

# Curriculum Vitae

## Bettina M. Knoll, MD, PhD

### PERSONAL INFORMATION

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### PRESENT ACADEMIC RANK AND POSITION

**Assistant Professor** 10/2012-  
Brown University Department of Medicine, Division of Infectious  
Diseases

### EDUCATION

**M.D.** Charite Medical Center, Humboldt University, Berlin, Germany 10/1997-07/2004  
• **PhD thesis:** Genetic variability, haplotypes, and htSNPs of the 03/2001-06/2005  
Arrestin domain-containing 4 gene (ARRDC4) in Russians;  
Variants of the ARRDC4 gene and their association with  
sporadic colorectal cancer, Thesis advisor: Prof. Dr. Ivar Roots,  
Department of Clinical Pharmacology, Pharmacogenomics,  
Charite Medical Center

### POSTDOCTORAL TRAINING

**Resident, Internal Medicine,** Mayo Clinic, Rochester MN 7/2005-06/2008  
**Fellow, Infectious Diseases,** Mayo Clinic, Rochester MN 7/2008-11/2009  
**Fellow, Infectious Diseases,** University of Minnesota, Minneapolis MN 12/2009-6/2010  
**Fellow, (Clinical)-Transplant Infectious Diseases,**  
Massachusetts General Hospital, Boston MA 7/2010-06/2011  
**Fellow, (Clinical/Research)-Transplant Infectious Diseases,**  
Brigham and Women's Hospital. Boston MA 7/2011-06-2012  
Dana-Farber Cancer Center, Boston MA

## BOARD CERTIFICATION(S)

	Year
<b>Diplomate in Internal Medicine, ABIM</b>	2008
<b>Diplomate in Infectious Diseases, ABIM</b>	2010
<b>Educational Commission for Foreign Medical Graduates (ECFMG)</b>	2005

## LICENSURE

Rhode Island MD14071

## HONORS/AWARDS

	Year(s)
<b>ACE award</b> (Peer selected during internship, for the 3 interns out of 49 best exhibiting the attributes of Attitude, Commitment, and Excellence)	2005/6
<b>Mayo Clinic Stiftung-Kellen Fellowship award</b> (The Mayo Clinic Stiftung is a charitable foundation that awards a resident or fellow of German citizenship in training at Mayo School of Graduate Medical Education in recognition of outstanding clinical performance, research productivity and humanitarian efforts. The award covers the cost of their stipend, benefits and indirects during the term of fellowship.)	2006/7
<b>ACE award</b> (Peer selected during senior year of residency, for the senior medical resident best exhibiting the attributes of Attitude, Commitment, and Excellence)	2007/8
<b>Mayo Clinic Stiftung-Kellen Fellowship award</b>	2008/9
<b>IDSA Travel grant</b>	2008
<b>Mayo Clinic Stiftung-Kellen Fellowship award</b>	2009/10
<b>IDSA Travel grant</b>	2009
<b>IDSA Travel grant</b>	2010
<b>Poster of Distinction, American Transplant Congress</b>	2012

## PROFESSIONAL & COMMUNITY MEMBERSHIPS, SOCIETIES AND SERVICES

### Professional Memberships

	Year(s)
American College of Physicians, Member	2005-2008
American Medical Association, Member	2005-2008
Infectious Diseases Society of America, Member	2008-current
American Society of Transplantation, Member	2010-current

**Editorial Activities**

Ad hoc Reviewer

Clinical Infectious Diseases

Transplant Infectious Diseases

Journal of Medical Microbiology

Journal of Infection

Mayo Clinic Proceedings

Inflammatory Bowel Diseases

Virulence

**EDUCATIONAL ACTIVITIES****Course Development**

Program in Clinical effectiveness - Harvard School of Public Health	07/2011
Responsible conduct of research - Mayo Clinic	08/2009
Writing for biomedical publication - Mayo Clinic	03/2009
Grant writing seminar and workshop - Mayo Clinic	11/2008
Introduction into clinical research-Mayo Clinic	07/2008

**Formal Teaching of Peers (e.g., CME and other continuing education courses)**

- Lecture (60'): 'The challenge of CMV infection after solid organ transplantation' 03/2011  
Yale School of Medicine Infectious Diseases Clinical Case Conference
- Lecture (30'): 'Syphilis in the 21<sup>st</sup> century' 02/2004  
The Dermatological Society of Berlin
- Lecture (30'): 'The genetic background of linear dermatoses' 08/2001  
The Dermatological Society of Berlin

**Formal Teaching of Students in Courses**

- PubH6355, Pathophysiology of Infectious Diseases 04/2010  
University of Minnesota Medical School  
2<sup>nd</sup> year medical students  
Weekly 2-hour course for 2 months

