

## Curriculum Vitae

**Hanna W. Mawad, M.D., F.A.C.P., F.A.S.N., C.C.D.**  
**Associate Professor, Clinical Title Series**  
**UNIVERSITY OF KENTUCKY**

### I. GENERAL INFORMATION:

Office Address: 800 Rose Street, MN 564  
 Lexington, KY 40536-0298  
 Phone: (859) 323-5048 Fax: (859) 323-0232  
[www.mc.uky.edu/nephrology/](http://www.mc.uky.edu/nephrology/)

Specialty Board Certification (Year Certified):

- American Board of Internal Medicine (1997)
- American Board of Nephrology (1999)
- Clinical Densitometry Certification (2000)

State Licensure:

- State: Kentucky #33043. Year: Active since 1997
- License of the Medical Council of Canada #75544. Year: Active since 1993

Languages: English, French, German and Arabic.

### II. EDUCATION:

#### Medical Education:

1973-1978 Damascus University  
 College of Medicine  
 Damascus, Syria  
 Degree: Medical Degree (M.D.)

#### Post Graduate Education:

1979-1981 Higher Studies in Internal Medicine  
 Damascus University  
 College of Medicine  
 Damascus, Syria  
 Degree: Master Diploma in Internal Medicine

1982-1985 Nephrology Training  
 University of Ulm  
 Division of Nephrology and Mineral Metabolism  
 Ulm, West Germany  
 Type of Training: Nephrology Clinical Fellowship

1985-1986 Clinical Investigator/Visiting Professor

University of Florida  
 Division of Nephrology  
 Gainesville, FL  
 Type of Training: Nephrology Research Fellowship

- 1994-1996 Internal Medicine Residency  
 University of Kentucky Medical Center  
 Department of Internal Medicine, Lexington, KY
- 1996-1998 Clinical Nephrology Fellowship  
 University of Kentucky Medical Center  
 Division of Nephrology, Bone and Mineral Metabolism  
 Lexington, KY
- 1999 Senior Research Fellow/Clinical Investigator  
 University of Kentucky Medical Center  
 Division of Nephrology, Bone and Mineral Metabolism  
 Lexington, KY

### **III. PROFESSIONAL EXPERIENCE**

- 1986-1992 Nephrology and Dialysis Private Practice  
 Damascus, Syria  
 Title: Attending Physician and Nephrology Consultant
- 1992-1994 Preparatory Studies for US and Canada Qualifying Examinations  
 Kaplan Educational Center  
 Montreal, Quebec, Canada

### **IV. ACADEMIC APPOINTMENTS**

- 1999-2005 University of Kentucky Medical Center  
 Department of Internal Medicine, Division of Nephrology,  
 Bone and Mineral Metabolism  
 Title: Assistant Professor of Medicine (Full Time)
- 2006-present University of Kentucky Medical Center  
 Department of Internal Medicine, Division of Nephrology,  
 Bone and Mineral Metabolism  
 Title: Associate Professor of Medicine (Full Time)

### **V. HOSPITAL OR CLINICAL APPOINTMENTS**

- 1986-1992 Nephrology and Dialysis Private Practice  
 Damascus, Syria  
 Title: Attending Physician and Nephrology Consultant
- 1999-Present University of Kentucky Medical Center and VA Medical Center  
 Lexington, KY 40536  
 Title: Nephrology Consultant (Full time)

## VI. CONSULTING ACTIVITIES

- 1986-1993 Nephrology and Dialysis Private Practice  
Damascus, Syria  
Title: Attending Physician and Nephrology Consultant
- 1999-Present University of Kentucky Medical Center and VA Medical Center  
Lexington, KY 40536  
Title: Nephrology Consultant (Full time)

## VII. TEACHING ACTIVITY (For details see Teaching Portfolio)

- |              |  |                              |
|--------------|--|------------------------------|
| 1998-Present | Housestaff Teaching Conferences              | 3-5 per year                 |
|              | Nephrology Teaching Conferences              | 5-10 per year                |
|              | Nephrology Clinical Pathological Conferences | 10-15 per year               |
|              | Nephrology Self-Assessment Program           | 25-30 per year               |
|              | Teaching Rounds:                             | Approximately 180 hours/year |
|              | Bedside Teaching:                            | Approximately 600 hours/year |
- 1999-2000 MD821: Introduction to Medical Profession
- 2000-Present Preceptor for medical students at the Salvation Army clinic
- 11/03/2008 Professional exchange with 24 visiting Nephrologists from Sweden, Denmark, and Finland; involving participation with Peritoneal Dialysis and Bone Biopsy procedures.

