Updated 03-02-2015

# Krishnan Natesan, Suganthini M.D. Division of Infectious Diseases John D. Dingell VA Medical Center, Detroit, MI

#### **OFFICE ADDRESS:**

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#### **PERSONAL DATA:**

Visa Status: U.S. Citizen

# **ACTIVE MICHIGAN LICENSURE (Expires 12/2016):**

Michigan State License: 4301071707

Michigan DEA: BK9417305

Controlled Substance License: 5315005291

### **BOARD CERTIFICATIONS:**

Board Certified in Internal Medicine 2001 (expired 2011).

Board Certified in Infectious Diseases 2014 (expires 2024)

# **EDUCATION AND TRAINING:**

S Krishnan Natesan, M.D Curriculum Vitae Page 2	
1986-1992	BS Degree, Bachelor of Medicine and Surgery, Medical School, Madras Medical College, Madras University, Madras, India
1998- 2001	Residency in Internal Medicine, St. Joseph Mercy Hospital, Pontiac, MI.
2001-2005	Fellowship in Infectious Diseases, Wayne State Univ, Detroit, MI

## **APPOINTMENTS:**

9/2013 to Present	Infectious Disease Consultant, John D. Dingell VA Medical Center, Detroit, MI
2014-Present	Member, Wayne State University-Infectious Disease Fellows Clinical Review Committee
8/01/05- 9/2013	Assistant Professor of Medicine, FTA, Division of Infectious Diseases, Department of Medicine, John D. Dingell V.A. Medical Center, Wayne State University, Detroit, MI.
8/2005 to Present	VA Alternate/representative for Wayne State University IRB (Institution Review Board MO1) Committee.
8/2005 to 2009/Present	Member, Pharmacy/Antibiotic Stewardship Committee. John D. Dingell VA Medical Center

# **HOSPITAL POSITIONS:**

2/1996-5/1998	Research Assistant, Louis Elliman Research Center, Wayne State University, Detroit, MI
8/1993-8/1995	Assistant Physician, Kovai Medical Center and Hospital, Coimbatore, India

S Krishnan Natesan, M.D. Curriculum Vitae Page 3 9/1992-7/1993

Internist, Chennai Kaliappa Hospital, Madras, India.

#### **PROFESSIONAL SOCIETIES:**

Infectious Disease Society of America American Society of Microbiologists American Medical Association American College of Physicians

## **REVIEWER FOR FOLLOWING JOURNALS:**

Journal of Antimicrobial Chemotherapy Diagnostic Microbiology and Infectious Diseases International Journal of Antimicrobial Agents and Chemotherapy Antimicrobial Agents and Chemotherapy Mycoses European Infectious Disease Journal Drug Design, Development and Therapy

### LICENSURE & BOARD CERTIFICATION: State of Michigan, ID #430107170

2014	Board Certified in Infectious Diseases
2001	Board Certified in Internal Medicine.
1993	Board Certified in Diplomate of National
	Board of Examinations, New Delhi, India
1992	Board Certified in M.B.B.S., First Class, Madras Medical College, Madras University, Madras, India.

1998-2000	Best Intern Award, and Dr. PES Award for The Best Resident, St. Joseph Mercy Hospital, Pontiac, MI
1994	Mother Theresa Award for rendering health care in Madras shelters.
1992	Graduated in the top 1 percent in the Madras University Board Certification Examination for M.B.B.S.
1990	Distinctions in Pathology, Microbiology and Biochemistry
1987	Graduated in the top 1 percent in Chemistry, Mathematics, Physics and Biology

#### **Recent Presentations-Invited Speaker :**

Infectious Disease Update 2015. Wayne State University Topic: Respiratory Infections: Current Perspective

### **RESEARCH SUPPORT**

### **1. Suganthini Krishnan Natesan, Principal Investigator: (\$150,000)**

Molecular Mechanisms of Triazole Resistance in *Aspergillus species*. CDA-2 (Career Development Award) Federal Grant, John D. Dingell VA Medical Center, 2009-14.