**Formal Teaching of Residents**

- Infectious Diseases Review for Internal Medicine Boards 10/2009  
Mayo Clinic Rochester  
Internal medicine residents  
Weekly half hour lecture for 2 months
- Lecture (60'): 'Fever of Unknown Origin' 03/2013  
Rhode Island Hospital  
Internal medicine residents

**Clinical Supervisory and Training Responsibilities**

- Preceptor at ISTOP 01/2010  
(Interprofessional STreet Outreach Project: providing basic health care, information, and supplies to individuals experiencing homelessness)  
University of Minnesota Medical School  
1<sup>st</sup> and 2<sup>nd</sup> year medical students  
One evening per week for 6 months
- Ambulatory Internal Medicine Clinic Preceptor 05/2008  
Mayo Clinic Rochester  
Internal medicine first year residents  
Daily for one month during third year of Internal Medicine Residency

**Other**

- Faculty discussant 01/2013  
Department of Medicine Clinico-Pathological Conference  
Warren Alpert Medical School of Brown University
- Faculty discussant 02/2013  
Morbidity and Mortality conference  
The Miriam Hospital

## COMMITTEE MEMBERSHIPS AND OTHER ACTIVITIES

### Mayo Clinic Rochester

Department of Internal Medicine Division of Infectious Diseases Education Committee	2008-9
Mayo Clinic Rochester Committees Infection Control Committee	2008-9
Research Committee	2008-9

### Rhode Island Hospital

Antimicrobial Stewardship Antifungal Work Group	2013-
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### Quality improvement projects

- Quality improvement project to increase the rate of autopsies at the Department of Internal Medicine, Mayo Clinic Rochester (2006-2008)  
I conducted a root cause analyses using online surveys among key stakeholders. Lack of knowledge about the procedure and associated lack of skills to obtain consent for it among internal medicine residents was identified as the major cause. I designed and implemented a multifaceted intervention strategy consisting of lectures, an educational pamphlet, and a specifically designed professionalism OSCE.
- Quality improvement project to educate kidney transplant patients about infection prevention, Division of Infectious Diseases, Mayo Clinic Rochester (2009).  
QIP consisted of creation of a patient information pamphlet and incorporation of the pamphlet into their pre-transplant education course.
- Quality improvement project to optimize the acute care for and work up of febrile patients with solid organ transplant in the Emergency Department, Division of Infectious Diseases, Massachusetts General Hospital (2011).  
QIP consisted of a syndrome specific fever work up algorithm to be used by surgical residents. The use of the algorithm reduced the number of unnecessary microbiological tests ordered, and increased the obtainment of appropriate tests.

## PRESENTATIONS

### International

Lytle FT, Knoll B, Comfere T. Microbiologic contamination of ultrasound transducers used by anesthesiologists in the operating room and intensive care unit. International Symposium of Intensive care and Emergency Medicine. Brussels, Belgium	03/2009
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**National**

- Knoll BM**, Spieler P, Kubiak D, Marty F 10/2012  
Neutropenia Associated with Prolonged Daptomycin Use  
Poster, IDSA 2012, San Diego, CA
- Knoll BM**, Koo S, Issa NC, Hammond SP, Tullius SG, Baden LR, Pomahac B, Marty FM. Infections following Facial Composite Tissue Allotransplantation (FCTA), Poster, American Transplant Congress, Boston, MA, Awarded Poster of Distinction 06/2012
- Marty FM, **Knoll BM**, Koo S, Hammond SP, Issa NC, Tullius SG, Milford E, Annino DJ, Baden LR, Pomahac B. Facial Allograft Lymphadenopathy Syndrome (FALS). Poster, American Transplant Congress, Boston, MA, Awarded Poster of Distinction 06/2012
- Knoll B**, Kappagoda S, Goldberg HJ, Gill R, Boyle K, Fuhlbrigge AL, Baden L, Marty F  
Nontuberculous Mycobacterial Infection Among Lung Transplant Recipients A Fifteen-Year Experience 1990-2005 10/2011  
Poster, IDSA 2011, Boston, MA
- Knoll B**, Corder GK, Gillingham KJ, Cavert W, Young JA  
Alemtuzumab Therapy Increases the Risk of Cytomegalovirus Infections in Kidney and/or Pancreas Transplant Recipients 10/2010  
Poster, IDSA 2010, Vancouver, BC
- Knoll B**, Brown B, Kremers W, Razonable R 10/2009  
Allele frequency of Toll-like receptor 3 L412F in Hepatitis C positive liver transplant patients  
Poster, IDSA 2009, Philadelphia PA
- Knoll B**, S.A. Cunningham, B.K. Hendrix, K.L. Wood, D.T. Lynch, E.A. Vetter, R. Patel 05/2009  
Evaluation of Simmons Citrate Agar Plates with 1% Inositol for Recovery of *Klebsiella oxytoca* from Stool, ASM 2009, Philadelphia PA
- Knoll B**, ElAtrouni W, B Lahr, LM Baddour 10/2008  
Recurrent Staphylococcus aureus Bacteremia in Olmsted County, Minnesota 1998-2005: A Population-Based Study. Poster, IDSA 2008, Washington DC
- ElAtrouni W, **Knoll B**, B Lahr, LM Baddour 10/2008  
MRSA Bacteremia: A Population based study in Olmsted County, MN 1998-2005. Poster, IDSA 2008, Washington DC
- ElAtrouni W, **Knoll B**, B Lahr, LM Baddour 10/2007  
Incidence of Staphylococcus aureus bloodstream infections in Olmsted County 2001-2005. Poster, IDSA 2007, San Diego, CA
- Knoll B**. Primary CNS lymphoma associated with mycophenolate mofetil and azathioprine in relapsing polychondritis. Poster, American College of Physicians Minnesota 2006, Minneapolis, MN 11/2006
- Peikert T, **Knoll B**, Barnes TW, Aubry MC, Krowka MJ. 'Pseudo'- mitral stenosis due to pulmonary venous obstruction by noncalcified fibrosing mediastinitis associated with histoplasmosis. 09/2006  
Oral Presentation by Knoll B. at: CHEST 2006, Salt Lake City, Utah