## VIII. ADVISING ACTIVITY

- |           |  |                 |
|-----------|--|-----------------|
| 1999-2000 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2000-2001 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2001-2002 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2002-2003 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2003-2004 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2004-2005 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2005-2006 | Professional Advising to Nephrology Trainees | Total 4 Fellows |
| 2006-2007 | Professional Advising to Nephrology Trainees | Total 5 Fellows |
| 2007-2008 | Professional Advising to Nephrology Trainees | Total 4 Fellows |

## IX. ADMINISTRATIVE ACTIVITY AND UNIVERSITY SERVICE

- 2001-Present Medical Director, Bone Densitometry Unit, Kentucky Clinic
- 2002-Present Medical Director, Peritoneal Dialysis Program, Kentucky Nephrology Research Trust
- 2004-Present Director, Clinical Research Program, Division of Nephrology, Bone and Mineral Metabolism
- 2006-Present Medical Director, Dialysis Unit, Kentucky State Reformatory

(KSR-LaGrange, KY)

2007-Present Medical Director, Acute Dialysis Unit, University of Kentucky Medical Center

## **X. SPECIAL ASSIGNMENTS**

## **XI. HONORS & AWARDS**

1999-2002 Physician' Recognition Award in Continuing Medical Education  
American Medical Association

1999-Present Consistently receives excellent evaluations by Nephrology trainees and residents  
in Internal Medicine (see evaluations).

2000-Present Strathmore's Who's Who

2002-Present American Registry of Outstanding Professionals

## **XII. PROFESSIONAL ACTIVITY, PUBLIC SERVICE AND PROFESSIONAL DEVELOPMENT**

Bone Biopsy Program: An internationally renowned program to promote expertise in the assessment of metabolic bone diseases. The following are selected physicians from throughout the U.S. and abroad that have completed hands-on training with me from 2000 – 2008.

<b>Physician</b>	<b>City/State</b>	<b>Physician</b>	<b>City/State</b>
Ashfaq, Akhtar	Great Neck, NY	Mulloy, Laura	Augusta, GA
Atta, Mohammed	Baltimore, MD	Old, Christopher	Birmingham, AL
Barri, Yousri	Little Rock, Arkansas	Osman, Yahya	Troy, MI
Betting, Gary	Mandan, ND	Ouimet, Denis	Montreal, QC
Bourjeily, Ghada	New Haven, CT	Oxman, Mark	Dayton, OH
Collins, Deaver	Jackson, MS	Rosner, Mitchell	Palmyra, VA
Crain, Lawrence	Atlanta, GA	Rowbatham, Gregory	Nashville, TN
Frederickson, Edward	Atlanta, GA	Shah, Hitesh	New Hyde Park, NY
Gehr, Todd	Richmond, VA	Shaver, Mary Jo	Little Rock, Arkansas
Haragsim, Lukas	Oklahoma city, OK	Shemin, Douglas	Providence, RI
Hoffman, Brenda	Philadelphia, PA	Siegel, Jeffrey	Dallas, TX
James, Sam	Tucson, AZ	Tamparia, Braham	Danbury, CT
Karam, Jyotheen	Spokane, WA	Topham, Steve	Las Vegas, NV
Kloepper, Robert	Missoula, Mt	Vaziri, David	Columbus, OH
Levitov, Alexander	Grand Forks, ND	Vieira, Cristovao	Miami, FL
Mehrotra, Ragnish	Torrance, CA	Wagner, Brent	San Antonio, TX
Mehta, Bhasker	Arlington, TX	Weingarten, Karl	Pensacola, FL
Mere, Constance	Bryans Road, MD	Wong, Sam	Berkeley, CA
Miyawaki, Bill	Rego Park, NY		

