

NAME Rangaramanujam M. Kannan	POSITION TITLE Professor, Ophthalmology, Johns Hopkins School of Medicine
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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
Birla Institute of Technology and Science, India	B.E.(Hons.)	1987	Chemical Engineering
Penn State University, USA	M.S.	1989	Chemical Engineering
California Institute of Technology, USA	M.S.	1991	Chemical Engineering
California Institute of Technology, USA	Ph.D.	1994	Chemical Engineering

Research Interests

- Translational nanotechnology/nanomedicine, Dendrimer-based targeted drug delivery
- Therapeutics/imaging approaches for neurodegenerative diseases: age-related macular degeneration, retinitis pigmentosa, cerebral palsy, autism, and spinal cord injuries
- Ocular nanotherapeutics: dendrimer platforms for sustained treatments of inflammation and infection
- Synthesis and characterization of dendrimer-based nanodevices and hydrogels
- Supercritical CO₂-based polymer nanocomposites

A. Positions and Honors

Positions and Employment

1994-1995	Postdoctoral: Research Associate, Chemical Engineering, University of Minnesota
1995-1997	Senior Research Engineer, 3M Corporate Research Laboratories
1997-2003	Assistant Professor, Department of Chem. Engg. &Mat Sci., Wayne State University
2002-present	Joint Appointment, Department of Biomedical Engg., Wayne State University
2003- 5/2009	Associate Professor, Department of Chem. Engg. &Mat Sci., Wayne State University
2003-present	Full Member, Barbara Ann Karmanos Cancer Institute, Detroit, Michigan
2004-2005	Co-founder & Research Director, nanoScience Engineering Corporation
5/2006-present	Vice President & Chief Technical Officer, nanoScience Engineering Corporation
5/2009-7/2011	Professor, Department of Chem. Engg. &Mat Sci., Wayne State University
9/07- 7/2011	Director, Nanotechnology Lab, NICHD Perinatology Research Branch, Detroit, MI
6/10-7/2011	Co-Director, Center for Active Nanostructures, Wayne State University
8/2011-current	Professor (Visiting, undergoing tenure), Ophthalmology, Wilmer Eye Institute, Center for Nanomedicine, Johns Hopkins School of Medicine

Honors

Du Pont Graduate Fellowship at Caltech (1989 – 1990)
Charles Lee Powell Foundation Graduate Fellowship at Caltech (1992-1994)
Unilever Award for outstanding Ph.D. thesis in polymer Science by ACS (1995)
Wayne State University Faculty Research Award (1997-1998, 1998-1999)
3M Non-tenured Faculty Award (1998 – 2000, 2001-2002)
National Science Foundation CAREER Award (1999)
Director, Nanotechnology Lab, NICHD Perinatology Research Branch, 2008-present
NIH Study section membership (NCI Special Emphasis Panels, and IMST W53 SBIR)
Editorial Board, Nanomedicine: Nanotechnology, Biology and Medicine

B. Publications

B.1 Peer-reviewed publications {name in bold denotes principal, corresponding author}

