BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Saeed R. Khan	Professor
eRA COMMONS USER NAME	
SRKHAN	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Agra University, Agra, India	B.Sc.	1962	Biology
Peshaware University, Peshawar Pakistan	M.Sc.	1964	Biology
Univ. Florida, Gainesville, FL	Ph.D.	1973	Biology

A. Positions and Honors.

Positions and Employment

1964-1970 Lecturer in Biology, Directorate of Education, NWFP Region, Peshawar, Pakistan.
1973-1974 Assistant Professor, Institute of Biological Sciences, Islamabad University, Islamabad, Pakistan.
1974-1976 University Research Fellow, Plant Pathology Dept., University of Adelaide, Adelaide, Australia.
1976-1978 Assistant Professor, Biology Dept., King Abdulaziz University, Jeddah, Saudi Arabia.
1978-1979 Post-doctoral Fellow, Dept. of Pathology, University of Florida, Gainesville, FL.
1979-1982 Assistant in Surgery, Dept. of Surgery/Urology, University of Florida, Gainesville, FL.
1982-1985 Assistant Research Scientist, Dept. of Surgery/Urology, University of Florida, Gainesville, FL.
1985-1987 Associate Research Scientist, Dept. of Pathology, University of Florida, Gainesville, FL.
1987-1991 Assistant Professor, Dept. of Pathology, University of Florida, Gainesville, FL.
1993-94, Director, University of Florida Center for the Study of Inflammatory Host Def. & Tissue Injury.
1991-1997 Associate Professor, Dept. of Pathology, University of Florida, Gainesville, FL.
1996- Director, Center for the Study of Lithiasis and Pathological Calcification, University of Florida
1997- Professor, Dept. of Pathology, University of Florida, Gainesville, FL.
2000-2002 Director, Research, Dept. of Pathology, Immunology & Lab. Med.

Honors

1988-89, **President,** Florida Society for Electron Microscopy.
1995-97, **Member**, General Medicine B Study Section
1996-99, **Member,** Urology Special Emphasis Panel
1997, **Recipient,** College of Medicine Excellence in Basic Science Award
1997-98, **President,** Society for Research on Calculus Kinetics (ROCK Society)
1999-00, **President**, Faculty Council, College of Medicine
2001-03, **Recipient,** University of Florida Research Foundation Professorship

B. Selected Publications (Selected from a total of 132 peer-reviewed publications)

1. **Khan SR**, 2005, Hyperoxaluria-induced oxidative stress and antioxidants for renal protection. Urol Res. 33:349-57.
2. Talham DR, Backov R, Benitez IO, Sharbaugh DM, Whipps S, **Khan SR**., 2006, Role of lipids in urinary stones: studies of calcium oxalate precipitation at phospholipid langmuir monolayers. Langmuir 22: 2450-06.
3. Delvecchio FC, Brizuela RM, **Khan SR**, Byer K, Li Z, Zhong P, Preminger GM., 2005, Citrate and vitamin E blunt the shock wave-induced free radical surge in an in vitro cell culture model. Urol Res. 33:448-52
4. Umekawa T, Byer K, Uemura H, **Khan SR**, 2005, Diphenyleneiodium (DPI) reduces oxalate ion- and calcium oxalate monohydrate and brushite crystal-induced upregulation of MCP-1 in NRK 52E cells. Nephrol Dial Transplant. 20:870-878

5. Byer K and **Khan SR**, 2005, Citrate provides protection against oxalate and calcium oxalate crystal induced oxidative damage to renal epithelium. J Urol. 173: 640-646

6. Umekawa T, Hatanaka Y, Kurita T, **Khan SR**, 2004, Effect of angiotensin II receptor blockage on osteopontin expression and calcium oxalate crystal deposition in rat kidneys. J Am Soc Nephrol 15: 635-644

7. Aihara K, Byer KJ, **Khan SR** 2003, Calcium phosphate induced renal epithelial injury and stone formation: involvement of reactive oxygen species. Kidney Intl 64: 1283-1291.