### 2. Suganthini Krishnan Natesan, Principal Investigator: (\$82,628)

Evaluation of the in *vivo* efficacy of voriconazole plus anidulafungin against voriconazole-resistant *A. fumigatus* using a neutropenic murine model of invasive pulmonary aspergillosis. Pfizer, IIR (Investigator Initiated Research) 2010-13.

### 3. Suganthini Krishnan Natesan, Principal Investigator:

Evaluation of the in *vivo* efficacy of posaconazole against voriconazole resistant *A*. *fumigatus* using a neutropenic murine model of invasive pulmonary aspergillosis. Schering-Plough, 2009-10.

### 4. Suganthini Krishnan Natesan, Principal Investigator: (\$50,000)

MSTF (Medical Staff Trust Fund), Wayne State University. Molecular Mechanisms of Voriconazole-resistance in *Aspergillus flavus* (2005-07).

## **CLINICAL TRIALS:**

2004-2005	A Phase 3, Multicenter, Randomized, Double-blind Comparative Study of the Efficacy and Safety of Tigecycline vs. Levofloxacin to Treat Subjects Hospitalized with Community Acquired Pneumonia. Wyeth Research Inc. Approved by IRB Feb 4, 2004, \$56,448. Krishnan, Suganthini, Sub- Investigator
2004-2006	A Phase 3, Multicenter, Double-blind, Randomized (3:1) Study Evaluating Tigecycline and Linezolid for the Treatment of Serious Infections in Subjects with Vancomycin-Resistant Staphylococcus Aureus, Wyeth Research Inc. Approved by IRB Feb 5 2004, \$121,086. <b>Krishnan, Suganthini, Sub-Investigator</b> .
2006	A Phase II, Prospective, Randomized, Double-Blind, Active Controlled, Parallel Group, Multicenter, "Proof of Concept" Trial in Adult Patients with Community-Acquired Pneumonia, Roche Inc, \$25,000. Krishnan, Suganthini, Sub-Investigator.
2006-2007	A Phase II Prospective Open Label, Randomized, Active Controlled, Parallel Group, Multicenter, "Proof of Concept Trial in Adult Patients with Complicated Skin and Skin Structure Infections, \$100,000. <b>Krishnan, Suganthini, Sub-Investigator</b> .

### **RESEARCH MENTORSHIP/TRAINING:**

1. 2012-2014: Trained Dr Wen, PhD, in the VA fungal research laboratory.

2. 2012: **Trained and mentored** Infectious Disease Fellow, Dr Subramaniam Swaminathan in the VA research laboratory.

3. 20010-2011: **Trained and mentored** Philip Mcdonald, Wayne State student in the VA fungal research research lab.

4. 2009: **Trained and mentored**, Dr Rajat Narang, Wayne State Univ. resident/graduated pulmonary critical care fellow, in the VA research lab.

5. 2011-2012: **Trained** Vidisha Patel in the VA fungal research laboratory, biochemistry graduate, WSU.

6. 2009-2011: **Trained** Ami Khanal Lamichchane, Chemistry/molecular microbiology graduate WSU, in VA fungal research laboratory.

# **PEER-REVIEWED PUBLICATIONS:**

- Krishnan Natesan S, Lamichchane AK, Swaminathan S, Wu W. Differential Expression of ABC (<u>ATP-Binding Cassette</u>) and/or MFS (Major Facilitator Superfamily) Class Efflux Pumps Contributes to Voriconazole Resistance (VRC-R) in *Aspergillus flavus*. <u>Diagn Microbiol Infect Dis.</u> 2013 Aug;76(4):458-63
- 2. **Krishnan Natesan S,** Wu W, Cutright JL, Chandrasekar PH. In *vitro-in vivo* correlation of voriconazole resistance due to G448S mutation (*cyp51A* gene) in *Aspergillus fumigatus*. Diagn Microbiol Infect Dis. 2012 Nov;74(3):272-7.
- 3. **Krishnan Natesan, Suganthini,** Wu W, Chandrasekar PH. In *vitro* efficacy of the combination of voriconazole and anidulafungin against voriconazole-resistant *cyp*51A mutants of *Aspergillus fumigatus*. Diagn Microbiol Infect Dis. 2012 Jun;73(2):135-7.
- 4. **Krishnan Natesan, Suganthini**, Manavathu EK, Cutright JL, Chandrasekar PH. Efficacy of anidulafungin, caspofungin and fluconazole in the early phase of infection in a neutropenic murine invasive candidiasis model. Int J Antimicrob Agents. 2010 Jul;36(1):33-6.
- 5. **Krishnan Natesan, Suganthini**, Elias K. Manavathu, George J. Alangaden, PH,Chandrasekar. A Comparison of The Fungicidal Activity of Amphotericin B and Posaconazole against Zygomycetes *in vitro*. Diagnostic Microbiology and Infectious Diseases. 2009 Apr;63(4):361-4.