2009- to date

- [21] 'Injectable PAMAM dendrimer-PEG hydrogels for the treatment of ascending genital infections: Formulation, *in-vitro* and *in-vivo* evaluation', A. Menjoge, R. Navath, H.Dai, A. Abbas, R.Romero, S.Kannan, **R.M.Kannan**, doi:10.1021/mp200027z, *Molecular Pharmaceutics* (2011) (impact factor=5.4).
- [20] 'PAMAM dendrimer-azithromycin conjugate nanodevices for the treatment of Chlamydia trachomatis Infections', M. Mishra, K. Kotta, M. Hali, S. Wykes, I. Benchaala, H. Gerard, A. Hudson, J. Whittum-Hudson, **R M. Kannan**, doi:10.1016/j.nano.2011.04.008, *Nanomedicine (NBM)* (2011) (impact factor:5.44).
- [19] 'Supercritical carbon dioxide processed resorbable polymer nanocomposite bone graft substitutes', K. Baker, M.Manitiu, R.Bellair, C.Gratopp, H. Herkowitz, **R M. Kannan**, 10.1016/j.actbio.2011.05.014, *Acta Biomaterialia* (2011) (impact factor:4.8).
- [18] 'Transfer of PAMAM dendrimers across the human placenta: prospects for use as drug carrier during pregnancy', A.R.Menjoge, A. Rinderknecht, R.Navath, M.Faridnia, R.Romero, R.Miller, **R.M. Kannan**, *Journal of Controlled Release*, 150(3), 326-338 (2011) (*journal impact factor: 6.5*).
- [17] 'Poly(amidoamine) dendrimer-erythromycin conjugates for drug delivery to macrophages involved in periprosthetic inflammation', A.Bosnjakovic, M.Mishra, Y.E. Kurtoglu, W.Ren, **R.M.Kannan**, *Nanomedicine (NBM)*, doi:10.1016/j.nano.2010.10.008 (2010) (impact factor:5.44)
- [16] 'Intrinsic targeting of neuroinflammation by polyamidoamine dendrimers in a rabbit model of cerebral palsy' H.Dai, R.Navath, B.Balakrishnan, B.Raja Guru, M.Mishra, R.Romero, **R.M.Kannan**, **S.Kannan**, *Future Medicine:Nanomedicine*,5(9), 1317-1329 (2010) (*journal impact factor:6.05*).
- [15] 'In vivo efficacy of dendrimer - methylprednisolone conjugate formulation for the treatment of lung inflammation', R. Inapagolla, Y.E. Kurtoglu, B. Raja Guru, X.Gao, M. Lieh-Lai, D.Bassett, **R.M.Kannan**, *Int.J. Pharm.*, 399(1-2), 140-147 (2010) (*journal impact factor:3.4*).
- [14] 'Inhibition of bacterial growth and intramniotic infection in a guinea pig model of chorioamnionitis using PAMAM dendrimers', B. Wang, R.Navath, A.Menjoge, B.Balakrishnan, R.Bellair, H.Dai, R.Romero, S.Kannan, **R.M.Kannan**, *Int. J. Pharm.*, 395(1-2), 298-308 (2010) (*journal impact factor:3.4*).
- [13] 'Amino acid functionalized dendrimers with hetero-bifunctional chemoselective peripheral groups for drug delivery', R.Navath, A.Menjoge, B.Wang, R.Romero, S.Kannan, **R.M.Kannan**, *Biomacromolecules*, 11 (6), 1544–1563 (2010) (*journal impact factor:4.5*) (*Top 20 list of most read articles for the period*).
- [12] 'Transport and Biodistribution of Dendrimers Across Human Fetal Membranes: Implications for Intravaginal Administration of Dendrimers', A. R. Menjoge, R. S. Navath, A. Asad, S. Kannan, C. J. Kim, R.Romero, **R. M. Kannan**, *Biomaterials*, 31(8), 5007-5021 (2010) (*journal impact factor:7.4*).
- [11] 'Investigation of clay modifier effects on the structure and rheology of supercritical carbon dioxide-processed polymer nanocomposites', R.Bellair, M.Manitiu, E.Gulari, **R.M.Kannan**, *J.Polymer Sci. (Poly.Phys.)*, 48(8), 823-831 (2010) (*journal impact factor: 3.97*).
- [10] 'Reversal of the effects of methylprednisolone in allergen-exposed female balb/c mice', **D.Bassett**, F.Hirata, X.Gao, R.M.Kannan, J.Kerr, N.Doyon-Reale, S.Wilson, M.Lieh-Lai, *J. Toxicology and Env.Health Part A*, 73 (11), 711-724 (2010) (*journal impact factor: 3.3*).
- [9] 'Dendrimer-Based Drug and Imaging Conjugates: Design Considerations for Nanomedical Applications', A.Menjoge, **R.M.Kannan**, **D.Tomalía**, Invited Foundation review, *Drug Discovery Today*, 15(5),171-185 (2010) (*journal impact factor: 7.7*).
- [8] 'Stimuli-responsive star polyethylene glycol conjugates for improved intracellular delivery of N-acetyl cysteine in neuroinflammation', R. Navath, B.Wang, R.Romero, S.Kannan, **R.M.Kannan**, *J. Control. Release*, 142, 447-456 (2010) (*journal impact factor: 6.5*).
- [7] 'Multifunctional Dendrimer-templated Antibody Presentation on Biosensor Surfaces for Improved Biomarker Detection', H.Han, **R.M.Kannan**, S.Wang, G.Z.Mao, J.P.Kusanovic, R.Romero, *Advanced Functional Materials*, 19, 1–13 (2009) (*journal impact factor: 7.5*).

