CURRICULUM VITAE AND BIBLIOGRAPHY

David George Frame, Pharm.D. Hematology/Oncology/BMT Clinical Specialist University of Michigan Health System

> Assistant Professor of Pharmacy University of Michigan Ann Arbor, MI

BUSINESS ADDRESS: University of Michigan Medical Center

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BIRTHPLACE: Belleville, IL, USA

LICENSURE: Michigan, Illinois

EDUCATION:

1978-1982 Belleville Township High School West, Belleville, Illinois
1982-1986 St. Louis University, St. Louis, Missouri (B.S. Chemistry)
1986-1990 Wayne State University, Detroit, Michigan (Grad. School Biochemistry)
1990-1993 Wayne State University, Detroit, Michigan (B.S. Pharmacy)
1993-1994 Wayne State University, Detroit, Michigan (Pharm.D.)
1994-1995 Fellowship (Oncology), University of Illinois at Chicago

ACADEMIC APPOINTMENTS:

1986-1988 Research Assistant, Endocrinology, St. Louis University School of Medicine
1989-1994 Faculty (Biochemistry) Wayne State University School of Medicine
1995- Present Associate Clinical Professor of Pharmacy, University of Illinois at Chicago
1995- Present Associate Clinical Professor of Pharmacy, Midwestern College of Pharmacy

2002-2005 Assistant Professor of Medicine, Rush University

2003-2006 Assistant Professor of Pharmacology, Rush University Medical School

2005- Present Assistant Professor of Pharmacy, University of Michigan

UNIVERSITY OF MICHIGAN APPOINTMENTS:

2006- Present Committee- Pharm.D Investigations 2005- Present Committee- Quality Control BMT

PROFESSIONAL EXPERIENCE:

1991-1992 Pharmacy Intern, Community Pharmacy,

1990-1994 Pharmacist and Intern, Children's Hospital of Michigan, Detroit, Michigan

1996-1997 Oncology Consultant, Copley Memorial Hospital, Aurora, Illinois

Dr. Reddy's Laboratories, Ltd., et al.

V.

Helsinn Healthcare S.A., et al. U.S. Patent No. 8,729,094



1995-1999 Hematology/Oncology Clinical Specialist, RUSH-Presbyterian-St. Luke's Medical Center, Chicago,

Illinois

1999-2005 Director of Clinical Hematology/Oncology Pharmacy Services and Research, RUSH-Presbyterian-St.

Luke's Medical Center (now Rush University Medical Center), Chicago, Illinois

Responsibilities include:

 Oversee of all clinical pharamcy oncology services (outpatient clinic, inpatient floor service, bone marrow transplant service)

- · Palliative care team member
- · Pain monitoring and control
- Hematology/Oncology patient outcomes monitoring
- · Anti-infective monitoring for appropriateness and outcomes
- · Cancer Institute research internal review board member
- Writing, Collaborating, and Consulting on Clinical Hematology/Oncology/BMT research protocols
- Member of Hospital Cancer Committee
- QA/QI committee co-chair for pharmacy and nursing
- Development of Anticoagulation service for inpatients as well as outpatient for hip and knee replacements
- Development of an inpatient anticoagulation consult service
- · Development of an anticoagulation research group

2003-2005 Assistant Professor of Pharmacology, Rush University Medical Center

- Teaching Pharmacology for second year medical students (General Principles, Kinetics, Rheumatology, Immunosuppressives, Oncology, Anticoagulation, Nausea and Vomiting)
- Teaching Masters and Ph.D. students (Kinetics, Oncology, Anti-infectives, Anticoagulation, GI)

2005- present Assistant Professor of Pharmacy, Clinical Hematology/Oncology/BMT Specialist,

University of Michigan

PROFESSIONAL SOCIETIES:

1990- 1994	Academy of Students of Pharmacy
1990- 1994	Michigan Pharmacists Association
1991-1994	Southeastern Michigan Society of Hospital Pharmacists
1993- Present	American College of Clinical Pharmacy
1994- Present	American Society of Health System Pharmacists
1998- Present	American Society of Clinical Oncology

1998- Present International Society of Oncology Pharmacists -Publications, Education and Research Committees

2004- Present Hematology/Oncology Pharmacy Association (HOPA)-, Research Committee

ACADEMIC HONORS AND AWARDS:

1984-1986 Phi Lambda Epsilon Honor Society, St. Louis University
 1985-1986 St. Louis University President Advisory Board
 1985 Monsanto Research Fellowship, St. Louis University
 1986-1987 Toyota Fellowship, Wayne State University



1986 Graduated Magna Cum Laude, St. Louis University
 1986 The Marcus Research Award, St. Louis University
 1986 Alpha Epsilon Delta Honor Society, St. Louis University
 1988-1989 Graduate Research Assistantship, Wayne State University

1989-1991 Public Health National Research Service Award

1991 Schering Future Pharmacist Award

1991 Wayne County Pharmaceutical Society Scholarship

1992 Allen and Hanbury's Scholarship Award 1992 Pharmacy Alumni Association Scholarship

1992 Rho Chi National Honor Society

1992 Wayne State University Pharmacy Curriculum Committee

1993 Wayne State Pharmacy Class President

1993 Eli Lilly Achievement Award

1993-1994 Wayne State University Graduate School Scholarship 1993-1994 Michigan Health Care Education and Research Scholarship

1999 RUSH Medical Center Team of the Year Award

1999 American Society of Health System Pharmacists Drug Research Award

RESEARCH EXPERIENCE:

Molecular Biology:

