte K, Kantor FS, Flavell RA. Roles of OspA, OspB, and flagellin in protective immunity to Lyme borreliosis in laboratory mice. Infection And Immunity 1992, 60: 657-61. PMID: 1730500, PMCID: PMC257680, DOI: 10.1128/iai.60.2.657-661.1992.
12. de Souza MS, **Fikrig E**, Smith AL, Flavell RA, Barthold SW. Nonspecific proliferative responses of murine lymphocytes to Borrelia burgdorferi antigens. The Journal Of Infectious Diseases 1992, 165: 471-8. PMID: 1531672, DOI: 10.1093/infdis/165.3.471.
13. **Fikrig E**, Barthold SW, Kantor FS, Flavell RA. Long-term protection of mice from Lyme disease by vaccination with OspA. Infection And Immunity 1992, 60: 773-7. PMID: 1541551, PMCID: PMC257553, DOI: 10.1128/iai.60.3.773-777.1992.
14. **Fikrig E**, Barthold SW, Persing DH, Sun X, Kantor FS, Flavell RA. Borrelia burgdorferi strain 25015: characterization of outer surface protein A and vaccination against infection. The Journal Of Immunology 1992, 148: 2256-60. PMID: 1545130, DOI: 10.4049/jimmunol.148.7.2256.
15. **Fikrig E**, Huguenel ED, Berland R, Rahn DW, Hardin JA, Flavell RA. Serologic diagnosis of Lyme disease using recombinant outer surface proteins A and B and flagellin. The Journal Of Infectious Diseases 1992, 165: 1127-32. PMID: 1583333, DOI: 10.1093/infdis/165.6.1127.
16. **Fikrig E**, Telford SR, Barthold SW, Kantor FS, Spielman A, Flavell RA. Elimination of Borrelia burgdorferi from vector ticks feeding on OspA-immunized mice. Proceedings Of The National Academy Of Sciences Of The United States Of America 1992, 89: 5418-5421. PMID: 1608951, PMCID: PMC49303, DOI: 10.1073/pnas.89.12.5418.
17. Magnarelli LA, **Fikrig E**, Berland R, Anderson JF, Flavell RA. Comparison of whole-cell antibodies and an antigenic flagellar epitope of Borrelia burgdorferi in serologic tests for diagnosis of Lyme borreliosis. Journal Of Clinical Microbiology 1992, 30: 3158-62. PMID: 1280650, PMCID: PMC270607, DOI: 10.1128/jcm.30.12.3158-3162.1992.
18. **Fikrig E**, Berland R, Chen M, Williams S, Sigal LH, Flavell RA. Serologic response to the Borrelia burgdorferi flagellin demonstrates an epitope common to a neuroblastoma cell line. Proceedings Of The National Academy Of Sciences Of The United States Of America 1993, 90: 183-187. PMID: 7678336, PMCID: PMC45624, DOI: 10.1073/pnas.90.1.183.
19. Comstock LE, **Fikrig E**, Shoberg RJ, Flavell RA, Thomas DD. A monoclonal antibody to OspA inhibits association of Borrelia burgdorferi with human endothelial cells. Infection And Immunity 1993, 61: 423-31. PMID: 7678585, PMCID: PMC302746, DOI: 10.1128/iai.61.2.423-431.1993.
20. **Fikrig E**, Kantor FS, Barthold SW, Flavell RA. Protective immunity in lyme borreliosis Trends In Parasitology 1993, 9: 129-131. PMID: 15463734, DOI: 10.1016/0169-4758(93)90176-g.

21. **Fikrig E**, Tao H, Kantor FS, Barthold SW, Flavell RA. Evasion of protective immunity by Borrelia burgdorferi by truncation of outer surface protein B. Proceedings Of The National Academy Of Sciences Of The United States Of America 1993, 90: 4092-4096. PMID: 7683420, PMCID: PMC46452, DOI: 10.1073/pnas.90.9.4092.
22. de Souza MS, Smith AL, Beck DS, Terwilliger GA, **Fikrig E**, Barthold SW. Long-term study of cell-mediated responses to Borrelia burgdorferi in the laboratory mouse. Infection And Immunity 1993, 61: 1814-22. PMID: 8478071, PMCID: PMC280770, DOI: 10.1128/iai.61.5.1814-1822.1993.
23. **Fikrig E**, Barthold SW, Flavell RA. OspA vaccination of mice with established Borrelia burgdorferi infection alters disease but not infection. Infection And Immunity 1993, 61: 2553-7. PMID: 8500891, PMCID: PMC280883, DOI: 10.1128/iai.61.6.2553-2557.1993.