Kidney Biopsy Referral Service: I have established myself as a regional expert in kidney biopsy and am routinely called upon by practicing nephrologists to perform kidney biopsies, particularly in difficult patients with unusual body habitus, during pregnancy or with single functioning kidney. A few referring nephrologists for 2005-2008 are:

Ziad Sara, MD, Harlan, KY  
 Sujatha Reddy, MD, Prestonsburg, KY  
 Rashid Faiaz, MD, Jackson, KY  
 Haile Bradley MD, Lexington, KY  
 Kelly Cole MD, Lexington, KY  
 Larry Coleman MD, Monticello, KY  
 Imad Khadir MD, Monticello, KY  
 Thomas Ferguson MD, Lexington, KY  
 David Slone MD, Lexington, KY  
 Rezkalla Butrus MD, Mt. Sterling, KY  
 Joitu Chandrana MD, Hazard, KY  
 Robert Friedler MD, Naples, FL  
 Rita Egan MD, Lexington, KY  
 Dinsh Ranjan MD, Lexington, KY

Metabolic Bone Disease Clinic: I am also currently recognized as a regional expert in the diagnosis and management of various metabolic bone diseases, including osteoporosis. My weekly Bone Clinic has flourished over the last 2-3 years. Numerous local physicians specifically request my expertise and assistance in the management of these patients.

Membership Affiliations:

- American College of Physicians, Associate 1994, Member 1998, Fellow 2000
- American Society of Nephrology, Member 1993, Fellow 2005
- International Society of Clinical Densitometry 1999
- International Society of Bone Histomorphometry 1999
- International Society of Peritoneal Dialysis 2002
- Canadian Society of Nephrology 2002
- American Heart Association 2003
- American Stroke Association 2004
- Association of Clinical Research Professionals 2004
- European Dialysis and Transplantation Association 1984-2001
- European Renal Association 1984-2001
- Renal Physician Association 2001-2003
- National Osteoporosis Foundation 2006

Editorial Board Reviewer:

- Clinical Nephrology (ad hoc)
- Nephrology Self-Assessment Program, American Society of Nephrology

Meetings/Workshops/CME:

- Peritoneal Dialysis University, Wake Forest University, Salem, NC 2001
- Spring Clinical Nephrology Meeting, National Kidney Foundation, 2001, 2002

- Renal Ultrasonography, Emory University, Atlanta GA 2003
- American Society of Nephrology Meeting, 2003, 2004
- University of Kentucky, Internal Medicine Grand Rounds, 10/year
- University of Kentucky, HIV/AIDS Medical Update 1999, 2002

Certifications/Examinations:

- ECFMG Part II, 1991
- FLEX Component I, 1991
- FLEX Component II, 1991
- Medical Council of Canada Evaluating Examination, 1991
- Council of Canada Qualifying Examination I, 1992
- Council of Canada Qualifying Examination II, 1992
- ECFMG Part I, 1992
- Certified Clinical Densitometrist, 2000, 2003, 2008
- ABIM certification in Internal medicine, 1997
- ABIM certification in Nephrology, 1999
- ABIM recertification in Internal Medicine, 2003
- ABIM recertification in Nephrology, 2005

**XIII. SPEAKING ENGAGEMENTS**

**STATE/LOCAL:**

- 1996 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Grand Rounds  
Title: Dyproteinemia and Renal Diseases
- 1999 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Bedside Teaching Workshop  
Title: Ultrasound Guided Cannulation of Central Veins for Placement of Double  
Lumen Dialysis Catheter
- 2002 University of Kentucky, Department of Internal Medicine, Grand Rounds  
Title: Metabolic Bone Disease
- 2002 University of Kentucky, CME Course  
Title: Osteoporosis Beyond the T-Score
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Fellow Teaching Conference  
Title: Key Clinical Issues in Peritoneal Dialysis
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Fellow Teaching Conference  
Title: Indications for Initiation of Dialysis in ESRD Patients
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Fellow Teaching Conference  
Title: Adequacy of Dialysis

- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Journal Club  
Title: Erythromycin and Sudden Death
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Fellow Teaching Conference  
Title: Hypertension
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Fellow Teaching Conference  
Title: HIV Nephropathy
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Clinical Pathological Conference  
Title: Burkitt Lymphoma and Acute renal Failure
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Clinical Pathological Conference  
Title: Allergic Interstitial Nephritis
- 2005 University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism,  
Weekly NephSAP (Nephrology Self Assessment Profile)  
Title: Moderator

**NATIONAL/INTERNATIONAL:**

- 1999 International Society of Bone Histomorphometry, Scottsdale, AZ  
Title: The Role of Bone Biopsy in the Management of Renal Osteodystrophy in  
the New Millennium
- 2000 National Kidney Foundation, Atlanta, GA  
Title: Technical Aspects of the Bone Biopsy
- 2001 National Kidney Foundation, Orlando, FL  
Title: Indication and Performance of Bone Biopsy
- 2002 National Kidney Foundation, Chicago, IL  
Title: Bone Biopsy in Metabolic Bone Disorders
- 2006 National Kidney Foundation, Chicago, IL  
Title: Osteoporosis
- 2006 Women's Health Conference, Lexington, KY  
Title: Osteoporosis

#### XIV. RESEARCH and/or CREATIVE PRODUCTIVITY

##### PUBLICATIONS:

##### Peer-Reviewed Journals:

1. **Mawad, H.W.**, Sawaya, B.P., Sarin, R., Malluche, H.H.: Calcific uremic arteriopathy in association with low turnover uremic bone disease. *Clinical Nephrology*, 52:160-166, 1999.
2. Malluche, H.H., **Mawad, H.W.**: Beurteilung und Behandlung von Hyperphosphatämie bei Patienten mit chronischer Niereninsuffizienz. *Nieren- und Hochdruckkrankheiten*, 29:159-170, 2000.
3. Monier-Faugere, M.C., **Mawad, H.W.**, Qi, Q., Friedler, R.M., Malluche, H.H.: High prevalence of low bone turnover and occurrence of osteomalacia after kidney transplantation. *JASN*, 11:1093-1099, 2000.
4. Monier-Faugere, M.C., Geng, Z., **Mawad, H.W.**, Friedler, R.M., Gao, P., Cantor, T. L., Malluche, H.H.: Improved assessment of bone turnover by the PTH-(1-84)/ large C-PTH fragments ratio in ESRD patients. *Kidney International* 60:1460-1468, 2001.
5. Malluche, H.H., **Mawad, H.W.**: Management of hyperphosphatemia of chronic kidney disease: Lessons from the past and future directions. *Nephrology Dialysis Transplantation* 17:1-6, 2002.
6. Malluche, H.H., **Mawad, H.W.**, Koszewski, N.J.: Update on Vitamin D and its newer analogues: Actions and rationale for treatment in chronic renal failure. *Kidney International* 62:367-374, 2002.
7. Malluche, H.H., **Mawad, H.W.**: Letter to the Editor [Management of hyperphosphatemia of chronic kidney disease: Lessons from the past and future directions.] *Nephrology Dialysis Transplantation* 18(4):848-9, 2003.
8. Malluche, H.H., **Mawad, H.W.**, Trueba, D., Monier-Faugere, M.C.: Parathyroid hormone assays-evolution and revolutions in the care of dialysis patients. *Clinical Nephrology* 59(5):313-318, 2003.
9. Sawaya, B.P., Butros, R., Naqvi, S., Geng Z., **Mawad, H.W.**, Friedler, R., Fanti, P., Monier-Faugere, M.C., Malluche, H.H.: Differences in bone turnover and intact PTH levels between African-American and Caucasian patients with end-stage renal disease. *Kidney International* 64(2):737-742, 2003.
10. Trueba, D., Sawaya, B.P., **Mawad, H.W.**, Malluche, H.H.: Bone Biopsy: Indications, Techniques and Complications. *Seminars in Dialysis* 16(4):341-345, 2003.
11. Malluche, H.H., **Mawad, H.W.**, Monier-Faugere, M.C.: The Importance of Bone Health in End-Stage Renal Disease: Out of the Frying Pan, Into the Fire? *Nephrology Dial Transplant* 19 (suppl 1): i9-i13, 2004.