- [6] 'Drug release characteristics of PAMAM dendrimer–drug conjugates with different linkers', Y.E.Kurtoglu, M.Mishra, S.Kannan, **R.M.Kannan**, *Int.J. Pharm*, 377(1-2), 159-168 (2009). (*journal impact factor:3.4*).
- [5] 'Structure and mechanical properties of supercritical carbon dioxide processed porous resorbable polymer constructs, Baker, KC, R. Bellair, M. Manitiu, HN Herkowitz, **RM Kannan**, *Journal of Mechanical Behavior of Biomedical Materials*, 2(6), 620-626 (2009).
- [4] 'Enhanced delivery of N-acetyl cysteine to activated microglial cells using dendrimer-based nanodevices', B. Wang, R. Navath, R. Romero, S. Kannan, **RM Kannan**, *Int.J. Pharm*, 377(1-2), 159-168 (2009) (*journal impact factor: 3.4*).
- [3] 'Effects of branching architecture and linker on the activity of hyperbranched polymer-drug conjugates', O. Perumal, J. Khandare, P. Kolhe, M. Lieh-Lai, S.Kannan, **R.M.Kannan**, *Bioconjugate Chemistry*, 20(5),842-846 (2009), Faculty of 1000 publication (*journal impact factor: 4.4*).
- [2] 'Role of Polymer-Clay Interactions and Nano-clay Dispersion on the Viscoelastic Response of a Series of scCO₂ Dispersed Clay/PVME Nanocomposites', Horsch, S, M. Manitiu, E. Gulari, **RM. Kannan**, *Polymer*, 50(15), 3786-3796 (2009) (*journal impact factor: 3.57*).
- [1] 'Drug release mechanisms and kinetics from dendrimer-drug conjugates with glutathione sensitive linkers', Emre, YK, R. Navath, B. Wang, R. Romero, S. Kannan, **RM Kannan**, *Biomaterials*, 30, 2112-2121 (2009) (*journal impact factor:7.4*).