24. Bockenstedt LK, **Fikrig E**, Barthold SW, Kantor FS, Flavell RA. Inability of truncated recombinant Osp A proteins to elicit protective immunity to Borrelia burgdorferi in mice. The Journal Of Immunology 1993, 151: 900-6. PMID: 8335917, DOI: 10.4049/jimmunol.151.2.900.
25. Telford SR, **Fikrig E**, Barthold SW, Brunet LR, Spielman A, Flavell RA. Protection against antigenically variable Borrelia burgdorferi conferred by recombinant vaccines. Journal Of Experimental Medicine 1993, 178: 755-758. PMID: 8340764, PMCID: PMC2191140, DOI: 10.1084/jem.178.2.755.
26. **Fikrig E**, Magnarelli LA, Chen M, Anderson JF, Flavell RA. Serologic analysis of dogs, horses, and cottontail rabbits for antibodies to an antigenic flagellar epitope of Borrelia burgdorferi. Journal Of Clinical Microbiology 1993, 31: 2451-5. PMID: 7691874, PMCID: PMC265777, DOI: 10.1128/jcm.31.9.2451-2455.1993.
27. Lam TT, Nguyen TP, Montgomery RR, Kantor FS, **Fikrig E**, Flavell RA. Outer surface proteins E and F of Borrelia burgdorferi, the agent of Lyme disease. Infection And Immunity 1994, 62: 290-8. PMID: 8262642, PMCID: PMC186099, DOI: 10.1128/iai.62.1.290-298.1994.
28. **Fikrig E**, Kantor F, Barthold S, Flavell R. A Recombinant OspA and OspB Based Lyme Disease Vaccine 1994, 25-31. DOI: 10.1007/978-1-4615-2415-1_5.
29. Roessner K, Russell J, Cooper S, Budd R, **Fikrig E**, Flavell R. Prominent T lymphocyte response to Borrelia burgdorferi from peripheral blood of unexposed donors European Journal Of Immunology 1994, 24: 320-324. PMID: 7905415, DOI: 10.1002/eji.1830240207.
30. **Fikrig E**, Bockenstedt LK, Barthold SW, Chen M, Tao H, Ali-Salaam P, Telford SR, Flavell RA. Sera from patients with chronic Lyme disease protect mice from Lyme borreliosis. The Journal Of Infectious Diseases 1994, 169: 568-74. PMID: 8158028, DOI: 10.1093/infdis/169.3.568.
31. Persing DH, Rutledge BJ, Rys PN, Podzorski DS, Mitchell PD, Reed KD, Liu B, **Fikrig E**, Malawista SE. Target imbalance: disparity of Borrelia burgdorferi genetic material in synovial fluid from Lyme arthritis patients. The Journal Of Infectious Diseases 1994, 169: 668-72. PMID: 8158048, DOI: 10.1093/infdis/169.3.668.
32. Lam TT, Nguyen TP, **Fikrig E**, Flavell RA. A chromosomal Borrelia burgdorferi gene encodes a 22-kilodalton lipoprotein, P22, that is serologically recognized in Lyme disease. Journal Of Clinical Microbiology 1994, 32: 876-83. PMID: 8027338, PMCID: PMC263156, DOI: 10.1128/jcm.32.4.876-883.1994.
33. Nguyen TP, Lam TT, Barthold SW, Telford SR, Flavell RA, **Fikrig E**. Partial destruction of Borrelia burgdorferi within ticks that engorged on OspE- or OspF-immunized mice. Infection And Immunity 1994, 62: 2079-84. PMID: 8168973, PMCID: PMC186469, DOI: 10.1128/iai.62.5.2079-2084.1994.

34. McMillen MA, Cunningham ME, Schoen R, **Fikrig E**. Gout in patients with systemic lupus erythematosus. British Journal Of Rheumatology 1994, 33: 595-6. PMID: 8205413, DOI: 10.1093/rheumatology/33.6.595.
35. **Fikrig E**, Telford SR, Wallich R, Chen M, Lobet Y, Matuschka FR, Kimsey RB, Kantor FS, Barthold SW, Spielman A, Flavell RA. Vaccination against Lyme disease caused by diverse Borrelia burgdorferi. Journal Of Experimental Medicine 1995, 181: 215-221. PMID: 7807004, PMCID: PMC2191810, DOI: 10.1084/jem.181.1.215.
36. Dunne M, al-Ramadi BK, Barthold SW, Flavell RA, **Fikrig E**. Oral vaccination with an attenuated Salmonella typhimurium strain expressing Borrelia burgdorferi OspA prevents murine Lyme borreliosis. Infection And Immunity 1995, 63: 1611-4. PMID: 7890431, PMCID: PMC173199, DOI: 10.1128/iai.63.4.1611-1614.1995.