12. Malluche HH, Koszewski N, Faugere MC, Williams JP, **Mawad H.W.**: Influence of the parathyroid gland on bone metabolism. *European Journal of Clinical Investigation* 36(2), 23-33, Aug 2006.
13. Faugere MC, **Mawad H.W.**, Malluche, HH.: Opposite Effects of Calcitriol and Paricalcitol on the PTH-(1-84)/Large Fragments ratio in Patients with Chronic Kidney Disease Stage-5. *CJASN*, vol. 2:pp. 1255-60, 2007.
14. Malluche, HH, **Mawad H.W.**, Monier-Faugere MC.: Bone biopsy in patients with osteoporosis. *Current Osteoporosis Reports*, 5(4); 146-52, 2007.
15. MALLUCHE, HH, Siami G, Swanepoel C, Wang, G, Mawad HW, Confer S, Smith M, Pratt R, Faugere MC. Improvements in renal osteodystrophy in patients treated with lanthanum carbonate for two years. **Clin Nephrol**, 70(4); 284-296, 2008.
16. Malluche,HH, **Mawad H.W.**, Monier-Faugere MC,: Effects of treatment of renal osteodystrophy on bone histology. *CJASN*, vol.3, S157-S163, Nov. 2008.

#### **Book Chapters/Monographs:**

1. Mawad, H.W., Basha, W.,Sabbagh, F. Kidney in Systemic Diseases. University of Damascus Faculty of Medicine Archives, 1979.
2. Mawad, H.W., Sayegh, J., Sabbagh, F. Glomerulopathy. University of Damascus Faculty of Medicine Archives, 1982.
3. Zanker, B., Bauer, H., Kohse, K., Mawad, H. W., Scheiffle, M., Scholz, M., Spohn, B., Wochner, G., Franz, H.E.: Withdrawal of immunosuppressive drugs after renal transplantation. *Nieren and Hochdruck Krankheiten* 14:97-101, 1985.
4. Castellanos, Ana Lia, **Mawad, H.W.**, Mitchell, Bonnie, Sawaya, Peter: Acute Renal Failure: A case of Burkitt's Lymphoma. Submitted to *Clinical Nephrology*, July 2008.
5. Herberth J, Monier-Faugere MC, **Mawad H.W.**, Branscum A, Wang G, Herberth Z, Cantor T, Malluche, HH.: Assessment of Bone Turnover by the 5 Most Commonly Used iPTH Assays. *JASN*, submitted June 2008.
6. Francis, Mike, **Mawad, H.W.**: Calciphylaxis Case Study: Treatment with Sodium Thiosulfate. *JASN*, submitted July 2008.
7. Harned, Kevin C., **Mawad, H.W.**, Mitchell, Bonnie L.: Acute Renal Failure During Tadalafil Therapy: Possible Direct Tubular Toxicity. *American Journal of Pathology*, submitted July 2008.