Apoptosis Carcinogenesis

Chemistry/Biochemistry:

Oligonucleotide synthesis in solution and solid phase

Palladium catalysis reactions

Kinetics:

Kinetics of Valsartan in Renal Failure Interaction of Itraconazole and Phenytoin Kinetics of Gengraf- a cyclosporine formulation Kinetics of Rituximab in CLL

Quality of Life:

Quality of life in patients with hypertension

Antiemetic Outcome studies in oncology and Post-operatively

Pain Outcome Monitoring Supportive care management

Anticoagulation

Kinetics of anti-Xa and outcomes with Lovenox in renal insufficient patients

Hematology/Oncology

Supportive car e protocols- Nausea and Vomiting, Anemia, GVHD, Bone Health

Development of Infection and Antifungal Guidelines Annual Nursing Training- Nausea and Vomiting

SELECT PRESENTATIONS:

2015 American Managed Care Pharmacy- Annual Meeting

"Managed Care Considerations in Multiple Myeloma"

2015 Hematology/Oncology Pharmacy Association Annual Meeting

"Immunotherapy in Oncology"



2014	Hematology Oncology Pharmacy Association Northeast Annual Meeting "Updates in Bone Marrow Transplant"
2104	University of Illinois Annual Oncology Updates "Updates in Hemophilia, ITP and Aplastic Anemia"
2013	Hematology Oncology Pharmacy Association Northeast Annual Meeting "Updates in Multiple Myeloma"
2011	American Society of Blood and Marrow Transplant- Annual Meeting San Diego "The Rationale and Role of Reduced Intensity Transplants"
2009	Hematology Oncology Pharmacy Association- Annual Meeting Salt Lake City "Pharmacogenomics in Oncology"
2008	American Society of Health System Pharmacists- Annual Meeting San Francisco "Pharmacy Considerations and Updates in CML"
2007	Hematology/Oncology Pharmacy Association- Annual Meeting Denver, CO "Mechanisms of Oral Tyrosine Kinase Inhibitors"
2006	American Society of Managed Care Annual Meeting- San Diego "New Therapies and Economics in CML"
2006	Asia Pacific Oncology Pharmacy Congress- Thailand "Treatments Options in Anemia" "Targeted Therapies In Cancer" "Pharmacogenetics and Cancer"
2005	International Society of Oncology Pharmacy Practicioners- Kuala Lampur "Pharmacogenomics in Oncology" "New Therapeutic Targets"
2004	American Society of Health System Pharmacists- Midyear Meeting "DNA methylation- A New Therapeutic Target" "Antiemetics: New Therapeutic Rationales and Cost Effectiveness"
2004	Making a Difference in Oncology National Meeting "Making Sense out of Anti-sense" "Gallium: New Therapy for Resistant Hypercalcemia"
2003	Making a Difference in Oncology National Meeting- Phoenix "Updates in Breast and Lung Cancer" "Apoptosis, Angiogenesis and Second Messengers"
2003	Focus on Fungal Infection International Meeting- Maui "New Preventative Strategies in Antifungal Therapy"- Presentation "Low dose liposomal amphotericin is effective in prevention of fungal infections in allogeneic bone marrow transplant"- abstract
2003	Supportive Care in Cancer International Meeting- Bermuda "Erythropoeitic agents: What do we really know?"
2002	International Society of Oncology Pharmacists International Meeting- Vancouver 2002 "Apoptosis: A new target in Oncology Therapeutics" "Cell Cycle and New Therapeutic Targets in Oncology"



2001	Oncology Nursing Society- Chicago Chapter "Updates on New Drugs in Oncology"
2000	Australian Clinical Society of Oncology National Meeting- Adelaide " Oncology agents with new molecular mechanisms" " Monoclonal antibodies in cancer" " Update on current phase I and II oncology trials"
2000	International Society of Oncology Pharmacists International Meeting-Prague "Pharmacokinetics of the Taxanes"
1999	Oncology Nursing Society- Chicago Chapter- "New oral chemotherapy drugs"
1998	Oncology Nursing Society- National Meeting "Hypercoagulation in Oncology Patients"
1998	University of Iowa Oncology Grand Rounds "Antiemetics and Supportive Care in Oncology"
1998	Memorial Sloan Kettering- Pharmacy Grand Rounds "Updates in Antifungal therapy and use in Oncology"
1998	Missouri Chapter ASHP "Updates in Oncology therapeutics- new targets and mechanisms"
1996	American Society of Health System Pharmacists- Midyear Meeting "Mechanisms of Resistance in the Treatment of Breast Cancer"
1996	American Society of Health System Pharmacists- Midyear Meeting "Liposomes: an overview of drug products with an emphasis on anthracyclines"
PUBLICATIONS:	
April 1993	Platform presentation for American College of Clinical Pharmacy "Gender and racial differences in the usage of thrombolytic agents in acute myocardial infarction"
May 1989	Abstract for the American Association for Cancer Research "Automated chemical synthesis of oligonucleotides containing site- specifically incorporated acetylaminofluorene adducts"
April, 1997	KeePosted "Liposomes: Drug Delivery Tools"
June, 1998 endometriosis"	Fertility and Sterility "Spontaneous apoptosis of endometrial tissue is impaired in women with
October, 1998	Archives of Internal Medicine "Efficacy of Ondansetron vs Prochloperazine in Post Operative Nausea and Vomiting after Total Hip or Knee Relacement"
December, 1999	Bone Marrow Transplantation "Intravesicular instillation of E-aminocaproic acid for patients with adenovirus- induced hemorrhagic cystitis"



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