37. **Fikrig E**, Tao H, Barthold SW, Flavell RA. Selection of variant Borrelia burgdorferi isolates from mice immunized with outer surface protein A or B. Infection And Immunity 1995, 63: 1658-62. PMID: 7729870, PMCID: PMC173206, DOI: 10.1128/iai.63.5.1658-1662.1995.
38. Telford SR, Kantor FS, Lobet Y, Barthold SW, Spielman A, Flavell RA, **Fikrig E**. Efficacy of human Lyme disease vaccine formulations in a mouse model. The Journal Of Infectious Diseases 1995, 171: 1368-70. PMID: 7751719, DOI: 10.1093/infdis/171.5.1368.
39. Suk K, Das S, Sun W, Jwang B, Barthold SW, Flavell RA, **Fikrig E**. Borrelia burgdorferi genes selectively expressed in the infected host. Proceedings Of The National Academy Of Sciences Of The United States Of America 1995, 92: 4269-4273. PMID: 7753795, PMCID: PMC41925, DOI: 10.1073/pnas.92.10.4269.
40. Barthold SW, **Fikrig E**, Bockenstedt LK, Persing DH. Circumvention of outer surface protein A immunity by host-adapted Borrelia burgdorferi. Infection And Immunity 1995, 63: 2255-61. PMID: 7768606, PMCID: PMC173294, DOI: 10.1128/iai.63.6.2255-2261.1995.
41. Cretella S, Gordon S, Flavell RA, **Fikrig E**. Evaluation of a lyme disease enzyme immunoassay using the 41-G fragment of flagellin European Journal Of Clinical Microbiology & Infectious Diseases 1995, 14: 609-613. PMID: 7588849, DOI: 10.1007/bf01690736.
42. Feng S, Barthold SW, Bockenstedt LK, Zaller DM, **Fikrig E**. Lyme disease in human DR4Dw4-transgenic mice. The Journal Of Infectious Diseases 1995, 172: 286-9. PMID: 7797933, DOI: 10.1093/infdis/172.1.286.
43. Telford S, **Fikrig E**. Progress Towards a Vaccine for Lyme Disease BioDrugs 1995, 4: 49-60. DOI: 10.1007/bf03259070.
44. Magnarelli L, Anderson J, Flavell R, **Fikrig E**. REACTIVITY OF WHITE-FOOTED MOUSE AND RACCOON SERA TO WHOLE CELL AND RECOMBINANT ANTIGENS OF BORRELIA BURGDORFERI Journal Of Wildlife Diseases 1995, 31: 339-344. PMID: 8592354, DOI: 10.7589/0090-3558-31.3.339.
45. Jwang B, Dewing P, **Fikrig E**, Flavell RA. The hook protein of Borrelia burgdorferi, encoded by the flgE gene, is serologically recognized in Lyme disease. MSphere 1995, 2: 609-15. PMID: 8548542, PMCID: PMC170207, DOI: 10.1128/cdli.2.5.609-615.1995.
46. Feng S, Das S, Lam T, Flavell RA, **Fikrig E**. A 55-kilodalton antigen encoded by a gene on a Borrelia burgdorferi 49-kilobase plasmid is recognized by antibodies in sera from patients with Lyme disease. Infection And Immunity 1995, 63: 3459-66. PMID: 7642278, PMCID: PMC173477, DOI: 10.1128/iai.63.9.3459-3466.1995.

47. **Fikrig E**, Tao H, Chen M, Barthold SW, Flavell RA. Lyme borreliosis in transgenic mice tolerant to Borrelia burgdorferi OspA or B. Journal Of Clinical Investigation 1995, 96: 1706-1714. PMID: 7560061, PMCID: PMC185806, DOI: 10.1172/jci118215.
48. De Silva AM, **Fikrig E**. Growth and migration of Borrelia burgdorferi in Ixodes ticks during blood feeding. American Journal Of Tropical Medicine And Hygiene 1995, 53: 397-404. PMID: 7485694, DOI: 10.4269/ajtmh.1995.53.397.
49. Schoen RT, Meurice F, Brunet CM, Cretella S, Krause DS, Craft JE, **Fikrig E**. Safety and immunogenicity of an outer surface protein A vaccine in subjects with previous Lyme disease. The Journal Of Infectious Diseases 1995, 172: 1324-9. PMID: 7594671, DOI: 10.1093/infdis/172.5.1324.
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