

**Name:** Milos N. Budisavljevic, MD

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**Office Address:** Nephrology Division  
Medical University of South Carolina  
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**Citizenship:** US Citizen

**Education:**

Undergraduate: Gimnazija "O. Prica", Sarajevo, Yugoslavia  
1967-1971

Medical School: University of Sarajevo Medical School  
1971-1976  
Degree: MD, 1976 (top 5% of graduating class)  
Field of Study: Medicine

**Internship:** Sarajevo University Hospital, Sarajevo, Yugoslavia  
1976-1977

**Residencies & Post Doctoral:**

Residency in Medicine:  
Institute of Nephrology, Sarajevo, Yugoslavia 1980-1985

Research Fellowship in Nephrology:  
INSERM U 64 Hospital Tenon, Paris, France 1986-1989

Residency in Medicine and Fellowship in Nephrology:  
Medical University of South Carolina, Charleston, SC, 1991-1996

**Board Certifications:**

Yugoslavian Board of Internal Medicine 1985  
Permanent Certificate of the ECFMG 1990  
FLEX 1992  
ABIM (Medicine) 1996  
ABIM (Nephrology) 1997  
ABIM (Nephrology) 2007  
UNOS Certified Transplant Nephrologist 2002

**Licensure:** South Carolina Permanent License # 17028  
1993-present

**Military Service:** n/a

**Faculty Appointments:**

1997-2005  
Assistant Professor of Medicine  
Medical University of South Carolina  
Department of Medicine  
2005-present  
Associate Professor of Medicine  
Medical University of South Carolina  
Department of Medicine

**Administrative Appointments:**

1999-present  
Medical Director, DCI James Island  
2006-present  
Medical Director, Apheresis Service, MUSC

**Hospital Appointments/Privileges:**

1997-present MUSC Hospital, Charleston, SC  
1997-present VA Medical Center, Charleston, SC  
2002-present Kindred Hospital, Charleston, SC  
2006-present East Cooper Medical Center, Charleston, SC  
1980-1991 Institute of Nephrology, Sarajevo Yugoslavia

**Other experience:**

1978-1980 Staff Physician  
Sarajevo Health Center, Sarajevo, Yugoslavia  
1977-1978 Staff Physician  
Kakanj Health Center, Kakanj, Yugoslavia

**Membership in professional/scientific societies:**

American Society of Nephrology  
National Kidney Foundation  
American Society of Transplant Physicians  
International Society of Nephrology  
Southern Society for Clinical Investigation  
South Carolina Medical Association  
American Society for Apheresis

**Editorial Positions:**

none

**Extramural Grants:**

1998-2000 American Heart Association  
Grant-in-aid Standard Award  
Principal investigator (time 20%)

1998-2000 Roche Pharmaceuticals  
Co-investigator (time 5%)

1999-2001 Wyeth Ayerst research  
Co-investigator (time 5%)

2000-2002 Dialysis Clinic Inc  
Research Grant, Principal investigator (time 10%)

2002-2004 Dialysis Clinic Inc  
Research Grant, Principal investigator (time 15%)

2004-2009 NIH  
Focal Segmental Glomerulosclerosis Clinical Trial (Site  
Principal Investigator)

2005-2009 Dialysis Clinic Inc  
Research Grant, Principal investigator (time 15%)

2009-2011 NIH  
Novel Therapies for Resistant Focal Segmental  
Glomerulosclerosis, A Phase II Clinical Trial (Site  
Principal Investigator)

**Intramural Grants:**

1992 Clinical Research Fellowship  
Medical University of South Carolina

**Awards and Honors:**

1988 City of Paris Award "Claude Bernard" for Meritorious  
Research by a Trainee

1996 University Research Committee Institutional Support  
Award Medical University of South Carolina

**Academic Committee Activities:**

MUSC Department of Medicine Peer Review Committee  
Nephrology Division:  
MUSC Renal Fellows exit exam.  
Nephrology Division call schedule

**Major Teaching Responsibilities:**

Clinical teaching as Attending Physician during core clerkship in  
Medicine  
at MUSC and VA Hospital, 1 fellow, 3 medical residents, 1 pharmacy  
resident and 2 students.

Clinical teaching as Consulting Attending Physician in Nephrology  
clerkship at MUSC in VA hospital, 1 fellow, 1 resident and student.

Clinical teaching as Attending Physician in Nephrology outpatient clinic  
in  
VA hospital, 3-4 fellows, 1-2 residents and students.

