Dr. Ashish N. Dongre

Dr. Ashish N. Dongre is presently working as Post Doctoral Researcher at the Department of Geology, University of Johannesburg, South Africa. After completing his B.Sc. and M.Sc. degrees (with gold medal) in Geology from Nagpur University, Nagpur, Maharashtra, he joined Ph.D. under the guidance of Dr. N. V. Chalapathi Rao (BHU) and Prof. L. G. Gwalani (Perth, Australia). For his extensive work on petro genesis of kimberlites from Narayanpet and Siddanpalli clusters, Eastern Dharwar craton, Dr. Dongre was awarded a Ph.D. degree by Nagpur University, Nagpur in 2010. He has worked with the Geological Survey of India (2005-2007) as Geologist in the prestigious 'Diamond Project' and there further developed his interests in kimberlites and related rocks. In 2007 he returned to academics as an Assistant Professor at the Post Graduate Department of Geology, Institute of Science, Aurangabad (Maharashtra). He has also been a visiting researcher at Institute of Geosciences of the Johannes Gutenburg University, in Mainz, Germany in 2013.

His research interests include the petro genetic aspects of very rare, small volume, potassic magmatism such as kimberlites, orangeites and lamproites and their crustal and mantle xenoliths. As a part of research interest he also works on partial melting processes that lead to the formation of these magma types and quantitative geochemical modeling of trace elements including REE in kimberlites. This work involves integration of field as well as laboratory data through combined study of mineralogy, petrology and whole rock geochemistry (including trace, REE and stable and radiogenic isotopes). His research on these aspects unraveled the nature and composition of mantle source regions of these exotic rocks. His research further led to the discovery of crustal carbonate xenoliths from Mesoproterozoic Siddanpalli kimberlite which has established an interconnection between presently separated (by about 100 km) Bhima and Kurnool Proterozoic sedimentary basins from southern India. This study on Siddanpalli kimberlites and their crustal xenoliths also has relevance to the alluvial diamond dispersal in the Krishna valley and the uranium metallogenesis of the Bhima and Kurnool basins. Other research works of Dr. Dongre involves recognition of unique geochemical signatures of Siddanpalli kimberlites explained due to involvement of subducted component in their mantle source region during the subduction related crustal growth of Dharwar craton in Archean; identifying mineralogical and geochemical characteristics similar to transitional kimberlites of Kaapvaal craton, in South Africa for kimberlites of Narayanpet kimberlite field, Eastern Dharwar craton and study of composition and evolution of their sub-continental lithospheric mantle. Recently, his

research has recognized a new kimberlite intrusion in Wajrakarur kimberlite cluster of Eastern Dharwar craton having strong mineralogical orangeite (Group II kimberlite) affinities and showing origin from diamond stability field necessitating further studies on its diamond potential. His recent research along with Dr. N. V. Chalapathi Rao (BHU) and others discovered Late Cretaceous (ca. 90Ma) orangeite magmatism from Timmasamudram kimberlite cluster of Eastern Dharwar craton having its origin related to Marion hotspot volcanism which suggested a strong connection between mantle plumes and kimberlite volcanism. Recently, Dr. Dongre carried out a detailed geochemical and stable isotope studies on very rare eclogite mantle xenoliths from Eastern Dharwar craton kimberlites and argued that they represent subducted seawater altered mafic oceanic crust. This finding supports the plate tectonic model for the geodynamic evolution of the Dharwar craton by subduction and discounts purely plume related models.

Dr. Dongre has published 17 research publications in the national and international peer reviewed journals having high impact factors and good number of citations. He has completed one major research project under Fast Track Scheme for Young Scientist of Department of Science and Technology (DST) and two projects from University Grants Commission (UGC). He is also a regular reviewer of scientific articles for national and international journals. Dr. Dongre has been conferred with the prestigious Young Researcher Award-2009 (part of National Geoscience Award) given by Govt. of India, Ministry of Mines.

In recognition of his outstanding research contributions in the field of Earth System Science the Ministry of Earth Sciences honors Dr. Ashish N. Dongre with “Young Researcher Award in the field of Earth System Science” for the year 2015.