### Abstracts National/International Meetings:

1. **Mawad, H.**, Faugere, M.C., Qi, Q., Friedler, R.M., Malluche, H.H.: Post-transplant bone disease: Histologic assessment in 57 patients. VII Congress of the International Society of Bone Morphometry, 1999.
2. Malluche, H.H., **Mawad, H.**, Faugere, M.C.: Renal bone disease post-transplantation. Submitted to Transplant Bone Disease Meeting, XVIII International Congress of the Transplantation Society, 2000.
3. Sawaya, B. P., Faugere, M.C., Butros, R., Geng, Z., **Mawad, H.W.**, Friedler, R., Fanti, P., Malluche, H.H.: Intact Parathyroid Hormone Levels are not Predictive of Bone Turnover in African-American Patients with ESRD. ASN, 2001.
4. **Mawad, H.W.**, Faugere, M.C., Sawaya, B.P., Malluche, H.H.: Acute Parathyroid Hormone (PTH) Response to Changes in Serum Phosphorus in African-American (AA) Is Different from Response in Caucasians (C). JASN, 15, 2004.
5. **Mawad, H.W.**, Faugere, M.C., Malluche, H.H.: Effect of phosphate binders on intact PTH, PTH 1-84 and the PTH/Large C terminal PTH peptide ratio. JASN, 2005
6. Herberth Z, **Mawad H.W.**, Monier-Faugere MC, Herberth J, Cantor T, Malluche, HH.: Comparison of 6 Commonly Used Parathyroid Hormone (PTH) Assays for Diagnosis of Bone Turnover in Hemodialysis Patients. JASN, 18: p305A, 2007.
7. Faugere, M.C., **Mawad, H.W.**, Trueba, D.M., Friedler, R.M., Malluche, H.H.: Opposite Effects of Calcitriol and Paricalcetriol on PTH (1-84)/C-Large Fragment Ratio in Patients on Hemodialysis. CJASN; 2: 1255-1260, 2007.

### CURRENT RESEARCH ACTIVITY:

1. Kentucky Nephrology Research Trust, Inc.  
Effects of changes in serum ionized calcium on the PTH-(1-84)/PTH-(7-84) ratio in African American, Caucasian, diabetic, and non-diabetic patients on chronic maintenance dialysis.  
7/1/05-6/30/09
2. Metabolic Bone Disease Registry. IRB approval received in April 2004. This is a large scale prospective data collection on all patients who undergo bone biopsy to evaluate noninvasive methods for assessment of bone abnormalities. Over 100 patients are currently registered.
3. Prevalence of osteoporosis in inflammatory bowel disease diagnosis and treatment. IRB Approval 2008.
4. Open-Label, Single-Arm Study to Assess the Safety of Darbepoetin Alfa Manufactured by a Serum Free Bioreactor Technology in Subjects with Chronic Kidney Disease. IRB Approval obtained June 2005
5. Prevention of post-transplant osteoporosis by Alendronates. IRB Approval obtained March 2004.

6. Treatment of post-transplant bone disease with teriparatide (Forteo)
7. The prevalence of osteoporosis in inflammatory bowel disease patient ongoing study in collaboration with GI Division.
8. NIH: RO1DK080770-01  
Renal Osteodystrophy: A Fresh Approach  
12/01/2008-11/30/2012  
PI: Hartmut Malluche, MD
9. K23: PA-05-143  
Advancements in the Diagnosis of Chronic Kidney Disease-Mineral and Bone Disorder  
04/01/09-03/31/13  
PI: Johann Herberth, MD

#### **COMPLETED RESEARCH ACTIVITY:**

1. Amgen Inc. – Effects of an Oral Calcimimetic Agent on Renal Bone Disease in Hemodialysis Patients with Secondary Hyperparathyroidism  
3/02–3/05 – \$119,000
2. Open Label, Randomized, Multi-center, Phase III, Comparator Controlled Parallel Group Study to Assess the Long-Term Safety and Efficacy of Lanthanum Carbonate in Chronic Renal Failure Patients Receiving Hemodialysis. Shire Pharmaceuticals, \$170,000, Grant period: 2002- 2005.
3. A Long Term, Open Label Extension Study of Protocols LAM-IV-301, LAM-IV-303, LAM-IV-307 and LAM-IV-308 (Protocol No: SPD 405.309), Shire Pharmaceutical, \$30,000. Grant period: 2003-2005
4. Calcitrol vs. Zemplar effects on PTH and PTH ratio in dialysis patients. Completed in July 2005.
5. Calcium-containing vs. calcium-free phosphate binders effects on PTH and PTH ratio in hemodialysis patients. Completed in July 2005.
6. PTH circadian rhythm and the circadian changes in bone turnover markers in hemodialysis patients. Completed 2006.