Didactic sessions in clinical nephrology and renal physiology for MUSC  
housestaff during their rotation on Nephrology inpatient service, 1 fellow,  
3 residents, 2 students.

VA Medical Center teaching rounds for medicine house staff and students  
during their rotation on VA medical service. 3-4 residents, 4-5 students.

Junior Medicine Core lectures, 10-20 students

Noon conference lectures for residents, 20-40 residents

Renal fellowship introductory course in Nephrology, 7-8 fellows.

Clinical teaching in ESRD at the James Island dialysis clinic, 1 fellow.

**Major Clinical Interests and Responsibilities:**

Calciphylaxis, Renal function in kidney donors, Glomerulonephritis.  
Organization and proper execution of GFR determination by  
<sup>125</sup>I-iothalamate.

**Invited lectures and Presentations:**

MUSC, Department of Medicine Grand Rounds, Charleston, SC  
Greenville Kidney Center, Greenville, SC  
Spartanburg Nephrology Associates, Spartanburg, SC  
MUSC, Nephrology Division Clinical Conference, Charleston, SC  
Management of Chronic Kidney Disease, Charleston, SC, March 2006,  
March 2007, March 2008  
Prevention of Renal Disease, Toronto, Canada, September 2008  
DCI Medical Director Meeting, Ft. Myers, FL, October 2008  
DCI Medical Director Meeting, Marco Island, FL, October 2009

**Extramural Professional Activities:**

Member of Medical Review Board, Southeastern Kidney Council  
Reviewer for:  
Nephrology Dialysis Transplantation  
American Journal of Medical Sciences  
American Journal of Physiology Renal Physiology  
American Society of Nephrology Annual meeting (abstracts)

**Community Service:**

Physician for Boy Scouts of America Troop 4 associated with Martin  
Luther Lutheran Church, 1605 Harbor View Rd, James Island, SC.

## National Kidney Foundation KEEP screening

### Publications:

1. **Budisavljevic M.** Renal Amyloidosis. *Proceedings of the 2nd Yugoslavian Congress of Nephrology*, Zagreb, Yugoslavia 1984 p 81
2. **Budisavljevic M.**, Geniteau-Legendre M., Boudouin B., Pontillon F., Verroust P.J., Ronco P.M. Angiotensin II related idiotypic network. II. Heterogeneity and fine specificity of A II internal images analyzed with monoclonal antibodies. *Journal of Immunology* 40:3059, 1988
3. **Budisavljevic M.**, Ronco P.M., Verroust P.J. Angiotensin II related idiotypic network. III. Comparative analysis of idiotopes and paratopes borne by monoclonal antibodies raised against A II(AB1) and its internal image (AB3). *Journal of Immunology* 145:1440, 1990
4. **Budisavljevic M.**, Bea M.L., Bensoussan M., Laubie M., Chuong P.P.V., Dussaule J.C., Verroust P.J., Ronco P.M. Antagonist effect of a receptor-mimicking peptide encoded by human angiotensin II complementary RNA. *Hypertension* 19:345, 1992
5. Paul R.V., Wackym P.S., **Budisavljevic M.**, Everett E., Norris J.S. Regulation of atrial natriuretic peptide clearance receptors in mesangial cells by growth factors. *Journal of Biological Chemistry* 268:18205, 1993
6. **Budisavljevic M.**, Cheek D., Ploth D.W. Calciphylaxis in chronic renal failure. *Journal of the American Society of Nephrology* 7:978, 1996
7. Paul R.V., Wackym P.S., **Budisavljevic M.** Destabilization of natriuretic peptide C-receptor messenger RNA by phorbol myristate acetate. *Journal of the American Society of Nephrology* 9:26, 1998
8. Guirguis N., **Budisavljevic M.N.**, Self S., Rajagopalan P.R., Lazarchick J. Acute renal artery and vein thrombosis after renal transplant, associated with a short partial thromboplastin time and factor V Leiden mutation. *Annals of Clinical and Laboratory Science* 30:75, 2000
9. Afzal F., **Budisavljevic M.N.**, Rajagopalan P.R., Baliga P. Viruses in Posttransplant Thrombotic Microangiopathy. *Transplantation* 72:750, 2001
10. Byrne M.C., **Budisavljevic M.N.**, Fan Z., Self S.E., Ploth D.W. Renal Transplant in Patients with Alport's syndrome. *American Journal of Kidney Diseases* 39:769, 2002
11. **Budisavljevic M. N.**, Stewart L., Sahn S. A., Ploth D. W. Hyponatremia associated with 3,4-Methylenedioxymethylamphetamine ('Ecstasy') abuse. *Am J Med Sci* 326:89, 2003
12. **Budisavljevic M. N.**, Hodge L., Barber K., Fulmer J. R., Durazo-Arvizu R. A., Self S. E., Kuhlmann M., Raymond R. R., Greene E. L. Oxidative stress in the pathogenesis of experimental proliferative glomerulonephritis. *Am J Physiol Renal Physiol* 285:F1138, 2003
13. Besenski N., Rumboldt Z., Emovon O., Nicholas J., Kini S., Milutinovic J., **Budisavljevic M. N.** Brain MR Imaging Abnormalities In Kidney Transplant Recipients. *Am J Neuroradiol* 26:2282, 2005
14. Varghese S.A., Powell T.B., **Budisavljevic M.N.**, Oates J.C., Raymond J.R., Almeida J.S., Arthur J.M. Urine biomarkers predict the cause of glomerular disease. *J Am Soc Nephrol* 18:913, 2007
15. Othersen J.B., Maize J.C., Woolson R.F., **Budisavljevic M.N.** Nephrogenic systemic fibrosis after exposure to gadolinium in patients with renal failure. *Nephrol Dial Transplant* 22:3179, 2007