- 6. **Krishnan Natesan, Suganthini,** Chandrasekar PH, Alangaden GJ, Manavathu EK. Molecular characterization of *cyp*51A and cyp51B genes coding for P450 14alpha-lanosterol demethylases A (CYP51Ap) and B (CYP51Bp) from voriconazole-resistant laboratory isolates of *Aspergillus flavus*. Int J Antimicrob Agents. 2008 Dec;32(6):519-2.
- 7. **Krishnan Natesan, Suganthini,** Chandrasekar PH, Manavathu EK, Revankar SG. Successful treatment of primary cutaneous *Aspergillus ustus* infection with surgical debridement and a combination of voriconazole and terbinafine. Diagn Microbiol Infect Dis. 2008 Dec;62(4):443-6.
- 8. **Krishnan Natesan, Suganthini,** Chandrasekar PH, Alangaden GJ, Manavathu EK. Fluvastatin potentiates the activity of caspofungin against *Aspergillus fumigatus* in *vitro*. Diagn Microbiol Infect Dis. 2008 Apr;60(4):369-73.
- 9. **Krishnan Natesan, Suganthini,** Elias K. Manavathu and Pranatharth Chandrasekar, Wayne State University, Detroit Medical Center, Detroit, Michigan. A comparative study of the fungicidal activity of Voriconazole and Amphotericin B against *Aspergillus fumigatus* hyphae. Journal of Antimicrobial Agents and Chemotherapy. 2005;55: 914-920.

# **BOOK CHAPTERS**

- 1. **Krishnan Natesan, Suganthini,** Pranatharthi Chandrasekar. ECAB Clinical Update: Infectious Diseases. Fungal Infections in Asia: Eastern Frontier of Mycology. An Appraisal of the Current Guidelines for the Use of Antifungals in the Treatment of Invasive Fungal Infections Due To *Candida, Aspergillus* And Mucor. (www.elsevier.co.in) 2013.
- 2. **Krishnan Natesan Suganthini**, Pranatharthi Chandrasekar, Wayne State University, Detroit Medical Center, Detroit, Michigan. Acute Osteomyelitis, Handbook of Infectious Diesease, Author: Krishnan S. In a Page Infectious Diseases. Ed. McCue ID & Kahan S. Lippincott Williams & Wilkins (104-113, 2007).
- Krishnan Natesan Suganthini, Pranatharthi Chandrasekar, Wayne State University, Detroit Medical Center, Detroit, Michigan. Chronic Osteomyelitis, Handbook of Infectious Disease, Author: Krishnan S. In a Page Infectious Diseases. Ed. McCue ID & Kahan S. Lippincott Williams & Wilkins. (104-113,

#### **REVIEW ARTICLES**

- Krishnan Natesan, Suganthini, Medscape Open Access: (emedicine.medscape.com) Chikungunya Virus. Published online 2014. December 4<sup>th</sup>
- 2. **Krishnan Natesan, Suganthini.** Terbinafine- A pharmacological and Clincial Review. Expert opinion in Pharmacotherapy, August, **2009.**
- 3. **Krishnan Natesan, Suganthini,** Chandrasekar PH. Int J Antimicrob Agents. 2008 Dec;32(6):519-24. Current and future therapeutic options in the management of invasive aspergillosis. Drugs. **2008**;68(3):265-82.
- 4. **Krishnan Natesan, Suganthini,** Manavathu EK, Chandrasekar PH. *Aspergillus flavus*: an emerging non-fumigatus Aspergillus species of significance. Mycoses. **2009**;52(3):206-22.

