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## **Guest Editors**

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Dr DN Dhanasekaran

Dr Dhanasekaran received his PhD from the Indian Institute of Science, Bangalore, India, where he studied signaling pathways involved in ovarian follicular maturation. During his post-doctoral work with Arnold Ruoho and Gary Johnson at the University of Wisconsin, Madison, Wisconsin, and National Jewish Center for Immunology and respiratory Medicine, Denver, Colorado, he demonstrated the dynamic interand intra-molecular interactions of the  $\alpha$ -subunits of G proteins underlying G protein-mediated signaling mechanisms. After joining the faculty at Temple University in 1992, Dr Dhanasekaran focused on defining the signaling pathways regulated by the  $\alpha$ -subunits of G12family of G proteins. Dr Dhanasekaran has made major contributions in defining the role of  $G\alpha_{12}$  and  $G\alpha_{13}$  in the regulation of cell proliferation and transformation. He was one of the first to show that the gep oncogenes, defined by the activated mutants of  $G\alpha_{12}$  and  $G\alpha_{13}$ , stimulate the c-Jun N-terminal kinase (JNK)-signaling pathway, and interact with the JNK-interacting scaffold protein JLP. Dr Dhanasekaran has also identified novel roles for  $G\alpha_{12}$  in neoplastic cell growth, and for  $G\alpha_{13}$  in regulating cytoskeletal changes associated with cell

migration and metastasis, as well as the role of Ras and Rho family of GTPases in the regulation of  $G\alpha_{12/13}$ mediated oncogenic cell growth and cytoskeletal changes. He has served on several peer-review committees including those of National Institute of Health and Department of Defense of USA and Research Grants Council of Hong Kong, China. In addition to being a member of the editorial boards of several journals, Dr Dhanasekaran also serves as the Editor-in-Chief of *Journal of Molecular Signaling*. His current research focuses on defining the role of G proteins in regulating different signaling networks and defining their role in tumorigenesis and tumor progression.



**Dr GL Johnson** 

Dr Johnson realized in the early 1990s from genetic studies in yeast that multiple mitogen-activated protein kinase (MAPK) pathways must exist in mammalian cells. He identified the genes encoding the MEKK family of the MAPK kinase kinases and continues to define their regulation of MAPK signaling networks and function in physiology and pathophysiology. He was one of the first to show that v-Ras and v-Src constitutively activate and dysregulate the timing of extracellular signal-regulated kinase 1/2 signaling, which increases proliferation and survival of tumor cells. He demonstrated roles of MAPKs in human diseases including mutation of a MAPK scaffold protein in cerebral cavernous malformations, which are vascular lesions of the central nervous system predisposing individuals to stroke, and the characterization of a Rac2 mutation that inhibits p38 MAPK activity responsible for a human neutrophil immunodeficiency. For his work, he received an NIH MERIT Award, AHA Established Investigator Award, and elected to organize Gordon Conferences, FASEB meetings and Keystone Symposia. He has served on many NIH, ACS and AHA committees and chaired the review the NIGMS Pharmacogenomics committee for Initiative. Education is critically important to Dr Johnson and he has trained 45 fellows and 13 graduate students, who have gone on to successful scientific careers. He has published more than 250 peer-reviewed scientific papers.

Dr Johnson received his PhD from the University of Colorado, where he studied adrenergic receptor regulation of adenylyl cyclase activity and agonist-induced receptor desensitization. During his post-doctoral work with Henry Bourne at the University of California, San Francisco, he demonstrated that  $G\alpha_s$  was a substrate for ADPribosylation catalysed by cholera toxin, which inhibited  $G\alpha_s$  GTPase activity resulting in constitutively activated adenylyl cyclase. After faculty positions at Brown University and the University of Massachusetts Medical School, Dr Johnson returned in 1988 to the University of Colorado Health Sciences Center and the National Jewish Medical and Research Center in Denver, Colorado, USA, where he began his work on the regulation of MAPK signaling networks. In 2003, he moved to the University of North Carolina School of Medicine where he is currently chair of the Department of Pharmacology. He continues his research on defining the function of MAPK signaling networks in homeostasis and how dysregulation of MAPK networks contributes to human disease.