16. Nazeer K., Janech M.G., Lin J.J.-C., Ryan K.J., Arthur J.M., **Budisavljevic M.N.** Changes in protein profiles during course of experimental glomerulonephritis *Am J Physiol Renal Physiol* 296:F186, 2009
17. Velez J.C.Q., Ryan K. J., Harbeson C. E., Bland A.M., **Budisavljevic M.N.**, Arthur J. M., Fitzgibbon W. R., Raymond J. R., Janech M.G. Angiotensin I is largely converted to angiotensin (1-7) and angiotensin (2-10) by isolated rat glomeruli. *Hypertension* 53:790, 2009
18. Varghese S. A., Powell T. B., Janech M. G., **Budisavljevic M. N.**, Stanislaus R. C., Almeida J. S., Arthur J. M. Identification of Diagnostic Urinary Biomarkers for Acute Kidney Injury *J Investig Med* 58:612, 2010

Non peer review

Brooks BM, Sieg A, **Budisavljevic M**, Janech MG (2007) A Case Study: Analysis of the Mitochondrial trna-ile Gene for a Mutation Linked to Renal Magnesium Wasting. Ethnicity & Disease: Vol. 17, No. sp5 pp. 14–15

### Abstracts:

1. **Budisavljevic M.**, Bea M.L., Laubie M., Pham P., Dussaule J.C., Ronco P.M., Verroust P.J. A synthetic octapeptide encoded by an RNA complementary to human angiotensin II RNA inhibits physiological effects of A II by mimicking A II receptor. *Kidney International* 37:354, 1990
2. Paul R.V., Wackym P.S., **Budisavljevic M.**, Everett E., Norris J.S. Regulation of atrial natriuretic peptide receptors in mesangial cells by growth factors. *Journal of the American Society of Nephrology* 3:444, 1992
3. Paul R.V., Karnaky K.J., **Budisavljevic M.**, Wackym P.S. ANP-Responsive guanylate cyclase in the apical membrane on inner medullary collecting duct cell cultures. *Journal of the American Society of Nephrology* 4:446, 1993
4. Bunke M., Hildebrand L., Ferrara D., **Budisavljevic M.**, Baillie M., Uber L., Rajagopalan P.R. Comparison of patients with and without status changes after re-evaluation for renal transplant. *Transplantation* 65:222, 1998
5. Radhakrishnan S., Baillie G.M., Baliga P.K., Chavin K.D., **Budisavljevic M.**, Graham V., Naert S., Rust P., Rajagopalan P.R. Long term outcome of renal transplantation for Alport's syndrome. *Transplantation* 67:S152, 1999
6. **Budisavljevic M. N.**, Fulmer J. R., Self S. E., Raymond J. R., Kuhlmann M. K., Greene E. L. The antioxidant [alpha]-Lipoic acid ameliorates cellular proliferation and ERK phosphorylation in anti-Thy 1 nephritis. *Journal of the American Society of Nephrology* 10:543A, 1999
7. **Budisavljevic M. N.**, Fulmer J. R., Self S. E., Lin Kuei-Fu, Paul R. V., Chao J., Chao L. Atrial natriuretic peptide gene delivery attenuates mesangial cell proliferation in anti-Thy 1 nephritis. *Journal of the American Society of Nephrology* 10:446A, 1999
8. **Budisavljevic M. N.**, Molintas J., Self S.E., Baliga P. K. Clinical features and outcome of posttransplant thrombotic microangiopathy (TMA). *Transplantation* 69:S326, 2000
9. Afzal F., Uber L.A., Baliga P., **Budisavljevic M.** Effects of FK 506 versus CsA on renal function, glucose lipid profile and blood pressure after kidney transplant. *Journal of the American Society of Nephrology* 11:677A, 2000
10. **Budisavljevic M. N.**, Hill V., Fan Z., Cheek D. E., Rajagopalan P. R. Long Term Effects of Kidney Donation on Renal Function and Blood Pressure in African Americans. *Journal of the American Society of Nephrology* 12:193A, 2001
11. Sannicandro T.J., Uber L.A., Afzal F., Thurman E.M., Baliga P., **Budisavljevic M.** Outcome