8. Thamilselvan S, **Khan SR**, Menon M, 2003, Oxalate and calcium oxalate mediated free radical toxicity in renal epithelial cells: effect of antioxidants. Urol Res 31:3-9.
9. **Khan SR**, Glenton PA, Backov R Talham DR, 2002, Presence of lipids in urine, crystals and stones: Implications for the formation of kidney stones. Kidney International 62: 2062
10. Moriyama MT, Glenton PA, **Khan, SR**, 2001, Expression of Inter-α-inhibitor related proteins in kidneys and urine of hyperoxaluric rats. J urol 165: 1687
11. Fasano JM, **Khan SR,** 2001, Intratubular crystallization of calcium oxalate in the presence of membrane vesicles: an in vitro study. Kid Intl 59:169
12. **Khan SR**, Thamilselvan S, 2000, Nephrolithiasis: a consequence of renal epithelial cell exposure to oxalate and calcium oxalate cyrstals. Mol urol 4 (4): 305
13. Maslamani S, Glenton PA**, Khan SR**, 2000, Changes in urine macromolecular composition during processing.J Urol 164: 230
14. Thamilselvan S, Byer KJ, Hackett RL**, Khan SR**, 2000, Free radical scavengers, catalase and superoixde dismutase provide protection from oxalate-associated injury to LLC-PK1 and MDCK cells. J Urol 164:224
15. Backov R, Lee CM, **Khan SR**, Mingotayud C, Fanucci GE, Talham DR, 2000, Calcium oxalate monohydrate precipitation at phosphatidylglycerol Langmuir monolayers. Langmuir 16: 6013
16. Atmani F, **Khan SR**, 2000, Effects of an extract from Herniaria hirsuta on calcium oxalate cyrstallization in vitro. Brit J Urol 85:621
17. **Khan SR**, Maslamani SA, Atmani F, Glenton PA, Opalko FJ, Thamilselvan S, Hammett-Stabler C, 2000, membranes and their constituents as promoters of calcium oxalate crystal formation in human urine. Calcif Tissue Intl 66, 90
18. **Khan SR**, Byer KJ, Thamilselvan S, Hackett RL, McCormack WT, Benson NA, Vaughn KL, Erdos G, 1999, Crystal-cell interaction and apoptosis in 0xalate-associated injury of renal epithelial cells. J Am Soc Nephrol 10: S457
19. Thamilselvan S, Hackett RL, **Khan SR**, 1999, Cells of proximal and distal tubular origin respond differently to challenges of oxalate and calcium oxalate crystals. J Am Soc nephrol 10: S452
20. Iida S, Inoue M, Yoshi S, Yanagaki T, Chikama S, Shimada S, Matsuoka K, Noda S, **Khan SR**, 1999, Molecular detection of heparan sulfate proteoglycan mRNA in rat kidney during calcium oxalate nephrolithiasis. J Am Soc Nephrol 10: S412
21. Atmani F, **Khan SR**, 1999, Role of urinary bikunin in the inhibition of calcium oxalate crystallization. J Am Soc Nephrol 10: S385
22. Backov R, **Khan SR**, Mingitaud C, Byer K, Lee CM, Talham DR, 1999, Precipitation of calcium oxalate monohydrate at phospholipid monolayers. J Am Soc Nephrol 10: S359
23. Sidhu H, Schmidt ME, Cornelius JG, Thamilselvan S, **Khan SR**, Hesse A, Peck AB, 1999, Direct correlation between hyperoxaluria/oxalate stone disease and the absence of the gastrointestinal tract dwelling bacterium *Oxalobacter frmigenes*: possible prevention by gut recolonization or enzyme replacement therapy. J Am Soc Nephrol 10: S334
24. Iida S, Peck AB, Byer KJ and **Khan, S.R.**, 1999, Expression of bikunin mRNA in renal epithelial cells after oxalate exposure. J Urol. 162: 1480
25. Iida S, Peck AB, Johnson-Tardieu J, Moriyama M, Glenton PA, Byer KJ and **Khan, S.R.**, 1999, Temporal changes in mRNA expression for bikunin in the kidneys of rats during calcium oxalate nephrolithiasis. J Am Soc Nephrol .10:986
26. Atmani, F., Glenton, PA and **Khan, S.R.**, 1999, Role of inter-alpha-inhibitor and its related proteins in experimentally induced calcium oxalate urolithiasis, II. Localization of proteins and expression of bikunin gene in rat kidneys. Urological Research 27: 63
27. Thamilselvan S, **Khan SR,** 1998, Oxalate and calcium oxalate crystals are injurious to renal epithelial cells: results of in ivo and in vitro studies. J Nephrology 11S: 66
28. Whipps, S, **Khan, SR**, Opalko FJ, Backov R and Talham DR, 1998, Growth of calcium oxalate monohydrate at phospholipid Langmuir monolayers. J Crystal Growth 192: 243
29. Atmani, F., Glenton, PA and **Khan, S.R.**, 1998, Identification of proteins isolated from calcium oxalate and calcium phosphate crystals induced in the urine of healthy and stone forming subjects. Urological Research 26: 201
30. Gokhale, J.A., Glenton, P.A., **Khan, S.R.**, 1997, Biochemical and quantitative analysis of Tamm Horsfall protein in rats. Urol Res 25(5): 347
40. **Khan SR,** 1997, Animal models of kidney stone formation: an analysis. World J Urol. 15: 236
41. Opalko FJ, Adair JH, **Khan SR,** 1997, Heterogeneous nucleation of calcium oxalate trihydrate in artificial urine by constant composition. J Crystal Growth 181(4):410
42. **Khan SR,** 1997, Intercations between stone forming calcific crystals and macromolecules.Urol. Internationalis,59:59-71.
43. **Khan SR,** 1997, Tubular cell surface events during nephrolithiasis. Curr Opin in Urol, 7: 240
44. Thamilselvan S, Hackett RL, **Khan SR,** 1997, Lipid peroxidation in ethylene glycol induced hyperoxaluria and calcium oxalate nephrolithiasis. J Urol, 157: 1059
45. **Khan SR,** 1997, Calcium phosphate/calcium oxalate crystal association in urinary stones: implications for heterogeneous nucleation of calcium oxalate. J Urol 157:376