### **CASE REPORTS**

- 1. Natasha Purai Arora, Tania Jain, Ravinder Bhanot and **Krishnan Natesan**, **Suganthini**. Levamisole-induced leukocytoclastic vasculitis and neutropenia in a patient with cocaine use: An extensive case with necrosis of skin, soft tissue, and cartilage Addiction Science & Clinical Practice 2012, 7(1)19.
- Natasha Purai Arora, Vikas Taneja, Carlos Reyes Sacin, Ravinder Bhanot, Krishnan Natesan, Suganthini. Coccidioidomycosis masquerading as malignancy. BMJ Case Reports 2012; doi:10.1136/bcr.12.2011.5357.
- 3. **Krishnan, Suganthini**, P.H.Chandrasekar, Recurrent Strongyloides stercoralis Hyperinfection Syndrome; Case report and Review of Literature. Infectious Diseases in Clinical Practice: July 2006 - Volume 14 - Issue 4 - pp 240-243

### PUBBLISHED ABSTRACTS

1. **Krishnan Natesan, Suganthini**, W. Wu, P. H. Chandrasekar. Characterization of a Putative Protein kinase A (*pkaC*) Gene Involved in Conidiation/Pigmentation Pathway in Wild type (WT) and Pigmentless, Non-conidiating Voriconazole-Resistant (VCZ-R) *Aspergillus flavus*. Poster presentation at International Aspergillosis Conference, Istanbul, Turkey 2012.

2. **Krishnan Natesan, Suganthini**, Philip McDonald, W. J. Wu, P. H. Chandrasekar. In *Vitro* Synergistic Fungicidal Activity of Tricyclazole (TCZ) and Tropolone (TRO) in Combination with Voriconazole (VCZ) against VCZ-Resistant (R) *Aspergillus flavus*. Poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy 2012 (51st ICAAC; # F1-1382)

3. Krishnan Natesan, Suganthini, S. Swaminathan , J. Cutright , C. Subramanian , N. Goyal , R. George , P. H. Chandrasekar. Antifungal Susceptibility Pattern of *Aspergillus fumigatus* isolated from Clinical Specimens in Detroit Medical Center (DMC): Rising frequency of High MIC of azoles (2003-06). Poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (50th ICAAC), Boston, MA, Sep 12th-15th 2010.

4. Krishnan Natesan, Suganthini, J. L. Cutright, S. B. Reddy, P. H. Chandrasekar. Efficacy of Posaconazole (POS) Against Voriconazole-Resistant (VCZ-R) *A. flavus* Pulmonary Infection in an Inhalational, Neutropenic Murine Model. Poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (50th ICAAC), Boston, MA, Sep 12th-15th 2010.

5. **Krishnan Natesan, Suganthini**, A. Lamichchane, P. H. Chandrasekar. Molecular Characterization of a Putative Polyketide Synthase PKSI/*alb1* gene involved in Di-Hydroxynaphthalene Melanin (DHN-M)/Conidial Pigmentation Pathway in Wild Type (WT) and Voriconazole-Resistant (VCZ-R) Albino Mutants (AMs) of *A. flavus*. Poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (50th ICAAC), Boston, MA, Sep 12th-15th 2010.

6. Krishnan Natesan, Suganthini, K. Jost, P. Chandrasekar. Overexpression of Four Novel Multi-Drug Resistance (MDR) Transporter Genes Encoding ABC or MFS Class Efflux Proteins Contribute to Voriconazole Resistance (VCZ-R) in *Aspergillus flavus*. Slide/Oral presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (50th ICAAC), Boston, MA, Sep 12th-15th 2010.

7. **Krishnan Natesan, Suganthini,** S. Swaminathan, P. Chandrasekar. Extended Spectrum Triazole Plus Type II Topoisomerase Inhibitor (TI) against Azole-Resistant (R) Isolates of *Aspergillus*: Synergistic Interaction in *vitro*. Poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (50th ICAAC), Boston, MA, Sep 12th-15th 2010.