and cost analysis of predominantly African-American kidney transplant patients switched from cyclosporine to tacrolimus. *The Journal of Human Pharmacology and Drug Therapy* 22:416, 2002

12. Uber L.A., McMillan S.D., **Budisavljevic M.**, Baliga P., Rajagopalan P.R. The safety and efficacy of atorvastatin in the treatment of hyperlipidemia in kidney transplant recipients on cyclosporine and sirolimus. *The Journal of Human Pharmacology and Drug Therapy* 22:420, 2002

13. Nazeer K., Arthur J. M., Barber K., Swartz M., **Budisavljevic M. N.** Detection And Characterization Of Glomerulonephritis Associated Proteins Using A Proteomics Approach. *Journal of the American Society of Nephrology* 14:408A, 2003

14. Kini S., Besenski N., Rumboldt Z., **Budisavljevic M.**, Emovon O. Brain MR Abnormalities in Renal Transplant Patients. *Proceedings of American Society of Neuroradiology* 42:296, 2004

15. **Budisavljevic M. N.**, Milutinovic J. Clinical Characteristics and Genetics of Autosomal Dominant Polycystic Kidney Disease in African Americans. *Journal of the American Society of Nephrology* 15:223A, 2004

16. Varghese S. A., Oates J. C., **Budisavljevic M. N.**, Almeida J. S., Arthur J. M. Urine Protein Biomarkers Predict the Etiology of Nephrotic Syndrome. *Journal of the American Society of Nephrology* 16:8A, 2005

17. **Budisavljevic M.**, Nazeer K., Bland A., Dugan M., Arthur J. Identification and Characterization of Glomerulonephritis Associated Proteins Using a Proteomics Approach. *Journal of the American Society of Nephrology* 16:667A, 2005

18. **Budisavljevic M.N.**, Janech M.G., Fitzgibbon W.R., Arthur J.M. Differences in Protein Expression between Sieved and Pipette Isolated Glomeruli. *Journal of the American Society of Nephrology* 17:439A, 2006

19. Velez J-C. Q., Arthur J.M., Bland A.M., **Budisavljevic M.N.**, Fitzgibbon W.R., Amani Z., Raymond J.R., Janech M.G. Angiotensin Metabolite Formation Identified by Mass Spectrometry in Isolated Rat Glomeruli. *Journal of the American Society of Nephrology* 18:209A, 2007

20. **Budisavljevic M.N.**, Velez J-C.Q., Arthur J.M., Janech M.G. Differences in Nephilysin, ACE, and Renin Expression in Isolated Glomeruli from Rats with anti Thy 1 Nephritis. *Journal of the American Society of Nephrology* 18:871A, 2007

21. Lewis E.C., Mataria M., **Budisavljevic M.N.**, Taylor T.P., Janech M.G., Arthur J.M. NGAL, NAG and Urine Cystatin C Predict the Future Requirement for Renal Replacement Therapy in Patients with Acute Kidney Injury. *Journal of the American Society of Nephrology* 19:576A, 2008

22. Mohammad R. Mataria, Adair M. Dempsey, Alison M. Bland, Michael G. Janech, **Milos N. Budisavljevic**, John M. Arthur Urinary Exosomal Albumin Is a Biomarker of Diabetic Nephropathy *American Society of Nephrology* [www.abstracts2view.com/asn/](http://www.abstracts2view.com/asn/) 2009

### **Book Chapters:**

Arthur J.M., **Budisavljevic M.N.**, Varghese S.A., Powell T.B. Proteomics and Acute Renal Failure in Ronco Claudio, Bellomo Rinaldo and Kellum John eds. *Critical Care Nephrology*, 2<sup>nd</sup> ed. 2009, Saunders Elsevier, Philadelphia, PA