46. **Khan SR**, Atmani F, Glenton P, Hou Z-C, Talham DR, Khurshid M, 1996, Lipids and membranes in the organic matrix of urinary calcific crystals and stones. Calcif Tisssue Int 59:357
47. Gokhale, J.A., Glenton, P.A., **Khan, S.R.**, 1996, Localization of Tamm-Horsfall protein and osteopontin in a rat nephrolithiasis model. Nephron 73:456
48. Atmani, F., Mizon J. and **Khan, S.R.**, 1996, Identification of uronic-acid-rich protein as urinary bikunin, a light cahin of inter-α-inhibitor. Eur J Biochem 236:984

C. Onoging Research Support –

R01- - Saeed Khan - (PI) 02/05 - 3/20/10
NIH-Calcium phosphate, crystal responsible for idiopathic nephrolithiasis
To determine the molecular mechanism for the inability of renal interstitial CaP crystals to provoke an inflammatory reaction.

R21- - Ammon Peck – (PI) 4/1/05 – 3/30/07
NIH – (Khan – Co-I) Oxalobacter as a Therapy in IBD-Associated Urolithiasis
By defining the inter-relationships between *O. formigenes* and the host when the host has IBD, we will be able to define limitations and/or the possible reisks of using this bacterium in "probiotic-like" therapies to treat hyperoxaluria in patients with IBD.

Completed Research Support:

R01 DK59765 – Laurie B. Gower – (PI) 07/15/01 – 6/30/05
NIH- (Khan – Co-I) Bioengineering Research Partnership – College of Engineering – Role of Biopolymer and Lipids in Kidney Stone Formation – It is proposed that crystallization of calcium oxalate in the urine is preceded by a polymer-induced liquid precursor (PILP). The major goal of my subproject is to investigate the nephrotoxic effect of PILP phase on the renal epithelial cells in culture. Role: Co-PI

R01-DK53962 –- Saeed Khan (PI) No Cost Extension 03/01/00 – 01/31/04
NIH - **Tissue-Crystal Interaction Calcium Oxalate Nephrolithiasis –** To test hypothesis that crystallization modulators produced by injured cells may be abnormal and/or functionally inadequate and production of such atypical modulators can indicate initiation of the stone forming cascade.

R01-DK4143401-07 – Saeed Khan – (PI) 07/01/96 – 06/30/00
NIH - Role of Lipids in Urolithiasis
To explore the role of lipids as nucleators in the formation of calcium oxalate kidney stones. Role: PI

R01 – DK53556 – A.B. Peck – (**PI)** 02/01/98 – 02/23/04
NIH -Regulation of enteric hyperoxaluria by Oxalobacter – This project is a study of factors controlling colonization of the gut with the bacterium, *Oxalobacter formigenes***,** using a rat model, and determining the efficacy of re-colonization in preventing adsorptive hyperoxaluria. Role: Co-PI.

NIH - R01DK56249-01 – **S. Thamilselvan – (PI)** 04/01/99 – 07/01/02
Urolithiasis and Peroxidative Injury Co-I: **Saeed Khan**
This project is a study of hyperoxaluria and calcium oxalate crystalluria with increased excretion of tubular marker enzymes, a finding consistent with damage to renal tubular cells, using a rat model and determining the efficacy of antioxidants in decreasing oxalate synthesis and deposition. Role: Co-PI