8. **Krishnan Natesan, Suganthini**, E. K. Manavathu, P. H. Chandrasekar Voriconazole-Resistant (VRC-R) *Aspergillus flavus* with Overexpression of *CYP51A* or ATP-Mediated Multi Drug-Resistant (MDR 1, 2) Efflux Pumps: Synergy of Voriconazole (VRC) with Sertraline (SER) or Tacrolimus (TAC) Demonstrated In *Vitro*. Accepted for poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco Sep 12th-15th 2009. Poster # M1722.

9. Krishnan Natesan, Suganthini, V. Patel, A. K. Lamichchane, P. H. Chandrasekar. Overexpression of Multi-Drug Resistance Transporter Genes Encoding ABC (ATP-Binding Cassette) Class Efflux Proteins (MDR1p, MDR2p) with or without *Cyp51A* Upregulation Contribute to Voriconazole Resistance (VRC-R) in *Aspergillus flavus*. Accepted for poster presentation at The 49th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco Sep 12th-15th 2009. Poster # M1723.

10. **Krishnan Natesan**, **Suganthini**. In *Vitro* Evaluation of the Antifungal Activities of Voriconazole and Anidulafungin Alone and in Combination against Voriconazole Resistant (VCZ-R) Isolates of *Aspergillus fumigatus*. Oral presentation at The 48th Interscience Conference on Antimicrobial Agents and Chemotherapy and The Infectious Disease Society of America, Combined Meeting, Washington DC, October 2008. M-3764 Oral/Slide Presentation.

11. **Krishnan Natesan, Suganthini,** Cutright, Jessica, Manavathu, Elias, Alangaden, George, Chandrasekar, P. H. In *vivo* Efficacy of Posaconazole Against Laboratory-Selected Voriconazole-Resistant, *A. fumigatus* in a Neutropenic Murine Pulmonary Aspergillosis Model. Poster presentation at The 48th Interscience Conference on Antimicrobial Agents and Chemotherapy and The Infectious Disease Society of America, Combined Meeting, Washington DC 2008. Poster Number M:1553.

12. **Krishnan Natesan, Suganthini,** Cutright, Jessica, Manavathu, Elias, Alangaden, George, Chandrasekar, P. H. A Comparative Study of the *in vivo* Efficacy of Anidulafungin, Caspofungin and Fluconazole on the Early Stage of Infection in a

Neutropenic Murine Disseminated Candidiasis Infection Model. Poster presentation at: 48th Interscience Conference on Antimicrobial Agents and Chemotherapy and The Infectious Disease Society of America, Combined Meeting, Washington DC 2008. Poster Number M:1559.

13. Manavathu E, **Krishnan Natesan, Suganthini**, Alangaden G, Revankar S, Cutright J, Cha R, Chandrasekar P. Effects of Animal and Human Sera and Blood on the bioactivity, and Influence of Grapefruit Juice on Blood concentrations of Orally Administered Voriconazole in Neutropenic Mice. IN: 47th Interscience Conference on Antimicrobial Agents and Chemotherapy, September 17-20, 2007, Chicago, Illinois, Abstract #A-769.

14. **Krishnan Natesan, Suganthini,** Manavathu EK, Alangaden GJ, Chandrasekar PH. Time-Kill Studies Demonstrating Rapid Fungicidal Activity of Amphotericin B (AMB) Compared to Posaconazole (POS) against Zygomycetes. IN: 47th Interscience Conference on Antimicrobial Agents and Chemotherapy, September 17-20, 2007, Chicago, Illinois, Abstract #M-1828.