2008-earlier

- [35] 'Supercritical CO₂-processed dispersed polystyrene-clay nanocomposites', 'M. Manitiu, R. Bellair, S. Horsch, E. Gulari and **R. M. Kannan**, *Macromolecules*, 41,8038-8046, 2008 (*journal impact factor:4.54*).
- [34] 'Dendrimer-drug conjugates for tailored intracellular drug release based on glutathione levels', Navath, R; E. Turkoglu; B. Wang; S. Kannan;R. Romero; **R.M. Kannan**, *Bioconjugate Chemistry*, 19, 2446-2455 (2008) (*journal impact factor: 4.4*).
- [33] 'Engineering Strength, Porosity, and Emission Intensity of Nanostructured CdSe Networks by Altering the Building Block Shape", H. Yu, R. Bellair, RM.Kannan, **S. Brock**, *Journal of American Chemical Society*, 130(15),5054-5055 (2008) (*journal impact factor: 8.6*).
- [32] 'Dendrimer Effect of surface functionality on the cellular trafficking of dendrimers', O. Pillai, R. Inapagolla, RM.Kannan, **S.Kannan**, *Biomaterials* (2008), 29(24-25), 3469-3476 (2008) (*journal impact factor: 7.4*).
- [31] 'Preparation and characterization of PAMAM dendrimer-Streptokinase conjugates', X. Wang, Rajyalkshmi I, **S. Kannan**, R. M. Kannan, *Bioconjugate Chem.*, 18(3), 791-799 (2007) (*journal impact factor: 4.4*).
- [30] 'Design and evaluation of dendritic nanodevices with high drug payload for enhanced cellular delivery', P. Kolhe, J. Khandare, O. Pillai, S. Kannan, M. Lieh-Lai, **R. M. Kannan**, *Biomaterials*, 27 (4): 660-669 (2006) (*journal impact factor:7.4*).
- [29] 'Activity of dendrimer-methotrexate conjugates in sensitive and resistant cell lines', S. Gurdag, J. Khandare, S. Staples, **R. M. Kannan**, L. Matherly, *Bioconjugate Chem.* (2006), 17(2):275-83 (*among the top 10 most accessed articles during that period, Faculty of 1000 publication, highlighted by NIH (Nano) and other publications*) (*journal impact factor: 4.4*).
- [28] 'Rheo-optical measurements of the first and third normal stresses of homopolymer polyvinyl methyl ether melt', A. Kulkarni, S. Kharchenko, **R. M. Kannan**, *Rheologica Acta*, (2006), 45(6), 951 (2006) (*journal impact factor:1.4*).
- [27] 'Supercritical CO₂ dispersion of nanoclays and polymer-clay nanocomposites', S. Horsch, G. Serhatkulu, E. Gulari, **R. M. Kannan**, *Polymer*, 47(21), 7485 (2006) (*journal impact factor: 3.57*).
- [26] 'Vibrational spectroscopic investigation of stereoregularity effects in syndiotactic polypropylene structure and morphology', M. Sevegney, **R.M. Kannan**, R. Naik, V. Naik, *Vibrational Spectroscopy*, 40 (2): 246-256 MAR 17 (2006) (*journal impact factor: 1.8*).
- [25] 'Synthesis, Cellular Transport and Activity of PAMAM Dendrimer-Methylprednisolone Conjugates', J. Khandare, P. Kolhe, O. Pillai, S. Kannan, M. Lieh-Lai, **R. M. Kannan**, *Bioconjugate Chemistry*, 16 (2), 330 - 337 (2005)(*journal impact factor:4.4*).
- [24] 'Effect of dendrimer end functionality on the cytotoxicity and the cellular drug delivery in lung epithelial cells', S. Kannan, P. Kolhe, **R. M. Kannan**, M. Lieh-lai, M. Glibatec, *Journal of Biomaterials Science: Polymers Edition*, 15(3), 311 (2004))(*journal impact factor:2.51*)

- [23] 'Novel streptokinase nanodevices for thrombolysis: preparation, in vitro, and in vivo studies, **S. Kannan**, O. Pillai, RM Kannan, *CHEST*, 126(4), 878S (2004) (*journal impact factor:4.0*)
- [22] 'Hyperbranched polymer-drug conjugates with high drug payload for enhanced cellular delivery', P. Kolhe, J. Khandare, O. Pillai, S. Kannan, M. Lieh-Lai, **R. M. Kannan**, *Pharm. Research*, 21(12), 2185-2195 (2004) (*journal impact factor:3.4*).
- [21] 'A rheo-optical FTIR spectrometer for the investigation of deformation behavior in complex polymers', M. Sevegney, G. Hofmann, **R. M. Kannan**, *Int. J. Poly. Anal. Char.* 9, 245-274 (2004)
- [20] 'Role of architecture on the conformation, rheology, and orientation behavior of linear, star, and hyperbranched polymer melts: 1. Synthesis and Molecular Characterization' by S. Kharchenko, **R. M. Kannan**, J. Cernohous, and S. Venkataramani, *Macromolecules*, 36(2), 399-406 (2003) (*journal impact factor:4.54*)
- [19] 'Role of architecture on the conformation, rheology, and orientation behavior of linear, star, and hyperbranched polymer melts: 2. Linear viscoelasticity and flow birefringence' by S. Kharchenko and **R. M. Kannan**, *Macromolecules*, 36(2), 407-415 (2003) (*journal impact factor:4.4*).
- [18] 'Drug complexation, in vitro release, and cellular entry by dendrimers and hyperbranched polymers', P. Kohle, E. Misra, **R. M. Kannan**, S. Kannan, M. Lieh-Lai, *Int. J. of Pharm.*, 259, 143-160 (2003) (*top 10 most accessed articles of the journal in 2003*)(*journal impact factor:3.4*).
- [17] 'Improvement in ductility of chitosan through blending and copolymerization with PEG: FTIR investigation of molecular interactions', P. Kolhe and **R. M. Kannan**, *Biomacromolecules*, Vol. 4 (1), 173-180 (2003) (*journal impact factor:4.5*).
- [16] 'Deformation-induced morphology changes and orientation behavior in syndiotactic polypropylene', M. Sevegney, G. Parthasarthy, **R. M. Kannan**, *Macromolecules*, 36(17), 6472 (2003) (*journal impact factor:4.4*).
- [15] 'Rheo-optical FTIR Spectroscopy of the deformation behavior in quenched and slow-cooled isotactic polypropylene films', G. Parthasarthy, M. Sevegney, **R. M. Kannan**, *J. Poly. Sci. (Poly. Phys.)*, 40(22), 2539-2551 (2002) (*journal impact factor:3.97*).
- [14] 'Unusual contributions of molecular architecture to rheology and flow birefringence in hyperbranched polystyrene blends', S. Kharchenko, **R. M. Kannan**, J. Cernohous, S. Venkataramani, G. Babu, *J. Poly. Sci (Poly. Phys)*, 39, 2562 (2001) (*journal impact factor:3.97*).