Khoo TK, **Knoll B**, Williams T, Temesgen Z. Acute flaccid Paralysis Associated with West Nile Virus Infection. Poster, American College of Physicians Minnesota 2003, Minneapolis, MN 10/2003

**Local**

**Knoll B**, Wright D, Ellingson LA, Kraemer L, Kuskowski MA, Johnson J Quality Improvement Project to Reduce Inappropriate Urinary Catheter Use at a Veterans Affairs Hospital  
Poster, Minneapolis Veterans Affairs Medical Center Research Day, and University of Minnesota Robert Hebbel Medicine Research Day, Minneapolis MN 05/2010

## Publications

### 1. Original articles

**Knoll BM**, Spieler PJ, Kubiak DW, Marty FM. Neutropenia Associated with Prolonged Daptomycin Use. Accepted for publication Clin Infect Dis.01/04/13

**Knoll BM**, Koo S, Issa NC, Hammond SP, Tullius SG, Baden LR, Pomahac B, Marty FM Infections following Facial Composite Tissue Allotransplantation. Single Center Experience and Review of the Literature. Am J Transplant. 2012 Dec 27. [Epub ahead of print]

**Knoll BM**, Hellmann M, Kotton CN. Vancomycin-resistant Enterococcus faecium meningitis in adults: Case series and review of the literature. Scand J Infect Dis. 2012 Sep 19. [Epub ahead of print]

**Knoll BM**, Kappagoda S, Gill RR, Goldberg HJ, Boyle K, Baden LR, Fuhlbrigge AL, Marty FM. Non-tuberculous mycobacterial infection among lung transplant recipients: a 15-year cohort study. Transpl Infect Dis. 2012 Oct;14(5):452-60.

**Knoll BM**, Wright D, Ellingson L, Kraemer L, Patire R, Kuskowski MA, Johnson JR. Reduction of inappropriate urinary catheter use at a veterans affairs hospital through a multifaceted quality improvement project. Clin Infect Dis. 2011 Jun;52(11):1283-90.

Sohail MR, Hussain S, Le KY, Dib C, Lohse CM, Friedman PA, Hayes DL, Uslan DZ, Wilson WR, Steckelberg JM, Baddour LM; Mayo Cardiovascular Infections Study Group. Risk factors associated with early- versus late-onset implantable cardioverter-defibrillator infections. J Interv Card Electrophysiol. 2011 Aug;31(2):171-83

Brown RA, Gralowski JH, Eid AJ, **Knoll BM**, Finberg RW, Razonable RR. R753Q single-nucleotide polymorphism impairs toll-like receptor 2 recognition of hepatitis C virus core and nonstructural 3 proteins. Transplantation. 2010 Apr 15;89(7):811-5.

El Atrouni WI, **Knoll BM**, Lahr BD, Eckel-Passow JE, Sia IG, Baddour LM. Temporal Trends in the Incidence of Staphylococcus aureus Bacteremia in Olmsted County, Minnesota, 1998 to 2005: A Population-Based Study. Clin Infect Dis. 2009 Dec 15;49(12):e130-8.

**Knoll BM**, Letendre L, Steensma DP.  
Life-threatening desquamating rash and hyperammonemia following administration of eculizumab for paroxysmal nocturnal hemoglobinuria. *Am J Hematol.* 2008 Nov;83(11):881-3.

Khandaker MH, **Knoll BM**, Arora AS.  
63-year-old man with cryptogenic cirrhosis and dyspnea.  
*Mayo Clin Proc.* 2008 May;83(5):580-3.