15. **Krishnan Natesan, Suganthini,** Manavathu EK, Chandrasekar PH, Revankar S. Successful Treatment of Primary Cutaneous Aspergillus ustus Infection with a Combination of Voriconazole (VCZ) and Terbinafine (TBF) Despite Drug Resistance; Synergistic Interaction Demonstrated in vitro Despite Drug Resistance; Synergistic Interaction Demonstrated in vitro. IN: 45th Annual Infectious Diseases Society of America (IDSA), October 4-7, 2007, San Diego, California, Abstract #181

16. **Krishnan Suganthini,** P.H. Chandrasekar, G.J. Alangaden, E.K. Manavathu, Wayne State University, John D. Dingell VA Medical Center, Detroit, MI. Molecular characterization of Cyp51 A and B genes from voriconazole-resistant and susceptible isolates of *Aspergillus flavus*. Sep 2006, Abstract # M-1757 (Interscience conference on antimicrobial agents and chemotherapy, San Francisco, 2006.

17. **Krishnan Suganthini**, P.H. Chandrasekar, G.J. Alangaden, E.K. Manavathu, Wayne State University, John D. Dingell VA Medical Center, Detroit, MI. *In vitro* activities of statins (anti-cholesterol agents) alone and in combination with antifungal drugs against *Aspergillus species*. Abstract # M-304, Interscience conference on antimicrobial agents and chemotherapy, San Francisco, 2006.

18. Elias K. Manavathu, **Krishnan, Suganthini**, I. Baskaran, George J. Alangaden and P. H. Chandrasekar. A point mutation in the cytochrome P450 14cx-sterol demethylase

gene cyp51B contributes to voriconazole resistance in a laboratory-selected isolate of Aspergillus fumigatus. Interscience Conference on Antimicrobial Agents and Chemotherapy, 2004.

19. P. H. Chandrasekar, J. L. Cutright, **Krishnan, Suganthini** and Elias K. Manavathu. A comparative study of the in vivo efficacy of amphotericine B lipid complex alone and in combination with caspofungin against Aspergillus fumigatus in a murine pulmonary aspergillosis model. Interscience Conference on Antimicrobial Agents and Chemotherapy, 2004.

20. **Krishnan, Suganthini**, George J. Alangaden, Jessica L. Cutright, Elias K. Manavathu, Pranatharthi Chandrasekar. Current Epidemiology of Blood Stream Infections Among Cancer Patients, 2000-2002. The Infectious Disease Society of America, San Diego, California, 2003.

21. **Krishnan, Suganthini**, Elias K. Manavathu and Pranatharthi Chandrasekar. A Comparative Study of the fungicidal activity of voriconazole and amphotericine B against *Aspergillus fumigatus* hyphae. Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, Illinois, 2003.

22. Elias K. Manavathu, **Krishnan, Suganthini**, Jessica L. Cutright and Pranatharthi Chandrasekar. A comparative study of the in vitro susceptibility of *Aspergillus fumigatus* to antifungal agents individually and in combinations by the fractional inhibitory concentration index, tetrazolium reduction and radiometric assays. 40th Interscience Conference on Antimicrobial Agents and Chemotherapy, Toronto, Ontario, Canada. September 17-20, 2000.Abstract No. 931

23. Manavathu EK, **Krishnan, Suganthini**, Cutright JL, Chandrasekar PH. A Comparative Study of the In Vitro Susceptibility of *Aspergillus fumigatus* to Antifungal Agents Individually and in Combinations. IN: Programs and Abstracts of the 11<sup>th</sup> International Symposium on Infections in the Immunocompromised Host, Halifax, Nova Scotia, Canada, June 18-21, 2000

23. Jorge A. Guzman, Felix J. Lacoma, Ali K. Najar, **Krishnan, Suganthini**, James A. Kruse. Normalization of systemic DO2 after resuscitation from shock is associated with inadequate splanchnic DO2 and persistent gastric intramucosal hypercarbia. American Journal of Respiratory and Critical Care Medicine. 1996;153:694-700.

## CLINICAL APPRENTICESHIP/ TEACHING: WSU/DMC/VA

1. 2005-Present: Infectious Diseases Consultation Service with WSU Fellows, Residents or students at VAMC

2. 2005-Present: Ambulatory clinic at the VAMC (HIV and General ID). Occasional ID fellow supervision.