Publications from graduate and postdoctoral work

- [13] 'Effect of composition fluctuations on tracer diffusion in symmetric diblock copolymers', R. M. Kannan, T. P. Lodge & J. Su, *J. Chem. Phys.*, 108(11), 4634-4639 (1998) (*journal impact factor:3.1*).
- [12] 'Diffusion in block copolymer microstructures', T. P. Lodge, M. Hamersky, J. Milhaupt, R. M. Kannan, M. C. Dalvi, and C. Eastman, *Macromolecular Chem. & Phy., Macro.Symp.*, Vol. 121, 219 (1997) (*journal impact factor: 0.9*).
- [11] 'Viscoelastic properties of highly entangled poly(vinyl methyl ether)', R. M. Kannan, T. P. Lodge, *Macromolecules*, Vol.30 (12), 3694-3695 (1997) (*journal impact factor:4.4*).
- [10] 'Dynamics of disordered diblocks of polyisoprene and polyvinylethylene', B. H. Arendt, R. Krishnamoorti, R. M. Kannan, K. Seitz, J. A. Kornfield & J. Roovers, *Macromolecules*, 30 (4), 1138-1145 (1997) (*journal impact factor:4.4*).
- [9] 'Effect of mesophase order and molecular weight on the dynamics of nematic and smectic side - group liquid - crystalline polymers, S. F. Rubin, R. M. Kannan, J. A. Kornfield, & C. Boeffel, *Macromolecules*, Vol. 28(10), 3521 (1995) (*journal impact factor:4.4*).
- [8] 'Evolution of microstructure and viscoelasticity during flow alignment of a lamellar diblock copolymer', R. M. Kannan & J. A. Kornfield, *Macromolecules*, Vol. 27, 1177-1186 (1994) (*journal impact factor:4.4*).
- [7] 'Stress - optical manifestations of molecular and microstructural dynamics in complex polymer melts', R. M. Kannan & J. A. Kornfield, invited paper, *Journal of Rheology*, Vol. 38(4), 1127-1150 (1994) (*journal impact factor:2.8*).
- [6] 'Dynamics of flow-alignment in side-group liquid-crystalline polymers', R. M. Kannan, S. F. Rubin, J. A. Kornfield, & C. Boeffel, invited paper, *J. Rheology*, 38(5), 1609-1622 (1994) (*journal impact factor:2.8*).

- [5] 'Shear orientation in side-group liquid - crystalline polymers', R. M. Kannan, J. A. Kornfield, N. Schwenk, & C. Boeffel, *Advanced Materials*, Vol. 6, 214-216 (1994) (*journal impact factor:8.2*).
- [4] 'Dynamics of each component in miscible blends of polyisoprene and polyvinylethylene', R. M. Kannan, B. H. Arendt, M. Zewail, & J. A. Kornfield, *Rheologica Acta*, Vol.33, 322-336 (1994) (*journal impact factor:1.4*).
- [3] 'Rheology of side-group liquid-crystalline polymers:effect of isotropic-nematic transition and evidence of flow alignment', R. M. Kannan, J. A. Kornfield, N. Schwenk, & C. Boeffel, *Macromolecules*, Vol. 26, 2050 - 2056 (1993) (*journal impact factor:4.4*).
- [2] 'Some thoughts on graduate education-A graduate student's perspective', R. M. Kannan, *Chemical Engineering Education*, Fall (1992).
- [1] 'The third normal stress difference in entangled melts: quantitative stress-optical measurements in oscillatory shear', R. M. Kannan & J. A. Kornfield, *Rheologica Acta*, Vol.31, 535-544 (1992) (*journal impact factor:1.4*).