**Knoll B**, Goldammer M, Lesniewska A, Flügge J, Johne A, Mrozikiewicz PM, Roots I, Koepke K.  
An Anomalous Haplotype Distribution of the Arrestin Domain-Containing 4 Gene (ARRDC4) Haplotypes in Caucasians. *Genet Test.* 2008 Spring;12(1):147-52.

**Knoll B**, Rea DJ, Szoztek J, Nagorney DS, Tefferi A, Mesa RA.  
Images submission: Extramedullary hematopoiesis.  
*Am J Hematol.* 2008 Feb;83(2):171.

**Knoll BM**, Valles A, Hogan MC.  
56-Year-old man with rash, abdominal pain, and arthralgias.  
*Mayo Clin Proc.* 2007 Jun;82(6):745-8.

**Knoll B**, Tleyjeh IM, Steckelberg JM, Wilson WR, Baddour LM.  
Infective endocarditis due to penicillin-resistant viridans group streptococci.  
*Clin Infect Dis.* 2007 Jun 15;44(12):1585-92.

**Knoll B.** Variants of the ARRDC4 (DRH1) gene and their association with sporadic colorectal cancer Dissertationsschrift (PhD thesis), Medizinische Fakultät der Charité-Universitätsmedizin, Berlin, Germany ; University Press, 2005, p 1-58.

Treudler R, **Knoll B**, Ackermann-Simon J, Roesler B, Krahl D, Orfanos CE. Annular skin lesions refractory to therapy, *Hautarzt* 2005; 56(5): 480-482.

## 2. Book Chapters/Reviews

**Knoll B**, Mylonakis E. Anaerobic Infections. *Gorbach's 5-minute Infectious Disease Consult* ed. Gorbach, Falagas, Mylonakis, and Stone, Lippincott Williams & Wilkins, USA 2011;

**Knoll B**, Mylonakis E. Pancytopenia and Fever. *Gorbach's 5-minute Infectious Disease Consult* ed. Gorbach, Falagas, Mylonakis, and Stone, Lippincott Williams & Wilkins, USA 2011;

**Knoll B**, Baddour L, Wilson W. Prosthetic valve endocarditis. *Principles and Practice of Infectious Diseases* ed. Mandell, Douglas & Bennett, Elsevier/Churchill, USA 2009; Chapter 78

**Knoll B**, Ventori S, Temesgen Z.  
Etravirine. *Drugs Today (Barc).* 2008 Jan;44(1):23-33.

**Knoll B**, Lassmann B, Temesgen Z.  
Current status of HIV infection: a review for non-HIV-treating physicians. *Int J Dermatol.* 2007 Dec;46(12):1219-28.



**Knoll B.** ‚Perioperative Antibiotikaprophylaxe und supportive Antibiotikatherapie Indikationen und Arzneistoffauswahl‘ (Perioperative antibiotic prophylaxis and supportive antibiotic therapy. Indications and choice of regimen) in Aktueller Stand der zahnärztlichen Implantologie ed. Hartmann HJ, Spitta Verlag, Balingen, Germany, 2007; CD-ROM part 2, Chapter 17

**Knoll-B,** Knoll-Koehler E. ‚Lokalanaesthetika‘ (Local anesthetics) in Aktueller Stand der zahnärztlichen Implantologie Hartmann HJ, ed. Hartmann HJ, Spitta Verlag, Balingen, Germany, 2007; CD-ROM part 2, Chapter 17

**Knoll B,** Knoll-Koehler E. ‚Analgetika‘ (Analgesics) in Aktueller Stand der zahnärztlichen Implantologie Hartmann HJ ,ed. Hartmann HJ, Spitta Verlag, Balingen, Germany, 2007; CD-ROM part 2, Chapter 17

**Knoll B,** Knoll-Koehler E, Kriegelstein J , Rudolph U. Lokal- und Allgemeinanästhetika (Local and general anesthetics) in Textbuch der Pharmakologie und Toxikologie, 6<sup>th</sup>. Edition, 2007, p 297-341, Estler H, Schmidt H, Schmidt, H (ed), Schattauer Verlag, Stuttgart, New York.

Knoll-Koehler E, **Knoll B.** Lokal Anästhetika‘ (Local Anaesthetics) In Textbuch der Pharmakologie und Toxikologie, 5th Edition, Estler H (ed), Schattauer Verlag, Stuttgart, New York: 2000; p 179-191.

### **3. Thesis**

**Knoll B.** Variants of the ARRDC4 (DRH1) gene and their association with sporadic colorectal cancer Dissertationsschrift (PhD thesis), Medizinische Fakultät der Charite-Universitätsmedizin, Berlin, Germany ; University Press, 2005, p 1-58.