3. 2012-Present: E-consultation services at VAMC

4. 2014-Present: ID follow up consultation services for home based Intravenous infusions for veterans treated in non-VA institutions in and around metro Detroit.

5. 2005-2013: Infectious Diseases Inpatient Consultation Service at WSU (3-4 months/year) with Fellows, Residents or students at WSU

6. 2005-2011: Internal Medicine rounds (1 month /year) at DRH and Harper University Hospital for residents and WSU students

7. 2006 to 2011: Microbiology case studies, Scott Hall, IInd Year Medical students 11. 2005- 2012: Journal club presentations for WSU faculty, fellows, residents and students per ID schedule

8. 2005-2012: Didactic lectures per ID schedule, for faculty, fellows, residents and students at WSU

9. 2005-2012: ID tutorial lectures for WSU residents and students

10. 2005-2009: Physical diagnosis for WSU medical students at VAMC

11. 2005-2009: Weekly basic science lab meetings with WSU faculty/trainees as part of fungal research.

### **PRESENTATIONS:**

1. 2014: "To treat or not to treat" Infectious Disease didactic presentation at the Noon Conference at VAMC

2. 2013: Research Conference: Molecular mechanisms of triazole resistance in *Aspergillus flavus* for faculty, fellows, post docs, residents and students at VAMC.

3. 2009-2013: VA research day poster presentations annually

4. 2012: Candidiasis and dimorphic fungi VAMC Noon Conference

5. 2011: Research Conference - Mechanisms of Triazole Resistance in Aspergillus species. Presented for Infectious Disease Faculty, Fellows, Residents and WSU Students at WSU

6. 2006-2009: Annual Lecture Respiratory Tract Infections- Internal Medicine residents, students.

7. 2006-2011: Respiratory Infections- Annual Lecture for Physician Assistants at Eugene Applebaum Pharmacy Building

8. 2011: Candidemia and Endemic Mycoses for residents and students at WSU/DMC and for faculty, residents and students.

9. 2011: Invasive Aspergillosis- Presentation for faculty, residents and students at the VAMC.

10. Current Epidemiology of Blood Stream Infections in Cancer patients, Didactic lecture presented to residents, fellows and faculty, Infectious Diseases, Wayne State University, Detroit, Michigan, 2007.

11. HIV and Syphilis Co-infection, presented to health care workers, nurses, students, residents and physicians, Didactic lecture presented at the Detroit Public Health Department, Herman Keiffer, 2005.

12. Dermatological Manifestations of Infectious Diseases following international Travel, Didactic lecture presented to staff at the Detroit Public Health Department, Herman Keiffer, 2005.

13. Severe Acute Respiratory Syndrome, didactic lecture presented to residents, fellows and faculty, Infectious Diseases, Wayne State University, Detroit, Michigan, 2005.

14. Clostridium difficile colitis, didactic lecture presented to residents, fellows and infectious disease faculty, Wayne State University, Detroit, Michigan. 2002.

15. Allergic forms of Aspergillosis and Aspergillomas: How serious are these infections? St. Joseph Mercy Hospital, Pontiac, MI. 2001.

16. Difficulties encountered in the management of infections in the geriatric population, didactic lecture presented to Internal Medicine residents and faculty at St. Joseph Mercy Hospital, Pontiac, Michigan. 2000.

17. Disseminated Cytomegalovirus infection presenting as Addison's Disease secondary to CMV adrenalitis in AIDS, case report and review of literature, presented to internal medicine residents, students and faculty at St. Joseph Mercy Hospital, Pontiac, Michigan. 2000.

18. Endovascular infections in intravenous drug addicts vs patients on hemodialysis, didactic lecture presented to Internal Medicine residents and faculty, at St. Joseph Mercy Hospital, Pontiac, Michigan. 1999.

19. Necrotizing Cavitary Pneumonia-Not always secondary to infection: Wegeners Granulomatosis: Didactic lecture for residents and faculty at St Joseph mercy Hospital, Pontiac, MI. 1999.

20. Endovascular Infections: A practical approach to bacteremias. Didactic lecture for faculty and residents at St Joseph Mercy Hospital, Pontiac, MI. 1998.