B.3. Patents

- (1) Dendrimer-containing particles for sustained release of compounds, **R.M. Kannan**, R. Iezzi, S. Kannan, US provisional patent filed 10/5/07 (Application #60/997987)/International PCT application filed Oct 2008 (application #, PCT/US2008/078988). Regular patents filed in US (#12/681,516), Canada (#2,701,291), European Union (#08835693.6), Japan (#2010-528216) and India (1247/ELNP/2010) (Apr. 2010).
Describes inventions relating to dendrimer-based sustained, targeted drug delivery applications in retinal and neurodegenerative diseases such as AMD and retinitis pigmentosa.
- (2) Dendrimer-based therapeutic nanodevices for therapeutic and imaging applications, **R.M. Kannan**, S. Kannan, R.Romero, R. Navath, H. Dai, Y. Kurtoglu, B.Wang, A. Menjoge, Provisional patent filed # 61/187263, 5/09, and additional provisional patent filed, #61/319285, 3/10, Regular US patent (#12/797,657) and international PCT (PCT/US10/38068), filed 6/10.
Describes inventions on dendrimer-based formulations for cerebral palsy and other neurodegenerative diseases, and for maternal-fetal infections and inflammation.
- (3) Supercritical Carbon-Dioxide Processed Biodegradable Polymer Nanocomposites, **R.M.Kannan**, K.Baker, M.Manitiu, R.Bellair, provisional patent filed, 1/10, *Regular US patent filed (Jan 2011, application # 1301052)*
Describes biodegradable, supercritical CO₂-processed polylactic acid-clay nanocomposite foams for bone graft and tissue engineering constructs.
- (4) Supercritical Carbon-Dioxide Processed Biodegradable Polymer Nanocomposites, **R.M.Kannan**, K.Baker, M.Manitiu, R.Bellair, provisional patent filed, 1/10, *Regular US patent filed (Jan 2011, application # 13010513)*.
Describes biodegradable, supercritical CO₂-processed nanocomposite materials for packaging film application.
- (5) Injectable dendrimer hydrogel nanoparticles, **R.M. Kannan**, S.Kannan, R.Romero, R. Navath, A.Menjoge, provisional patent filed, 61/319289, 3/10, PCT application under preparation.
Describes injectible, biodegradable, hybrid nanoparticles containing dendrimer nanodevices for targeted therapy.
- (6) 'Supercritical Fluid based process for preparing highly exfoliated nanocomposites', E. Gulari, G.K. Serhatkulu, R. M. Kannan, US patent, 7,387,749, 2007 (spinoff company, RM Kannan-CTO)
- (7) Method for aligning side-group liquid-crystalline polymers", J. A. Kornfield, R. M. Kannan, N. Schwenk, US patent, 5,313,320 (1994)

B.4. Book Chapters

- (1) Kannan, RM., Pillai, O., Kannan, S. Cellular interactions of nano drug delivery systems. In: Force microscopy in biology and medicine, Edited by B.P. Jena, Wiley & Co., June 2007
- (2) Kannan, RM., Pillai, O., Kannan, S. Dendrimers and hyperbranched polymers for drug delivery. In: Biomedical applications of nanotechnology, Edited by V. Labhasetwar, D.L. Leslie-Pelecky John Wiley & Co., August 2007.
- (3) Y.E. Kurtoglu, Kannan RM. Cellular trafficking of dendrimers. In: Organelle-specific pharmaceutical nanotechnology, edited by V.Weissig and G.G.GM. D'Souza, Wiley & Co., 2010

D. Mentoring

D.1 Graduate Student Advised: 11 PhDs and 3 MS

Semen Kharchenko (**Ph.D.** in ChE - October 2001) (at Masco R & D)
 Vivek Maheshwari (**M. S.** ChE (Thesis) – September 2001)(Assistant Professor, U Waterloo)
 Gautam Parthasarthy (**M. S.** MSE (Thesis) – August 2001)(R & D industry, India)
 Ekta Misra (**M. S.** MSE (Thesis) – July 2001)(Intel R & D)
 Parag Kolhe (**Ph.D.** MSE – April 2004) (Pfizer R & D)
 Michael Sevegney (**Ph.D.** ChE – April 2004)(Pall Corp. R & D)
 Sezen Gurdag (**Ph.D.** – May 2005)(R & D, Turkey)
 Ajay Kulkarni (**Ph.D.** – May 2006) (Packaging R & D)
 Rajyalakshmi Inapagolla (**Ph.D.** – December 2006)
 Steve Horsch (**Ph.D.**- June 2006 (with E. Gulari))(Dow Chemical R & D)
 Bharath Raja Guru (**Ph.D.**, December 2008)(Postdoctoral Researcher, U Minnesota)
 Yunus Emre Kurtoglu (**Ph.D.** August 2009)(BASF R & D)
 Robert Bellair (**Ph.D.** November 2009)(Dow Chemical R & D)
 Mihai Manitiu (**Ph.D.** May 2010)(BASF R & D)
 Kevin Baker (Ph.D. Student, BME, July 2011)(Beaumont Hospitals Biomaterials Lab)

D.2 Postdoctoral Researchers Advised:

Gerald Hoffman (1999-2000) (currently at 3M R & D)
 Omathanu Perumal (2005-2007) (jointly with S.Kannan)(currently tenured faculty at SD State)
 Jayanth Khandare (2005-2006)(currently at Nicholas Piramal R & D, Mumbai, India)
 Hrushikesh Agashe (2007-2008)(currently at OK State, Pharmaceutical Sciences)
 Raghavendra Navath (2008-2010)(currently at Johnson and Johnson R & D)
 Hye Jung Han (2008-2010)(currently at Kettering Cancer Center, NY)
 Anupa Menjoge (2009-2010)(currently at Allergen R & D)
 Bing Wang, MDPHd (10/2007-12/2009)(joint with S.Kannan)

D.3 Graduate Students - Current

Admira Bosjanovic (Ph.D. student-MSE, 4th year)
 Siva Kambhampati (Ph.D – biomedical engineering – 2nd year)
 Fengyuan Yang (Ph.D. student - Materials Science-2nd year)
 Fan Zhang (Ph.D. student-Materials Science, 1st year)

D.3 Current Post-doctoral Associates:

Manoj Mishra (10/2007-current)
Wojciech Lesniak (8/10-current)
Hui Dai, MDPHD (10/2007-current)(joint with S. Kannan)
Amar Jyoti (2010- current)(jointly with S.Kannan)
Ugir Hussain Sk (1/11-current)

F. Selected Invited Talks

1. International Dendrimer Symposium, Washington DC, July 2011
2. Northwestern University - Biotechnology/ChemE - July 2010
3. Nanobusiness Alliance conference, Chicago, IL, September 2010
4. Stanford University – Chemical Engineering, April 2010
5. Bristol Myers Squibb - NJ, May 2010
6. Clemson University-Bioengineering, Joint Page Morton Hunter Bioengineering Distinguished Seminar Series & NIH COBRE SCBiomat Lecture Series, Feb, 2010
7. University of Akron (Polymer Science), December, 2009-Dendrimer nanotherapeutics & neuroinflammation; Austen Bioinnovation Institute of Akron, May 2010
8. 'Dendrimer-based nanotherapeutics', Plenary Speaker, Symposium on 'Nanotechnology in Health Sciences', American Association of Dental Research, Ann Arbor, MI , 12/08
9. 'Dendrimer-based nanodevice platforms', Invited talks in the following departments at Wayne State University: Obstetrics and Gynecology (11/08), Perinatology Research Branch (9/08), Immunology and Microbiology (4/08), Institute of Environmental Health Sciences (3/07, 4/10); Anatomy and Cell Biology (1/07), Pediatric Critical care(12/05), Children's Hospital of Michigan-PET Center (3/08); pharmaceutical sciences (2006); Karmanos Cancer Institute (2003, 2007, 2009).